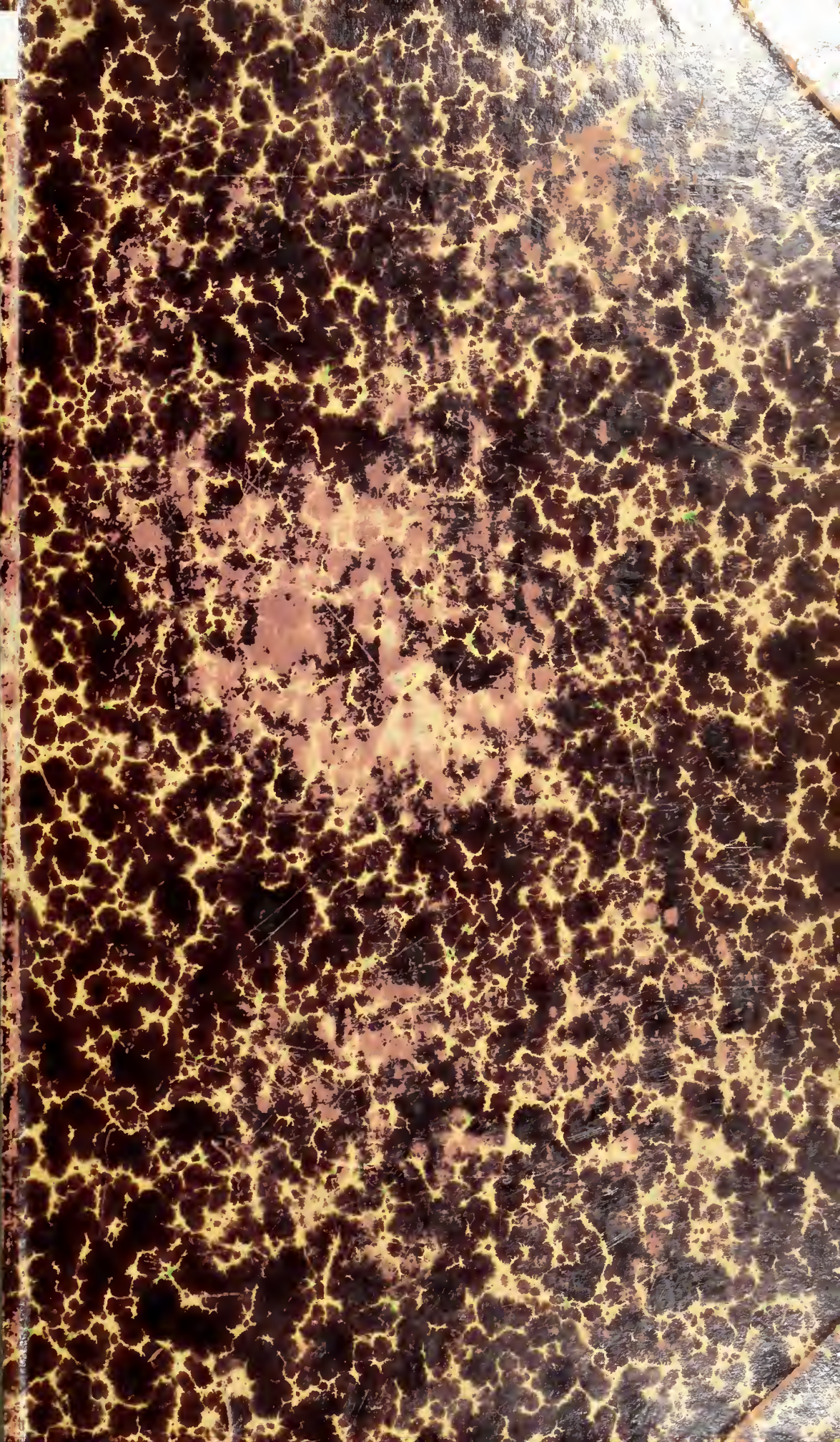


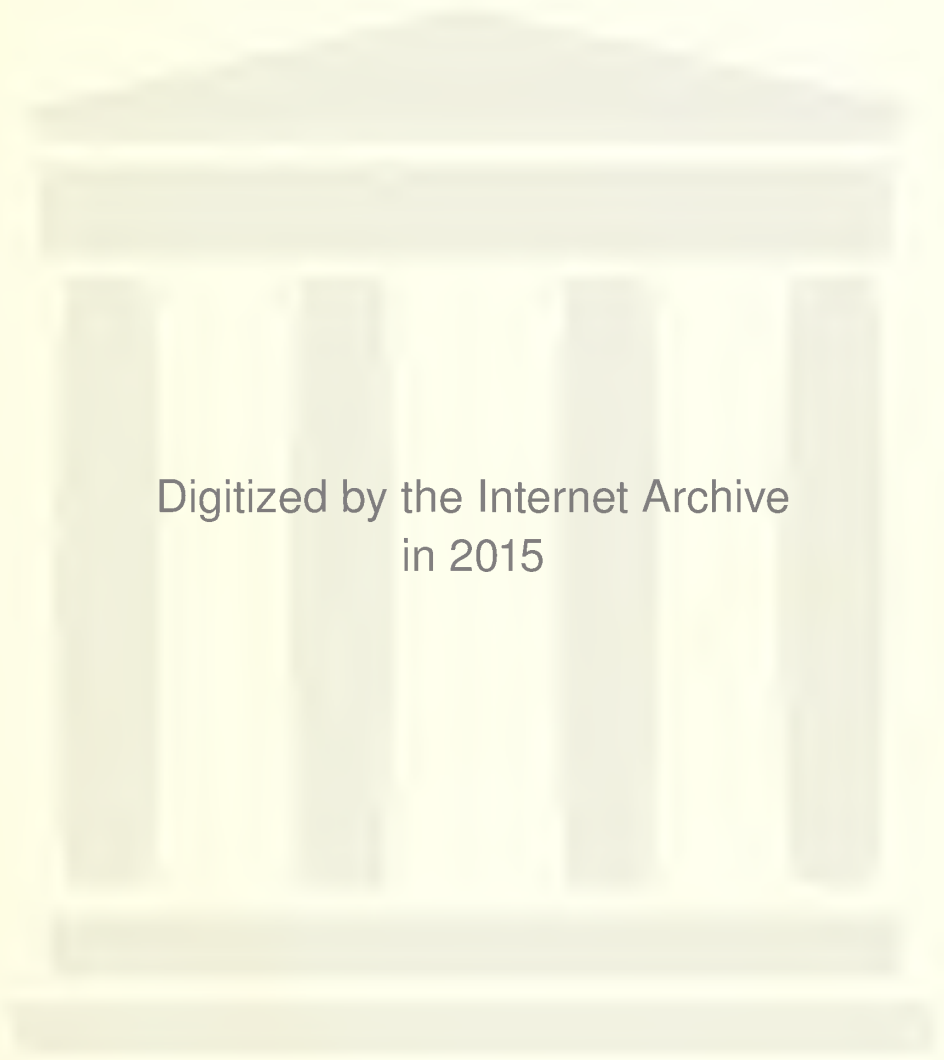
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Feeding the Dionne Quintuplets

The January *Journal of the Canadian Medical Association* contains a detailed account by Dr. Allen Roy Dafeo of his management of the famous Dionne Quins during the first year of their lives.

They were kept in incubators until each one reached the weight of 6 pounds.

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Assorted vegetables and fruits cooked and strained were also used in the diet.

The nutritional improvement in the children was satisfactory throughout. Their management by Dr. Dafeo reflects great credit on his professional skill. The world justly applauds him on his success.

A 34-Year Record

The Physicians Casualty Association of Omaha has recently published its report for "34 years of uninterrupted usefulness" in which they show payments to physicians for sick and accident claims of \$535,052.98—over a half million dollars. The report further shows they have a surplus fund of \$1,350,000 as evidence of their financial ability to pay what they promised to sick or disabled members.

New Regulations for Advertising Medicines

The *Werberat der deutschen Wirtschaft* (advertising council of German trade) has introduced a number of innovations in advertising remedies, making thereby fundamental restrictions in this field. Remedies in the widest sense of the word are meant, medicines as well as medical appliances, and processes and treatments.

Misleading advertisements are declared inadmissible. Advertisements are misleading when false data as to ingredients or quality are given, when exaggerated effects are attributed, or when success is promised without reason. Recommendation among laymen is for-

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ALEXANDER H. COLWELL, M.D., PITTSBURGH

The most important problems before the medical profession of to-day are concerned with its social relationships. In common with many other long-established forms of human activity, medicine has been subjected to a very critical survey. Its position being traditionally a very conservative one, the medical profession has always resisted abrupt change both within its own structure and in its relations to society in general. This conservative attitude is consistent with that of other groups in society whose social relationships also have evolved as a result of natural, evolutionary processes. By and large, the social benefits that have accrued from the conservative attitude of the medical profession have far outweighed any temporary losses this attitude may have caused. The medical profession cannot be condemned, therefore, if a sincere skepticism regarding some proposed social changes has dominated its consideration of these questions. Collectivism is a very ancient social formula which has recently been forcibly revived. The experience of society is that it has always failed. In spite of this unchanging lesson of history, sociologists of our own day are attempting on a much vaster scale than ever before to apply this apparently impossible pattern of human behavior. Among their many schemes is the collectivization of medical practice.

For more than 2 generations the profession of medicine has been concerned especially with the developments of certain sciences as they relate to the discovery of the cause or the treatment of disease. The present advanced state of medical knowledge is a result not only of the contributions of physicians themselves but also of their ability to adapt and borrow for their own particular uses the discoveries and advances

in allied fields of science. However, these fields have not included the social sciences. So long as the absorption of ideas occurred as a result of the appreciation by the medical profession of the values of new discoveries, the processes went on in an orderly and normal fashion and were accepted as part of the usual growth of medicine. The present social unrest, however, has caused a reversal of the direction of the flow of ideas and from a new source. The profession of medicine is receiving an impact of theories thrust upon it from without by the social sciences, regardless of its willingness to accept them or its present ability to evaluate them accurately. Resistance has been the inevitable result. Nevertheless, it is evident that resistance can only be successfully maintained against error. The medical profession cannot, if it be true to its traditions, reject any modification of its social relationship which can be proven to be for the benefit of the public at large. Because of the advantageous position of the profession of medicine in its ability to judge of the effects of proposed social changes both upon the public and upon itself, and its opportunity to see these effects in countries where medicine has been regimented, it is faced with a solemn double duty. It must accept just criticism, and it should vigorously and militantly oppose theories of social behavior which it believes to be erroneous. Physicians are aware of the vitality and virility of their profession. They know it has both the willingness to hear constructive criticism and the ability to profit by it. From very ancient times it has had to struggle as well as it could with problems which were far beyond solution by the application of knowledge current at the time. It need not, therefore, hesitate before the present problems, however complex and strange they seem, but should be able to consider them with-

* Read before the General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

out heat or passion. The ultimate objective of the medical profession is the well-being of society.

Movements for change imply or express criticism of the existing order. If one considers proposed changes in medical-social relationships, this criticism may be observed to follow certain broad general lines, namely, that the costs of medical care should be more widely distributed, and that the quality of medical service should be improved and made more readily and more generally available. There is, first, the charge of duplication and wasteful use of the physical equipment essential to medical practice; second, that present educational methods are ineffective in keeping the general level of medical skill and knowledge at a sufficiently high level; third, that discipline is inadequate in that it fails to remove soon enough the unscrupulous or incompetent physician; and, fourth, that the organized practitioners of medicine have failed to make more easily available to a very large and relatively poor group in society a more facile type of medical service, to which they should be entitled by means of collective purchase, rather than to be dependent upon inconstant and often grudgingly given free service from the hands of such physicians as may be willing to serve them.

Regarding the first criticism, namely, the wasteful use of physical equipment for practice, let us consider something of what the medical profession is accomplishing in its attempt to correct this. Such a consideration necessarily involves the relation of the physician to private, nongovernmental hospitals and in particular to the structure of professional staffs in these hospitals. Scarcely more than one generation ago hospital staff organization was usually limited to a very small percentage of the physicians in a given community. This has been thought by some to have been the result of the jealousy or greed of the members of the so-called closed hospital staff. Such a concept is far from the truth. The closed hospital staff of a past generation was a necessity arising out of the very great differences in the quality of medical education and training which then prevailed. As medical education and training for practice became more uniform in response to demands from within the medical profession itself, there was no longer a need for restrictive hospital staff organization. More and more young physicians were added to the permanent staffs of hospitals with the result that in our own day a very high percentage of the physicians in any given community now utilize the hospital facilities in their environment. There are, no doubt, many com-

munities in the United States where the aspirations of certain individuals or of social, religious, fraternal, or medical groups have created more hospitals than were absolutely needed. The medical profession may be justly criticized for not having opposed such expansion where it went beyond local needs or means of support, though one may as justly call attention to the fact that the actual determination of local needs is an exceedingly difficult problem. Hospital facilities must be available not only to care for the average incidence of illness but also to provide a considerable reserve of hospital beds to meet the contingency of large epidemics. So far as is known to the speaker, no social scientist has yet been able to indicate convincingly what this reserve of hospital beds should be. In his opinion they are scarcely qualified to do this. Such overdevelopment of hospitals as has occurred is even now automatically tending to right itself, and in a very few years this situation will be corrected as it pertains to nongovernmental hospitals. It is necessary at this point to call attention to the fact that the American Medical Association has, for more than 10 years, courageously resisted the wasteful expansion of hospitals built and operated under government control. In this it has stood practically alone without the effective support of social scientists now so much concerned in medical costs. The medical profession has, directly and indirectly, favored the more general use of available physical equipment for practice by the average physician as rapidly as was consistent with public safety. In so far as social reformers conceive that sickness costs to the public may be decreased by the restriction of equipment for practice in the physician's own office, they are simply in error. Physicians as a class do not install office equipment with the primary objective of increasing their incomes. It is done for the purpose of broadening their usefulness to their clientele. The physician who, for instance, in a rural or small urban community adds to his office equipment a roentgen-ray apparatus is really a benefactor to his patients and to the community in which he lives. It may be stated very positively that marked progress has been made by the medical profession in the more effective use of medical equipment; that this progress is constantly going forward; and, that the impetus for it arose within the medical profession itself.

The maintenance of an average level of medical knowledge and skill is, of course, dependent upon many factors. It is just as impossible to conceive of a system in which all physicians would be nearly equal in medical skill as one in

which all engineers would be engineering geniuses or all lawyers paragons of knowledge and virtue. However, we should consider for a moment what physicians have done in the past generation to elevate the average level of medical knowledge and skill. For more than 30 years the quality of medical education available in the United States has been constantly advancing, so that now many of the medical students in our country can receive a training which is not excelled by that available in any other part of the world. Preliminary educational requirements have steadily increased. They have included not only a broad scientific foundation on which a more thorough medical education may be erected but also have emphasized the necessity for cultural accomplishments. In no other professional field is greater attention paid to the quality of the character of its aspirants. The purpose of all these progressive changes has been to make available to the public a finer type of physician, of better training, of higher moral standards, of greater breadth of culture than was obtainable before. This was done in order that the average man in our country might receive a better quality of medical service. It has been so thoroughly accomplished that the quality of medical practice in the United States at the present time is higher than ever before in its history, and compares favorably with that of any other country. Following the period of graduation numberless opportunities are provided the ambitious practitioner for postgraduate instruction. Medical societies exist chiefly for this purpose, and by far the largest proportion of their funds is spent to this end. The official medical publications of the American Medical Association and allied professional groups are equal to, or excel, those of any other nation. They are devoted almost wholly to the dissemination of the most recent advances in the diagnosis and treatment of diseases. Certain large subdivisions of the medical profession composed of specialists require as prerequisites for admission to membership that the applicant shall present satisfactory evidence of special training, experience, and ability, and shall successfully pass highly specialized examinations. It is true that the medical profession has not found any practical scheme for the organized periodic reexamination of its membership for continuation of the right to practice. This has been advocated by many who are interested in the regimentation of medicine. It may be pointed out, however, that this method has been in operation for many years in certain very specially regimented branches of the medical profession. Interestingly enough, it seems

to have failed in these groups to accomplish what its advocates so ardently claim for it. The average level of professional attainments among these regimented factions of the medical profession is certainly not higher than among its other members. There is some justice in the opinion that it is actually lower. Physicians may well feel proud of their present self-developed methods for medical education and graduate study. They may vigorously contend that they are not only adequate but that they are the best that may be evolved at present among a people, a majority of whom still hope for the preservation of personal liberty.

The difficult question of discipline within the profession, itself, has not been met well, nor can we be satisfied with present attainments. The technical difficulties in the application of disciplinary measures are enormous. However, they should stimulate us to try to achieve a far better solution than has as yet been evolved. It is still too easy for the unscrupulous or incompetent physician to continue to delude a too credulous public. The only weapon which organized medicine has developed against the undesirable practitioner is professional ostracism, and this is a very ineffective one since to men of his character it means nothing. It seems very evident that the medical profession must devise a more effective method of eliminating the professionally inadequate and morally unfit from among its membership, and of adopting a much more militant attitude toward them. The Judicial Council of the American Medical Association is now studying the best constitutional mechanism to correct this.

A prominent sociologist has said that "the medical profession has failed to integrate itself with an industrial civilization." To most of us this is a somewhat cryptic statement. It is believed to mean that the profession of medicine has failed to recognize a necessity for mass production, of a standardized service to be purchased for a standardized and presumably low cost. It is implied that we have teetered between adopting a business philosophy and remaining a profession and have failed to do either precisely. So it seems that nobody is satisfied. Thus, we must see our social behavior in the light of unfavorable criticism and failure. There is still, of course, a wide variety in the quality of medical service available and an even greater diversity in its availability. The first situation exists in spite of our own valiant and manifold efforts to correct it, but the experience of the past 20 years indicates that it is rapidly being overcome and will ultimately be corrected. Nothing in the

experience of the countries in Europe where medical practice has been regimented compels us to believe that the quality of service in those countries is better than it is in the United States. The question of availability is a different matter. It involves a social consideration difficult for physicians to accept. It is probable that adequate medical service is available in this country for everyone who has the initiative and energy to obtain it, at least so far as physicians themselves can supply it. But for the improvident and for the waster who dissipates his income on unnecessary luxuries and installment purchases there is considerable difficulty. It seems probable that most physicians think there should be. Nor would they be alone in this thought. The social scientist, however, would provide medical service for this group whether or not they want it or deserve it. In order to accomplish this he conceives the plan of forcibly deducting from the pay envelope a portion of their already low wages. Of course, this is an indirect means of raising wages because employers and the state are also compelled to add to the fund so created. Should physicians be condemned because they resist the social plan of using them to raise wage standards by coercion? May they not with justice demand that the efforts of the social scientists should be spent to obtain better wages for the underpaid, who may then make their own arrangements with physicians of their own choice? Is this proposed plan of the social scientists not an admission of a sense of their own inability to influence the powerful forces of industry to provide more adequate wages for their employees? The social pattern of coercion of employee and employer and physician is after all the application of a social theory. It should require no apology to disagree with this theory.

The man of small income has always been able to make his arrangements with his individual physician, sometimes at greatly reduced payment, frequently without payment. That he has not been able to meet the expenses of a long or complicated illness which requires hospitalization or elaborate laboratory investigation is true. The proportion of society facing these special economic burdens is, however, relatively very small, and it does not seem just to physicians that their entire profession should be regimented to meet the needs of this small group. These needs may be met by voluntary participation in plans to provide hospital care as needed. Still further, the American Medical Association has adopted resolutions permitting the development or expansion of voluntary plans for the low-income groups, designed to distribute the

cost of medical care. Physicians are well aware of statements of sociologists that such plans always fail simply because they are voluntary. They find it difficult to admit, however, the concept that a patient must be compelled to accept treatment save in so far as his rejection of treatment jeopardizes through contagion the health of his fellow citizens. The medical profession also sees the necessary corollary to compulsion of the patient, which is compulsion of the physician. It knows better than any other group that the science and art of medicine do not thrive in an atmosphere of compulsion any better than any other art or any other science could thrive in such an atmosphere. It is best aware of the biologic influence on the human sense of responsibility that will never be corrected by legislation. However, in expressing a willingness to cooperate with low-income groups in voluntary schemes physicians have not settled this problem. They must also be prepared for leadership in the formation of such groups and must be insistent that these groups be and remain voluntary. They must at the same time be more insistent on a better type of medical care for the indigent. They must be more positive in their demands that medical care of the indigent be detached from political control and be placed on a decent basis of professional supervision. In its broader application the medical profession should insist that all public health problems and projects be detached from partisan political management.

For the solution of these perplexing questions physicians owe to the public their best endeavors. We have too long taken the negative attitude of noninterference. It is now time that the medical profession abandon this negative attitude and adopt a militant one. There is much to be accomplished. The control of public health in both state and nation should be completely divorced from political domination. A more vigorous and very vocal resistance to the forces which would seek to regiment medicine must be rapidly developed, because their proposals, which seem so enticing to some, on analysis are found to contain the elements of medical retrogression and decay. With sufficient time the profession of medicine can by its own efforts, provide adequately for low-income groups in a way which will be doubly effective for those citizens who have the will to be helped. It must resist those who would cunningly take advantage of a distressing temporary economic situation to compel in a year social changes which should be effected, if at all, by the slower but safer method of gradual evolution.

During the period of the present social unrest

what may the average physician do toward providing a solution? It seems to the writer that the answer to this question is very simple. Is it not in the rededication of ourselves to the time-honored ideal of the medical profession, which is that service shall be rendered before and without consideration of monetary compensation? This attitude will often involve considerable sacrifice, but the profession of medicine is one accustomed to sacrifice. Is it possible that physicians have, alas, become too well integrated with an industrial civilization? Could we have been poisoned with the profit-making concept of our day, which sees distinction and honor only in the accumulation of material wealth? Is it necessary for physicians to be paid for everything they do? Is it not, on the contrary, true that the medical profession has been chiefly distinguished not in proportion to what it received from society but in proportion to what it gave? Is there not still a compensation in the joy of service, which seemed to bring to our ancestors in medicine serenity and dignity in their own lives and honorable leadership in their social relationships? Is it not still possible for a bond to exist between

physician and patient which neither pauperizes the patient nor annoys the physician and is not expressed in money? In consideration of medical-social problems the writer has had the advantage of conferences with many of his professional fellows. It has been the unanimous opinion of his older colleagues that the first duty of the physician is to render service irrespective of payment, and that in the discharge of this duty, performed with kindness and patience, lies the solution of his particular social problems. On the other hand, we alone know the basic values to the general public of medical service springing from sources free from political domination, restrictive social control, and unreasonable economic outlook. Devotion to service is the necessary price which must be paid if physicians are to retain for themselves the degree of freedom for professional growth which still remains to them. Nor is this price too great, for in the payment of it there will be added immeasurably to the quality of medical service and to the spiritual stature of the men and women who render it.

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THE PROBLEM OF APPENDICITIS

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Appendicitis continues to be one of the major problems of diagnosis and treatment in the daily practice of the physician and surgeon. As evidence of this fact, 25,000 people die annually in the United States and Canada from this disease, an average of about 1 death every 25 minutes. It is the cause of death in almost 4 times as many persons as cancer before age 50, and equals the combined mortality of intestinal obstruction, gastric and duodenal ulcer, and gall stones. That the mortality from appendicitis is on the increase at a time when hospitalization and medical and surgical skill are so far advanced is not only paradoxical but humiliating. The truth of this statement is borne out by the following vital statistics: In 1920 the death rate in the United States was 13.4; 7 years later, in 1927, it was 15; and in 1929, 15.2 per 100,000 population. In Pennsylvania in 1906, the mortality rate was 9.2; in 1932 the rate was 11.8. In Berks County alone the mortality rate for 1931 was 16.6, and for 1932, 17.6. Furthermore, the United States ranks highest in mortality rate of all countries in the world. In the period, 1921 to 1928, Spain and Italy had the lowest rates, 2.8 and 2.9 respectively. The average European death rate in

1928, with an aggregate population of 207,000,000 inhabitants, was 5.6.

Confronted with these facts, physicians and surgeons everywhere, particularly those who are members of the constituent county medical societies, should acquaint themselves with conditions and results pertaining to their local communities and hospitals, and consider means of rectifying this tragic onward march of death—lives sacrificed essentially through ignorance and delay.

It is generally conceded that in many hospitals throughout the country the mortality rate, between 5 and 9 per cent, is much too high. The late A. P. C. Ashurst, in 1927, reported a general mortality of 13.7 per cent; Miller reviewed the mortality statistics in 2 hospitals in New Orleans recently, covering a 6-year period, and reported a rate of 9.9 per cent; Muller, in 101 cases, reported a mortality of 4.9; Eliason and Ferguson had a mortality of 5.5. In the Philadelphia hospital survey for 1922, Bower and Clark found the mortality to be 9.6 per cent. Contrast these rates with that of 0.58 per cent in a series of 2593 cases reported by LeGrand Guerry in 1926, a truly remarkable record.

To attack this problem in Berks County an analysis was made of the cases operated upon in the Reading Hospital for the 10-year period, 1923 to 1932 inclusive, the results of which are summarized in the following tabulation. There were 1866 cases with 75 deaths, a mortality of 4.01 per cent. While these results compare favorably with rates reported from many other institutions, methods of improving this mortality rate should be frankly considered and discussed.

The cases were arbitrarily divided into the 5 groups that are commonly recognized:

	<i>Number of cases</i>	<i>Number of deaths</i>	<i>Mortality rate (per cent)</i>
Chronic appendicitis	480	2	0.41
Subacute appendicitis . . .	377	2	0.53
Acute appendicitis	768	22	2.86
Ruptured with abscess . . .	128	13	10.14
Ruptured with spreading or diffuse peritonitis	113	36	31.85
	1866	75	4.01

1. There were 480 cases of chronic appendicitis in the series with 2 deaths, a mortality of 0.41 per cent. These include the patients who had had one or more definite attacks with an interval operation, and those who had had no sharp pain but rather an aching or grumbling discomfort. One patient died of subendocardial hemorrhage and massive collapse of the lung; the other died of adynamic ileus.

2. In the subacute group there were 377 cases with 2 deaths, a mortality of 0.53 per cent. These patients were operated upon during or immediately following either a mild attack or one that was subsiding. One of the 2 deaths in this group was from pulmonary thrombosis and the other from massive collapse of the lung.

3. The acute unruptured group included 768 cases with 22 deaths, a mortality of 2.86 per cent. Every case up to the point of rupture is included in this group. In many of the cases the appendix had undergone some gangrenous change. Of the 22 deaths, 6 were from general peritonitis, 2 from anesthetic calamities, 1 from adynamic ileus, 1 from cerebral hemorrhage and peritonitis, and 2 from pulmonary embolism. There were 10 deaths without necropsy.

4. Ruptured with abscess—here are included all cases of ruptured gangrenous appendices in which the inflammatory process had become successfully localized. There were 128 patients with 13 deaths, a mortality of 10.1 per cent. Five of the patients died from general peritonitis, 1 from appendiceal abscess draining into the cecum, and 1 from subphrenic abscess. In 6 cases there was no necropsy.

5. Ruptured with peritonitis—this group includes all cases of ruptured gangrenous appendices with spreading or diffuse peritonitis without evidence of localization. There were 113 patients with 36 deaths, a mortality of 32.1 per cent. All of these deaths were caused by diffuse peritonitis.

It is the last group that should be given more consideration. When it is realized that approximately 80 per cent of the deaths from appendicitis are caused by peritonitis, the problem presents itself clearly. How can deaths from peritonitis be eliminated or reduced to a minimum? The answer is: Diagnose and operate early. If there is rupture with diffuse peritonitis, consider the advisability of a late operation. Solution of the various phases of this problem involves a divided responsibility of the public, the physician, and the surgeon.

The responsibility of the public is clearly shown by the following: The average duration between onset of symptoms and the physician's examination in this series of combined acute cases was 42.1 hours, almost 2 full days. Furthermore, 25 per cent of the patients had received a cathartic or laxative (still too frequently prescribed by a physician) before admission to the hospital. Of those receiving a cathartic, death occurred in 13.5 per cent of the ruptured cases will abscess and in 32 per cent of the ruptured cases with peritonitis.

From 80 to 90 per cent of the fatal cases of appendicitis are those which have been home-treated, rather mistreated, with administration of cathartics and delay in calling the family physician. Occasionally the physician fails to make a sufficiently early diagnosis; this may be rare, but it continues to be a factor which should be considered and which should stimulate all to be on guard. The fear of hospitals and of the doctor who believes in operating still prevails. Unfortunately, newspapers have helped to inculcate this fear by featuring, in broad headlines, deaths that follow operation. Frequently the operation is blamed for the outcome rather than the home treatment and delay.

This procrastination and misdirected treatment on the part of the public can be explained only by a lack of knowledge of the all-important dangers involved. To-day practically every physician will agree that the time element between onset and operation is of paramount importance, and that the administration of cathartics to patients with abdominal pain is not only dangerous but is to be condemned. If we believe these fundamentals in the treatment of appendicitis and if we admit that the mortality from this

disease is on the increase, what is to be done about it? Are we to continue to sit on the side lines with our arms folded and our lips closed and not proclaim these fundamentals to the world? Our constituent county medical societies should promulgate programs of lay education that will leave not one family in the county ignorant of the dangers of home treatment and delay when dealing with abdominal pain.

The responsibility of the physician embodies several factors for discussion. The early diagnosis of acute appendicitis ranks highest in consideration of the subject, for upon it hinges the question of early operation and recovery. Only 40 per cent of the cases in this survey were seen by a physician during the first 12-hour period of the disease, but of these only 11 per cent were diagnosed and operated upon within the first 12 hours. This can mean but one of 2 things; either a sufficiently early diagnosis was not made, or an attitude of watchful waiting, with the hope that the attack would subside, was adopted. A carefully taken history is of utmost importance. The sequence of abdominal pain, nausea or vomiting, shifting of the pain to the right lower quadrant, a rise of temperature, and leukocytosis is classical and aids materially in arriving at a diagnosis, but all too frequently the symptoms are not typical. Only 40.5 per cent of these patients gave a typical history, whereas 59.5 per cent of the histories were atypical. Although 90.6 per cent of patients complained of abdominal pain as the first symptom, right lower quadrant pain ranked highest in frequency—32.5 per cent. Generalized abdominal pain occurred in 31.7 per cent of the cases, epigastric pain in 16.9 per cent, and pain centered about the umbilicus in only 4.2 per cent. Nausea and diarrhea occurred as the primary symptom in 7.9 and 1.3 per cent of the cases, respectively. Constipation accompanied the attack in 36 per cent of all cases, and diarrhea was associated in 6.4 per cent.

The early diagnosis of acute appendicitis must depend of necessity on the proper interpretation of the physical findings. The temperature and pulse are increased to a moderate degree only and it has been noted frequently in the early stages that other symptoms and signs may be fairly typical several hours before a rise in temperature is found. Usually the temperature ranges from 99° plus to 101° F; rarely does the temperature in cases of acute unruptured appendicitis reach 102° F. If it is elevated to 103° or 104° F., a search should be made for some other cause.

By grading intensity values on a basis of I to

IV, it was found that right lower quadrant tenderness overshadowed rigidity in 61 per cent of cases, that tenderness equalled rigidity in 31 per cent, and that rigidity overshadowed tenderness in only 6.9 per cent of the cases. It is usually taught that the important question in making a diagnosis, aside from the history, is the presence of tenderness and muscular rigidity at McBurney's area or in the right lower quadrant. Most of the teaching and textbook description regarding rigidity is descriptive of advanced stages of acute appendicitis rather than of the early case—the type to which we should direct attention more fervently in the future. Most surgical treatises on abdominal findings in appendicitis convey the idea of waiting for the development of definite rigidity before venturing a diagnosis. My experience has not been entirely in accord with this teaching. On the contrary, I have found in numerous instances that, when delay had occurred because of watchful waiting for the appearance of unequivocal rigidity, the disease was no longer an early process but rather had passed on to varying stages of localized or spreading peritonitis. In a few instances I have observed but very slight, if any, rigidity present up to the time of operation when perforation had already occurred, although extreme tenderness had been present for many hours. Definite rigidity makes the diagnosis easier, but the amount of pathologic involvement present usually increases in direct proportion to the degree of rigidity in the right lower quadrant. Therefore, in early acute appendicitis, tenderness usually overshadows in intensity whatever rigidity may be present. If this disease is to be diagnosed in its early stages, the localized tenderness must be evaluated, which, when considered together with the history, temperature, and possible leukocytosis (particularly if there is a polymorphonuclear leukocytosis), will render possible an early diagnosis in a greater number of cases in the future than has been possible in the past. As the hours and days elapse before a diagnosis is made, the progression of the inflammatory process may in a rough way be checked with the intensity of rigidity found at any examination. It is just as desirable to diagnose early acute appendicitis before marked rigidity has developed as it is to recognize intestinal obstruction from the paroxysmal, rhythmical, cramplike pains which precede complete obstruction without waiting for fecal vomiting to supervene.

There always will be a small group of cases with atypical symptoms and abdominal findings which will baffle the intellect and ingenuity of the most experienced. This applies particularly

to the cases in which the appendix is in a retrocecal position, hanging over the pelvic brim, or lying high up beneath the liver: also to the cases developing in infancy or childhood and in the aged. The younger the child, the greater is the obscurity of symptoms, the quicker perforation occurs, and the higher the mortality.

Even in infancy the disease cannot be overlooked or neglected, for in patients over age one it is the commonest abdominal emergency. The relatively high position of the appendix, its greater relative length, and its mobility are some of the influencing factors in diagnosis since they may lead to infection in unusual situations. Pain and vomiting are the initial symptoms in infancy, and due to the fact that these occur so frequently as the result of digestive upsets, they are likely to receive little consideration before the condition has progressed to a definite peritonitis. The grave danger lies in failing entirely to think of appendicitis.

Appendicitis in the aged, although diminishing with increasing age, is still sufficiently common beyond age 60 to make it one of the important emergencies within the abdomen. While the symptoms are the same as in younger adults, the mental attitude of the physician is prone to be distinctly different when considering these elderly people. He will be seeking conditions common for that age of life—carcinoma of the bowel, gallbladder or urinary disease with its complications. Furthermore, there is a reluctance to advise operation under any but the most clear-cut indications.

The danger of the early administration of cathartics and morphine in cases of acute abdominal pain should be emphasized repeatedly and condemned. Both the public and the physician must be taught the seriousness of this practice. The persistent use of cathartics by some physicians in undiagnosed abdominal pain apparently comes down to the present day from certain of the earlier teachers who believed that they should be given in cases of appendicitis. Even John B. Deaver, in his first treatise on appendicitis, published in 1896, advocated castor oil immediately after the diagnosis had been established. Soon afterwards, however, he changed his opinion and became one of the staunchest advocates for early operation. With the accumulated evidence of the past 25 years in regard to the relation of cathartics to perforated appendices, peritonitis, and death, there should be no doubt to-day on the part of any physician as to the clear-cut duty toward his patient: Cathartics must not be given until appendicitis or other potential perforative lesions of the gastro-in-

testinal tract can be reasonably ruled out. Likewise, the prescribing of morphine for abdominal pain before a diagnosis has been reasonably established is very dangerous and too often leads to delayed or mistaken diagnoses. At least careful thought should be given to eliciting a good history and making a thorough examination before permitting use of the drug.

The responsibility of the surgeon is very great, for patients with acute appendicitis in all stages of severity continue to be recommended for operation. In the patients in this survey the average duration between onset of acute attack and operation was 104.6 hours, more than 4 full days. There were 23 appendectomies within 6 hours with no deaths. Within the first 12 hours there were 131 operations with 2 deaths, a mortality of 1.5 per cent. After 12 hours in a group of 1053 cases there were 62 deaths, a mortality of 5.98 per cent, 4 times the mortality of those operated upon within the first 12 hours.

Appendicitis is strictly a surgical condition to be treated by excision of the acutely inflamed appendix, and we should strive to make sufficiently early diagnoses so that operation may be performed if possible within the first 24 hours, preferably within the first 12 hours. This and other studies have shown that, if operation is postponed to within the second 12-hour period, the mortality rate is doubled as compared with that of the first 12 hours, and if delayed until after 24 hours this rate is more than doubled.

The indication for drainage of a well-walled-off abscess of appendiceal origin is clearly defined. If the abscess is definitely outlined through the abdominal wall, a small incision well within the boundaries of the abscess wall can usually be made without opening up the free peritoneal cavity. No adhesions should be broken up save those necessary to break into the abscess for drainage. The appendix, if seen and easily accessible, may be removed, but this frequently is not possible without unnecessary trauma and risk of spreading the infection.

The outcome of patients that will continue to be admitted to hospitals with spreading and diffuse peritonitis will depend largely on methods of treating peritonitis by the individual surgeon. Most of the patients reported here were operated upon immediately after admission, and the mortality rate of 32 per cent is not praiseworthy.

The folly of precipitate surgery in these cases was learned after several very bitter experiences. The greater the number of patients with acute diffuse peritonitis treated by a deferred operation, the greater will be the number of recoveries and the lower the mortality. It is necessary only

to refer again to the work of LeGrand Guerry to ascertain what can be accomplished by such management. He reported 2 groups of acute diffuse peritonitis—the first group of 85 cases, operated upon immediately, with 7 deaths, a mortality of 8.2 per cent; the second group of 123 cases, by a deferred operation, with 2 deaths, a mortality of 1.6 per cent. To my knowledge the record of results in these cases has not been duplicated by any other method or surgeon, and he has been very emphatic in his belief that the secret of his success in diffuse peritonitis lies in the deferred operation. Also, it has been pointed out in the fourth survey of acute appendicitis in Philadelphia that much of the credit for the reduction in mortality during the past 5 years was given to an improvement in the management of spreading peritonitis by the surgeons of that city.

This is no new method of treating peritonitis; years ago Deaver spoke of operating upon these patients immediately on admission as “precipitate or too radical removal during peritonitis,” and Richardson referred to them as coming “too late for an early operation and too early for a late operation.”

The real problem to-day is to interest surgeons in giving the method a conscientious trial. A unanimity of teaching the subject by our outstanding surgeons would soon bring about the desired results; until then we can only plead for adherents to the cause.

On the surgical service at the Reading Hospital the management of acute appendicitis with diffuse peritonitis is now as follows: The patients are placed on “regulation” therapy, consisting of strict Fowler position, nothing by mouth, intermittent or continuous gastric siphonage drainage as required, morphine, fluids under the skin, and glucose intravenously. This treatment is observed until the patient has become immunized against the infection and the peritonitis brought well under control, as evidenced by a subsidence of temperature and pulse, the restoration of normal peristalsis, and the passing of flatus. Usually a well-walled-off abscess will form close to the appendix or in the pelvis in from 5 to 10 days, when it may be opened and drained through a small abdominal incision or through the culdesac. An abscess may be incised through the rectum if it is pointed in this region and cannot be operated upon safely through the abdomen or vagina; this, of course, is less preferable than either of the other 2 routes. The time and method of operation is chosen with extreme caution; we endeavor at

all times to deal with each case on its own merits.

Surgeons will not fully live up to their responsibility to the public until they have thoroughly tried out such a method of treating these most difficult cases. The urge to operate is great, and many will recover following the immediate operation, but successful management of the majority demands discrimination and mental poise.

SUMMARY

It is generally admitted that the mortality from appendicitis is much too high and that it is steadily increasing. In an endeavor to ascertain the results and the reasons for an increasing mortality, together with consideration of methods of improvement in Berks County, 1866 cases operated upon in the Reading Hospital during the 10-year period, 1923 to 1932 inclusive, were reviewed. The mortality in the entire series is 4.01 per cent.

The responsibility for a mortality of 32.1 per cent in the group of ruptured cases with spreading and diffuse peritonitis was divided between the public, the physician, and the surgeon. The average duration between the onset of acute attack and physician's examination was 42.1 hours; 25 per cent had received cathartics before admission. Of these, death occurred in 13.5 per cent of the ruptured cases with abscess, and in 32 per cent of the ruptured cases with peritonitis. Of 40 per cent of patients seen by a physician during the first 12 hours after onset, only 11 per cent were diagnosed and operated upon within the 12-hour period. The average duration between onset of attack and operation in the entire series of acute cases was 104.6 hours.

The public is responsible for failure to call the physician and for misdirected home treatment such as the administration of cathartics. The apparent lack of coöperation on the part of the public in these matters involves a lack of proper knowledge of the actual dangers involved, and the only method known for correcting the situation is lay education. Every county medical society should inaugurate definite programs at once, including radio broadcasts, talks before civic organizations, parent-teacher meetings, grade and high school students, together with approved newspaper articles that will put this message across to every family in the county. This should be the first step in a campaign to prevent peritonitis, thereby lowering the mortality rate in appendicitis.

The physician is responsible for making an early diagnosis. He should strive to make earlier diagnoses in the future and thus do his part in

preventing peritonitis. The question of right lower quadrant localized tenderness overshadowing rigidity in early acute appendicitis as a diagnostic aid has been stressed, and deserves careful study. Do not wait for advanced rigidity before venturing a diagnosis; marked rigidity may mean spreading or diffuse peritonitis. It is the physician who deserves the credit and praise for the smooth and uneventful recovery of the patient operated upon without peritonitis.

The surgeon is responsible for the method of management of acute appendicitis, in all stages of severity, on admission to the hospital. Most of the patients herewith reported were operated upon immediately after admission. Should the choice of procedure in all cases be immediate

operation, or should management be rationalized to suit the individual case? It is doubtful if any one will raise a question about immediate operation in acute unruptured appendicitis; nor is there any grave question pending regarding incision and drainage of a well-walled-off abscess. There is, however, abundant reason to suggest and urge a delayed operation in most cases of spreading and diffuse peritonitis, awaiting immunization against the infection and the formation of a localized abscess. Patients with peritonitis usually do well on conservative treatment, and the resulting abscess can be drained with much less risk.

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HYPERTHYROIDISM AND HEART DISEASE

Case Report*

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Sufficient evidence of the production of heart disease by toxic goiter has been presented to leave no doubt in the mind of anyone. The cure of this heart disease by thyroidectomy has similarly been proven by voluminous statistics.

The manner in which the heart disease is produced is still conjectural; however, it would appear from gradually accumulating data that the increase in metabolic rate is not the basic cause. The abnormal cardiac findings which are most commonly associated with hyperthyroidism may be listed according to frequency as follows:

1. Increased rate and amplitude.
2. Auricular fibrillation and occasionally auricular flutter (occurs in about 10 per cent of all cases).
3. The systolic blood pressure is elevated and the diastolic pressure is lowered.
4. Underlying angina pectoris may be brought out or intensified.
5. Congestive heart failure may develop as follows:
 - a. With auricular fibrillation alone.
 - b. With auricular fibrillation and associated cardiovascular disease.
 - c. With normal rhythm and coincident cardiovascular disease.
6. Dilatation of pulmonary artery with or without obvious congestive heart failure.
7. Dilatation of the heart with or without evidence of failure.
8. Slight hypertrophy of ventricles.

DIAGNOSIS

The presence of hyperthyroidism may easily be overlooked as the basic cause of cardiac symptoms. When the patient applies for treatment, the cardiac symptoms may be of such severity that the immediate therapy is directed to the heart. This mistake may be avoided by insisting upon a basal metabolic rate determination in all cardiac cases. The hypertension case and the colloid goiter in the young should not be erroneously diagnosed as hyperthyroidism until repeated estimations of the basal metabolic rate have given a true basic reading. Occasionally in the borderline case the Goetsch test will give valuable diagnostic information. The presence of paroxysmal tachycardia or fibrillation should immediately cause suspicion that the thyroid is hyperfunctioning.

The following case was admitted to the medical service of the Misericordia Hospital with a very large nodular goiter involving the whole left lobe of the thyroid and associated general anasarca, involving both lower extremities, the abdomen, and both pleural cavities. The radial pulse was very rapid and irregular. Marked dyspnea and cyanosis were present.

Medical therapy was directed to the heart with very little success, and operation was deferred because of the very poor condition of the patient. It was hoped that, as improvement occurred in the heart, a thyroidectomy could be performed. The improvement in the heart did

not occur; the patient developed bronchopneumonia and later an uncontrollable neurosis. Two months after admission it was decided that a thyroidectomy should be attempted, and the left lobe of the thyroid was completely removed under local anesthesia. The right lobe was examined at the time of operation and found normal.

CASE REPORT

Mrs. A. G., age 52, was admitted to the Misericordia Hospital on Oct. 10, 1933, complaining of dyspnea, abdominal distention, and enlargement of the neck. The latter had been present for 25 years and was of no concern to the patient except for the disfigurement. It was first noticed following pregnancy, but no enlargement had been observed during the past few years.

Four months before admission she noticed the beginning of the dyspnea. Three months before admission she noticed some enlargement of the abdomen and swelling of both lower extremities.

The menstrual history was negative. The menopause occurred 4 years previously without any abnormal symptoms.

Physical examination upon admission revealed a very large nodular goiter, involving the left lobe of the thyroid and measuring about 4 inches in diameter. This mass was freely movable, did not produce any pressure symptoms, and was of little concern to the patient. Examination of the chest revealed the heart to be greatly enlarged to the left, with a well-developed fibrillation. The tone was fair, and no murmurs were heard. The lungs showed only fair expansion, and there was

definite evidence of fluid in both pleural cavities. The abdomen was considerably distended, and very definite evidence of free fluid was present. The extremities showed edema throughout their whole extent. The diagnoses on admission were: (1) Adenoma of thyroid—left; (2) auricular fibrillation with decompensation; (3) abdominal ascites; (4) pleural effusion; and (5) anasarca.

It was impossible to record the pulse rate definitely at the time of admission; the respiratory rate averaged between 38 and 40. The blood pressure was 138/78. The general condition of the patient was so poor that all of the treatment was directed to the heart and the edema. The urine was positive for albumin and contained numerous casts. The blood count was within normal limits except for a slight secondary anemia. Blood urea was 14, chlorides 470, and sugar 86.

The fibrillation continued without improvement. On Oct. 31, 1933, the patient was given potassium iodide. Within a few days a marked improvement in the pulse rate occurred, but this was soon followed by recurrence of the fibrillation. The basal metabolic rate at this time was 52 plus. The iodine was continued, and 7 days later the same test was 30 plus. Electrocardiographic study showed a marked auricular fibrillation. Operation was advised but refused by the medical service because of the very poor condition of the patient.

The patient developed bronchopneumonia associated with a marked delirium, which persisted for one month.

On Dec. 11, 1933, the large adenoma was excised under local anesthesia. Within 5 days the delirium had completely disappeared and the cardiac fibrillation was relieved. The pulse rate at this time varied between 90 and 100, and was perfectly normal in rhythm. The



FIG. 1.—(A) Five days after left lobectomy of thyroid. (B) Ten months later.

blood pressure was 128/62. The respiratory rate was 20, and the temperature was normal.

On Dec. 28, 1933, electrocardiographic study revealed a rhythm of normal sinus origin, with a rate averaging 75. There were no evidences of delay in conduction and no axis deviation. The T waves in all 3 leads were inverted.

She was discharged from the hospital on Jan. 5, 1934, and a follow-up, made on Apr. 3, 1934, showed that she had gained 40 pounds, the heart rate was 80, the rhythm was normal, and there were no murmurs. There was no evidence of edema, and the patient did not complain of any dyspnea.

On Nov. 20, 1934, the patient was again examined. The weight had increased 70 pounds since her discharge from the hospital. Her pulse rate was 90, and the rhythm was normal. The tone was good, and no murmurs could be heard. The heart was completely compensated.

SUMMARY

This case illustrates the following points:

1. The importance of basal metabolic rate determinations in cardiac cases.
2. Thyroidectomy will effect a cure in a cardiac case associated with thyrotoxicosis even though it is apparently hopeless.
3. Therapy directed to the heart should not be continued for too long a period when hyperthyroidism is associated with the cardiac disease.



FIG. 2.—Section of adenoma. This section was the most hyperplastic of many made from the adenoma.

The therapy will be much more effective after thyroidectomy.

4. The size of the heart decreases after thyroidectomy.

255 South Seventeenth Street.

HYPOGLYCEMIA AS A CAUSE OF MENTAL SYMPTOMS

Report of Cases*

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Hyperinsulinism has been recognized as a disease entity only during the past 10 years. Stimulated by the work of S. Harris in 1924, the first reports described convulsive and comatose states due to hypoglycemia; these were severe cases of hyperinsulinism. To consider them as typical would be to consider the coma of diabetes mellitus as the usual finding. Both insulin shock and diabetic coma are extreme conditions. Just as other symptoms were found in diabetes so are they being found in hyperinsulinism. As we began to look for these cases it appeared that less severe degrees of hypoglycemia caused other symptoms such as anxiety, irritability, sweating, tremor, nervousness, and even mental changes.

Frank N. Allan in 1929 reported 2 cases of hyperinsulinism. One patient had temporary attacks of acute mania, which passed off with the administration of glucose. The other case was

diagnosed as hysteria until a blood sugar estimate of 48 mg. gave the clue to the diagnosis. Glucose gave relief to this patient also.

In 1932, Louis G. Heyn reported a patient who, when his breakfast was delayed for the purpose of obtaining a fasting sugar, was found to be crying uncontrollably. An hour later he became violently active, threw his arms about, jumped out of bed, repeatedly turned the lights on and off, made peculiar screams and noises, and was quite maniacal. It took 3 attendants to restrain him, but several hours later he was normal and retained no memory of these events. His condition was later proven to be a case of hyperinsulinism, and further attacks were prevented by frequent feedings. Many mild recurrences were so much like hysteria that a psychiatrist made this diagnosis. Heyn also noted that many women at the onset of menstruation have an exceedingly high glucose tolerance with low curves and low fasting sugar levels. He sug-

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gested that this might explain some of the nervous symptoms of the menstrual period.

In February, 1933, another of Harris' papers reported several cases of epilepsy and narcolepsy associated with hyperinsulinism. At about this time it was evident that the diagnosis could not be made on a single fasting blood sugar estimate, but that a glucose tolerance curve lasting at least 4 or 5 hours was necessary and that this was not always conclusive. The symptoms were increased to include nervous irritability and anxiety, weakness, fatigability, hunger, tremor, muscular twitching, lack of clearness of vision, diplopia, unsteadiness in gait, syncope, excessive perspiration, loss of emotional control, convulsions, coma, and even death. Many of these symptoms belong definitely to the so-called neurotic group and to these may be added an equally large number of definitely psychotic manifestations as observed in the literature and in our own patients.

Harris in December, 1933, recorded the case of a patient with this disease who had such severe spells of weakness, irritability, lapses in memory, definite depression, and delusions of persecution that institutionalization was thought necessary. Medical treatment, however, gave relief. In 1930 Wilder reported a patient with somnambulism due to hyperinsulinism who also had attacks of delirium requiring restraint in a straight jacket. Nevertheless this man was normal when the blood sugar was within normal limits. Wilder surmises, "It is probable that many of these cases are being dismissed with such diagnoses as hysteria, psychoneurosis, epilepsy, or schizophrenia. The nervous manifestations of hyperthyroidism led to this disease being included among the neuroses."

A patient reported by Bernard E. McGovern in 1932 experienced attacks of amnesia and unconsciousness, usually beginning in the forenoon. He would usually lie down although he sometimes walked about muttering and shouting.

M. K. Tedstrom in February, 1934, reviewed 65 cases of hyperinsulinism from the standpoint of etiology, symptomatology, laboratory findings, and treatment, all of which were severe cases. Clouding of the sensorium was observed in 70 per cent, varying from confusion to coma; weakness in 70 per cent; convulsions in 45 per cent; change of behavior in 30 per cent; and maniacal attacks in 10 per cent. All severe cases showed transitory neurologic findings such as diplopia, clonus, or a Babinski sign. Most of the attacks occurred at night, early in the morning, or late in the afternoon. The age incidence was 20 to 60 years.

With such abundant evidence that hyperinsulinism is capable of producing not only material symptoms but a definite psychosis it would seem that some patients with this disease were actually being admitted to mental hospitals. It was thought a review of blood sugar determinations in psychopathic patients might cast some light on such a possibility. We were fortunate in that the laboratory of the Philadelphia General Hospital for more than 10 years has done blood sugar determinations practically as a routine procedure on most of the patients admitted to both the psychopathic and general hospital wards, and it has been the custom to check all abnormally low sugar estimates. A single determination is not diagnostic unless it is extremely low, and a normal finding does not rule out the condition.

During a period of about 4 years 329 patients were admitted to the psychopathic department who had blood sugar estimates below 70 mg.; 132 were below 65 mg. In this latter group the following diagnoses were made: Schizophrenia, 26 cases; manic depressive psychosis, 18; epilepsy, 7; toxic psychosis, 6; psychoneurosis, 3; acute encephalitis, 1, who recovered in a week; senile dementia, 20; paresis, 14. The remainder, 37 cases, were recorded under rather vague classifications such as "undiagnosed, no psychosis" and "unclassified psychosis." Eleven patients died.

A comparison of the incidence of low blood sugar estimates in the psychopathic ward with those of the general wards was made. In 1000 general medical and surgical patients there were 28 blood sugar estimates below 70 mg., 2.8 per cent; and 10 below 65 mg., 1.0 per cent. In 2000 psychopathic patients there were 87 with blood sugar estimates below 70 mg., 4.35 per cent; and 21 below 65 mg., 1.05 per cent. To emphasize the need of glucose in the brain we would mention the extremely high respiratory quotient for nervous tissue, .98 to 1.00. This would indicate that nervous tissue metabolism is almost completely the metabolism of carbohydrates. Heart muscle gives a value of .91 and other tissues range even lower than this figure. With glucose so important is it not possible that the brain or mind may become affected or reduced in function when carbohydrate metabolism becomes faulty?

The following cases were admitted to the Psychopathic Department of the Philadelphia General Hospital.

CASE REPORTS

CASE 1.—A case of psychosis occurring in a known diabetic who had been standardized to insulin dosage and whose psychosis was proven to be due to hypogly-

emic periods. It is included as a control case to illustrate that hyperinsulinism may cause mental symptoms, and suggests that perhaps some cases of diabetes belong to the dysinsulinism group rather than to pure hypoinsulinism.

H. H., white male, age 37, was admitted June 23, 1933, having been sent from the accident ward of another hospital because of peculiar mental symptoms. He was subject to attacks resembling acute mania. The attack preceding admission occurred about midnight at the patient's home and so alarmed the family that they called the police, who took him to the hospital. He had been a known diabetic for 4 years. The insulin dosage had been 20 units at 7:30 a. m., 10 units at 4 p. m., and 18 units at 10 p. m. The attacks always occurred about midnight. The following day the patient volunteered the information that he would grow restless, twitch and turn and things would go dark in front of his eyes, but he had never lost consciousness and could remember all that had occurred during the attack. No mental abnormalities could be determined; he was oriented, rational, alert, and there were no hallucinations or delusions. Fasting blood sugar findings were 170 mg. per 100 c.c. on June 24, 360 mg. on June 27, 234 mg. on June 28, and 166 mg. on June 29. Physical examination was negative. He was being given an insulin dosage of 20-10-18 in the daytime with a diet of 80 P—120 F—100 C. On June 27, due to the high sugar estimate of 360 mg., he received 8 units at midnight. At 3 a. m. he became so violent that he needed restraints; an hour later he was completely confused and stared into space. At 5 a. m. he was normal and stated that the insulin had caused the attack. It was suggested that the attack was due to hysteria. A change was made in the dietary régime; he was given lunch at midnight and on the following day, June 29, lunch was withheld and 10 units of insulin were given at noon. Blood sugar estimates were made at 1:30 p. m., 2:15 p. m., and 3:15 p. m. These were reported as 45, 37, and 37 mg. respectively. Shortly after the last blood sugar determination was taken he became exceedingly restless. At 4 p. m. the attack was typical; he rolled from the bed, tossed his arms and legs about, rolled his eyes, and talked thickly and incoherently. Orange juice relieved the symptoms. The blood sugar estimate on June 30 was 312 mg., and on July 1, 364 mg. He was discharged with a diagnosis of hypoglycemic excitation.

CASE 2.—T. D., white male, age 36, was admitted Sept. 23, 1933, with the history that he was confused and talked queerly, and that he was a steady drinker of about one-half pint of whiskey daily for the past 2 or 3 years. He had had 3 hospital admissions, each with a similar history—that he would begin to breath hard, become confused and frightened, and often go into a comatose state. He had not had a great deal to eat for several days preceding this admission. Shortly after coming to the hospital the confused state, which was thought to be an alcoholic psychosis, passed into coma. A blood sugar estimate was 40 mg. Atropine ($\frac{1}{120}$ grain) and 50 c.c. of 50 per cent glucose were given intravenously. Within 1 or 2 minutes he was awake and alert as though nothing had happened. He often became very hungry before mealtime, shaky, and felt as if he might fall over. There were no delusions or hallucinations; memory and orientation were unimpaired.

Physical examination was entirely negative except for the liver, which was palpable about 1 cm. below the

costal margin. A glucose tolerance test gave a fasting sugar of 80 mg., a rise to 150 mg. in one-half hour, a rapid return to normal, 101, at 1 hour, 86 at 2 hours, and 98 at 3 hours—a high tolerance and low curve. Starvation undoubtedly precipitated the hypoglycemic state. No treatment was necessary other than regularity of eating with occasional feeding between meals.

CASE 3.—A. H., Negress, age 45, was admitted Oct. 28, 1933, with the history (given by a neighbor) that the patient had been stuporous since morning. Preceding this she had had headaches for 2 months, had been acting queerly, and had told of seeing peculiar lights at night. It was also said that there were some ideas of persecution.

Examination revealed a middle-aged Negress, appearing to be somewhat stuporous but with eyes open and a slight smile. There was perfect catatonia, the limbs remaining in whatever position placed for several minutes. She would not speak but would make occasional movements with her lips as if attempting speech. She did not respond to commands and was not suggestible. Eyeground examination showed a very slight degree of arteriosclerosis, and general physical and neurologic examinations were negative. The blood urea nitrogen was 22 mg., the blood sugar 45 mg. A diagnosis of hyperinsulinism was made, and 8 ounces of orange juice was given by mouth. Within 15 or 20 minutes she was able to talk though still somewhat confused. The following morning she seemed all right and was able to give a good account of herself but remembered nothing of the events leading up to her admission to the hospital. For the preceding several months when going to bed at night, she would see many queer things, balls of fire, various colors, and flashes of light. She had good insight in that she knew these visions were not real. That night she again saw the lights and, in addition, the face of the doctor who had examined her during the day. During this attack there was catatonia. There were several recurrent attacks at night or in the early morning. Repeated fasting sugar estimates on separate mornings were 44, 113, 60, 78, and 40 mg. A glucose tolerance test was done. Starting with an initial fasting value of 40, the blood sugar rose to an abnormally high level and showed a delayed return to normal—131, 200, and 124 mg., respectively, for the first, second, and third hours. The curve was essentially diabetic in type except for the initial value indicating that the case was one of dysinsulinism. On Nov. 1 she was placed on a high caloric, high fat diet, with orange juice between meals and before going to bed. On this régime she remained free of symptoms until her discharge on Nov. 21. The basal metabolic rate was plus 10. The skull roentgenogram was negative.

This case not only illustrates the rôle of hypoglycemia as a cause of mental symptoms but is also an unusual picture in the catatonia and visual hallucinations.

CASE 4.—S. R., Negro, age 54, was admitted Feb. 18, 1934, with the history of having violently attacked a sister and a nephew. He had been having occasional nocturnal convulsive attacks for 4 years, and it was said that for the past 2 years he had become mentally unbalanced. Several times he had made violent attacks, used vile language, and would frequently lie awake at night and cry out at the top of his voice at imaginary people. During the day he was normal.

Examination revealed a somewhat undernourished

Negro of middle age. He was fairly coöperative but sluggish in reactions, and the voice was hoarse. Physical examination was negative except for sluggish pupils and a blood pressure of 180 systolic and 110 diastolic. The mental reaction was that of a mild confusion. He knew the month but said that the year was 1932. His memory was so poor that he could not tell anything of his recent history and little of his past; he did not know his age and did not remember the attack which was the cause of his admission. The blood sugar estimate was 44 mg. A high caloric diet with sufficient carbohydrate seemed to change the condition considerably, for on the following day he was alert and well oriented but retained no memory of the hypoglycemic periods. The blood sugar was 87. A glucose tolerance test gave the following values fasting: 75 mg. and 141 mg. at one-half hour; 136, 100, and 91 mg. at 1, 2, and 3 hours, respectively. This curve is only slightly lower than the usual normal curve. The blood Wassermann reaction was negative. The family later stated that he drank occasionally but never to excess. He was placed on a high carbohydrate, high fat diet with frequent feedings. There was no recurrence of the symptoms.

CASE 5.—D. E., Negro, age 31, was brought to the hospital by the police at 10 p. m. on Apr. 19, 1934, because he had fallen on the street. He was in a confused state, fairly stuporous, but at times would watch what was going on about him. He would not speak. The following day, with confusion still present, he would watch the examiner and the patients, and would eat. A diagnosis of hysterical aphonia was made because he could not be induced to talk. On April 21 he seemed quite normal, but 2 days later showed a return of the mental condition some time after his breakfast. It was fortunate that the routine blood sugar was taken during this attack, for there had been no suspicion of the real nature of the condition. It was reported as 54 mg. The glucose tolerance test curve typical of hyperinsulinism showed 72, 91, 63, 61, 64, and 100 mg. He was given frequent feedings and showed a rapid return to normal in the next day or two. The physical examination was entirely negative. The pupils reacted well to light; there were no tremors, and all reflexes were perfectly normal. He was perfectly oriented and alert. Examination by the commitment officers revealed nothing except that he was perhaps a little too well satisfied with his hospital surroundings. He had been admitted to a hospital in Paterson, N. J., on March 28, because of a sudden spell of weakness, shortness of breath, and sweating; he was discharged 16 days later and was told that he had a "lazy heart." The spinal fluid and blood serology were reported as 4 plus in all antigens and he had a paretic type of gold curve—333221000. Although he was an early case of paresis he showed no mental changes other than those on admission and shortly afterward. The correlation between the early paresis and hypoglycemic attacks presents an interesting chance for speculation. We have observed it in one other case.

CASE 6.—F. L., white male, age 49, was admitted Mar. 13, 1934, being brought in by the police with a note that he had entered a restaurant at 6:20 p. m. and demanded food although he was unable to pay for it. On being refused he attacked the proprietor and created a disturbance. Additional history from his landlady stated that he had been acting in an unusual manner for the past few days. Examination on admission re-

vealed a stupor or deep sleep. Touching the hand or separating the eyelids had no effect. Vigorous shaking caused him to awaken, but during the examination he yawned many times and stated that he felt sick and sleepy. There was no recollection of the events leading up to the arrest except that he had not had anything to eat all day and had gone into a restaurant to ask for food; from there his memory failed him. Physical examination was negative except for definite exaggeration of all deep reflexes. The blood sugar estimate, which unfortunately was not taken until the following day, was 75 mg. With 3 full meals daily there was no recurrence of symptoms and subsequent blood sugar estimates were low but not below 70 mg. He was removed from the hospital by relatives before further tests could be done. The past mental history was completely negative.

SUMMARY AND CONCLUSIONS

Because of definite evidence in the literature that many of the symptoms of hyperinsulinism are mental we have looked for these cases in the psychopathic wards of the Philadelphia General Hospital. It is significant that there is a somewhat higher percentage of low blood sugar determinations found in psychopathic patients than in patients in the general medical and surgical wards.

The diagnostic features are: (1) A psychosis which may take almost any form, often violent in character and belonging to the organic group in that the sensorium is always affected; (2) psychotic manifestations which alternate with periods of normal behavior, a more or less transient psychosis depending upon the severity of hypoglycemia; (3) a low blood sugar estimate during the psychotic period; (4) relief of symptoms when glucose is given; (5) a high glucose tolerance as evidenced by a glucose tolerance curve, which is below normal either during the period of fall or at any point in its course; (6) a tendency for the psychotic episodes to occur in the early morning, late at night, or occasionally just before mealtime.

A further study may cast light on some of the obscure and transient psychoses which disappear on regular hospital feeding. Starvation or irregularity in meals seemed to be a precipitating factor in 3 of the 6 cases reported. The omission of a meal might cause a low blood sugar level to descend further to a dangerous point and so initiate the mental symptoms. The medicolegal aspect of such a transient mental state is a point worthy of consideration.

There is little doubt that hypoglycemia may cause a definite psychosis, necessitating institutional care, and it is important for the general practitioner to be able to recognize these cases. The symptoms are so quickly relieved by the

oral or intravenous administration of glucose that confinement in a mental hospital could be avoided except in a few of the more severe cases.

It is interesting to note that convulsions occurred in only 1 of the 6 cases reported.

Medical Arts Building.

THE WELL-FITTED BRASSIERE AND ITS USE

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The most common condition encountered in the breast of the female patient over age 30 is that of the pendulous breast, which in a great many cases is complicated with abnormal involution. By abnormal involution is meant that condition of the breast in which the acini begin to appear at the time of conception, and increase in size and number until the time of lactation is established. The breast at this time contains little but glandular tissue. When lactation is interrupted, involution occurs until the breast is restored to a structure containing ducts and but few acini, and a number of undifferentiated-appearing round cells. There is a coincidental increase in the perilobular connective tissue, and choking off of the ducts or acini may occur. This leads to retention of secretion and interruption in the involution of the lobule and produces small or larger cystic structures—the so-called chronic cystic mastitis.

In a series of 40 cases of abnormal involution studied at random, it was noted that the breasts of 34 were pendulous, heavy, and quite painful, particularly at the time of menstruation. The support of these breasts with a properly fitting brassiere was attended with great relief in the great majority of patients. As a result of this

study and the observation of many other patients it was concluded that a contributing factor in abnormal involution is that of improper breast support. Certainly such subjective symptoms as pain, drag, and tenderness are often caused by it.

There is no doubt but that many of the modern brassieres on the market to-day are poorly fitting. Many not only do not support the breast but compress it against the thorax, and in some cases actually cause the breast to be pushed downward, making the breast even more pendulous than it was before the garment was worn.

The stimulus to the breast in menstrual life is supplied by ovarian secretion which causes hyperplasia of cells and a subsequent differentiation and organization of them into ductules. Coincidentally, the connective tissue disappears. When ovarian stimulation is interrupted, as it is at a certain point in the menstrual cycle, the reverse occurs; that is, the epithelial cells disappear, and the connective tissue undergoes hyperplasia. This hyperplasia of the pericanilicular and periacinous connective tissue with a new formation of ducts and acini, including the desquamation of the epithelial cell in the terminal ducts and their acini, is termed masoplasia. The epithelial cells that have separated from the

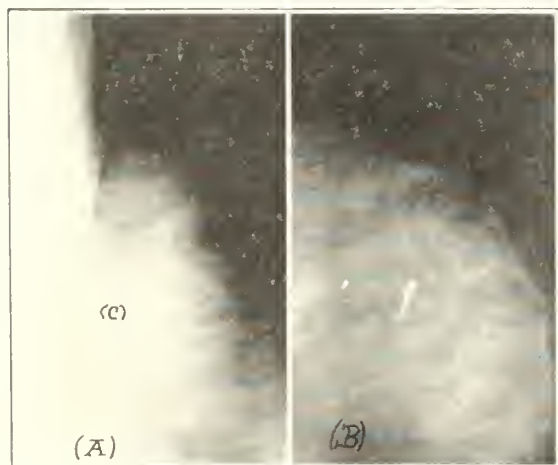


FIG. 1.—(A) Primary roentgenogram of the breast before wearing a well-fitted brassiere. (B) Same breast 2 years later, after wearing a well-fitted brassiere. Note area (C) has disappeared in (B).

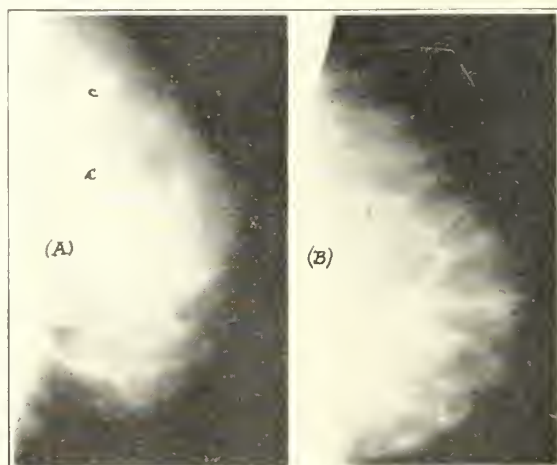


FIG. 2.—(A) Primary roentgenogram of the breast before wearing a well-fitted brassiere. (B) Same breast 9 months later. Note disappearance of areas (C); also that striations which curve downward in (A) are more horizontal in (B).



FIG. 3.—A well-fitted brassiere preserving the normal conical contour of the breast.



FIG. 4.—A poorly fitted brassiere compressing the breast.

ductules undergo disintegration and are carried away through the blood and lymph vascular systems, perhaps also some via the ducts. Any condition which will impede this removal and dam up these products will provoke connective tissue growth of a kind different from that growing in the normal cycle. Finally, in these small areas the fibrous tissue contracts into the firm, shotty nodules met in abnormal involution, and previous acini are dilated to the cysts so prominent in these cases. These cysts are nothing more than dammed-up areas in the duct and perchance also lymphatics, the walls of which have organized. Probably one of the most important factors in the production of a poor venous and lymphatic return is the stasis of these systems produced by the actual pulling weight of the pendulous breast. Another factor is that of the stretching of the lymphatics, thereby causing a narrowing of the lumen of these vessels. The constant strain on the elastic tissue from the actual weight of the breast finally causes the individual fibers of the tissue itself to give way in small tears with an actual loss of its elasticity. There is, as a result of this, a further relaxation of the breast tissues, causing the breast to be more pendulous than ever; hence, a proper breast support is necessary to interrupt this vicious cycle and thereby give relief to the patient.

A series of 20 cases has very definitely shown that a proper uplift brassiere will, in the great majority, not only improve the comfort of the patient with pendulous breasts, but also show an actual disappearance of these shotty nodules of abnormal involution, both by palpation and on the roentgenogram. The roentgen examination of the breasts of these patients was exceedingly useful in obtaining permanent records of the changes in the breast architecture for comparison at the different periods.

The following 2 cases will serve to show the results obtained in this series of 40 cases of patients with painful pendulous breasts who have worn a properly fitted brassiere over a period of time.

CASE REPORTS

CASE 1.—Patient, age 32, married, 2 children, no miscarriages, menstruation always regular every 28 days, lasting 2 or 3 days. History of caked breast during the nursing of the last child. Seven months before admission she noticed some lumps in the right breast mingled with small shotty nodules. These lumps were always more painful and seemed to be a great deal larger just before the onset of menstruation. The patient complained particularly of a drawing pain throughout the entire breast with a dull, heavy sensation, which was more prominent toward the end of the day. Physical examination revealed 2 irregular, nonadherent masses in the upper portion of the breast. There were no palpable masses in the axilla. Radiographic exam-



FIG. 5.—A well-fitted brassiere showing nipple at apex of cone.

ination showed 2 irregular heterogeneous opacities in the superior angle with many smaller opacities scattered through the breast. The entire picture was that of abnormal involution (Fig. 1). The patient reported 13 months later, during which time she had constantly worn a well-fitted brassiere, that she had been relieved of all pain and heaviness in the breast, and that she could not feel the lumps that had previously been present. On examination no lumps could be palpated, and a great deal of the shottiness had disappeared. Roentgen-ray examination showed the masses decreased in size and density with their borders more diffuse. The films taken of the axilla were clear. Two years after the first examination, the patient again reported that the breasts were very comfortable with pain entirely gone. Roentgenograms at this time revealed the breast architecture clear throughout. The masses had disappeared (Fig. 1).

CASE 2.—Patient, age 37, no children, no miscarriages, menstruation regular every 29 days lasting from 3 to 5 days. There was no history of injury or disease of the breast of any kind. The patient stated that for the previous 4½ years she had been having a heavy, dragging sensation in the breast which was particularly prominent in the upper portion. The uncomfortable feeling was greatly exaggerated just before the onset of menstruation. There never had been any actual pain in the breast itself, but the patient had noticed small lumps in both breasts about the size of ordinary buck-shot. These lumps seemed to become larger just before the onset of the menstrual period. On examination it was noted that the breasts were quite pendulous and had a distinctly shotty feeling on palpation. The roentgen-ray examination showed practically the entire breast triangle filled with conglomerate opacities, typical of

abnormal involution. The axillae were clear of enlarged glands (Fig. 2).

This patient was fitted with a brassiere, which she wore for 9 months. At this time she reported, saying that she had entirely lost the weighty sensation in the upper portion of the breasts, that the dragging pain was gone, and that she was not conscious any more of the small shotty lumps in her breast. Roentgenographic examination (Fig. 2) showed the conglomerated masses previously reported entirely gone, giving the breast more of the normal translucent appearance. The stria of the breast triangle, instead of pointing downward as in the previous films, were actually pointing out to the nipple, that is, perpendicular to the thorax. Thus the normal breast drainage was again established.

The reversal of the direction of the breast stria is noted quite frequently in cases in which pendulous breasts are properly supported. The ideal support for the breast is that type which will lift and hold the breast up and away from the thorax, giving it its normal conical contour. An excellent example of retaining the normal breast contour is shown in Fig. 3. Note in Fig. 4 how the brassiere compresses and flattens the breast against the chest wall. When the breast is held with its normal conical contour, the nipple should be in the extreme apex of the cone (Fig. 5) and not in a dependent portion as is seen in many of the poorly fitting garments on the market to-day. Fig. 6 illustrates a garment which gives little or no support.



FIG. 6.—A commonly worn brassiere giving little or no support to breast.

It is true that many of the present-day brassieres lift the breast, but in so doing they compress and flatten it against the body, and in some cases actually compress it in a downward direction. Fig. 7 shows the result of wearing a brassiere exerting downward pressure. This patient was properly fitted with a support, and in less than 6 months received absolute relief from the dull, dragging pain which is so constant in patients with pendulous breasts.

The flattening of the breast caused by its compression is sufficient in itself to retard the breast drainage with the appearance later of the discomfort, the pain, and the shotty nodules of abnormal involution.

Another condition in the uplift garment which must be avoided is the compression of the tail of the breast as well as the structures in the lower anterior portion of the axilla where the mammary gland drains itself into the general circulation. Therefore, it is essential that the upper border of the brassiere be free and entirely loose from the skin surface.

In certain cases the use of proper endocrine preparations will relieve, or actually cure shotty breasts, provided, of course, secondary changes have not advanced to too great a degree. In all probability, alterations in the normal routine of secretions from the endocrine gland are at fault in the production of these lesions in certain cases much as a perverted function can cause the condition in such diseases of the endometrium as the so-called "Swiss cheese" appearance. The point



FIG. 7.—Pendulous breasts as a result of wearing poorly fitted brassieres.

is, however, that a properly fitting brassiere, even in these cases, should give a measure of relief. Probably it is of at least as much importance as in cases in which no endocrine disturbance is apparent.

506 Cumberland Street.

RATTLESNAKE BITE

A Case Report

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A number of years ago a physician in Warren County (Pa.) offered a reward of \$100 for anyone producing an authentic death resulting from a rattlesnake bite. In the 10 years from 1923 to 1932, according to the Bureau of Vital Statistics, Harrisburg, there were 42 deaths from poisoning by venomous animals. One of these was caused by a rattlesnake bite.

It seems to be the opinion among physicians and the laity that rattlesnake bite is usually a life-and-death matter. I am familiar with the case of a man who raises rattlesnakes and other venomous snakes for the Ringling Brothers and Barnum and Bailey circus. This man was bitten 15 times by rattlesnakes over a period of years without any ill effects.

CASE REPORT

A boy, age 15, was admitted to the service of Dr. Monroe T. Smith, of the Warren General Hospital, on July 7, 1931, with the history of having been bitten by a rattlesnake one hour previously. He had been picking berries when the snake bit him twice on the dorsal and thumb surface of his right hand. He killed the snake and walked one mile for aid. The wound was cut by a friend; gunpowder was poured into the open wound and set on fire. A tourniquet of a rag bandage was then applied at the shoulder, and the patient was brought to the hospital. Upon admission he was quite edematous around the eyes and along the forehead. These swellings increased in size and were very blue in color. The pulse was not palpable at the wrist. The entire arm was cyanotic and edematous. At the site of the bites there were many large bluish blebs. The wound continued to bleed for several hours. When the tourniquet was removed, the edema and cyanosis progressed above

the tourniquet line and extended along the right chest as far as the midline and diffused downward along the whole costal cage and upward over the clavicle, and over both triangles of the neck. This edema was hard and did not pit on pressure.

On admission the temperature was 98.6 F., pulse 100, and the respiratory rate 25. The hemoglobin was 58 per cent; red blood cells 3,650,000. Within the next 4 days the hemoglobin dropped to 17 per cent; the red blood cells dropped to 1,300,000; the temperature arose to 105.2 F., the pulse rate increased to 130, and the respiratory rate to 28. Urinalysis showed a heavy trace of albumin and occasional red blood cells. The bleeding and coagulation time were both 15 minutes plus. The hemolysis continued to increase although 2 injections of antivenine (10 c.c.) were given, one ampule 6 hours after admission and another 3 hours later. Twenty-four hours later another ampule was given, and 36 hours later another ampule (10 c.c. antivenine) was given subcutaneously. In the meantime horse serum and Normet's solution were given without avail.

On the fourth hospital day the patient was bleeding from the nose, the swelling in the neck and chest was extending, and the temperature was 105.2 F. He was very dyspneic and complained of being cold. The red

blood cells were 1,300,000 and the hemoglobin 17 per cent. The red cells showed poikilocytosis and anisocytosis. A blood transfusion of 300 c.c. was given by the direct method. Immediately following this the patient went into a sound sleep, the temperature began to drop, the pulse rate decreased, and the general condition was improved. The blood count showed an increase in hemoglobin from 23 to 30 per cent, and the red blood cells increased from 1,300,000 to 2,200,000 without further medication. On the eighth hospital day he was given a combination of iron and copper in solution, which was taken daily. He was discharged on July 25, 1931, and at that time the hemoglobin was 70 per cent and the red blood cells 4,800,000 (18 days after the rattlesnake bite).

Herewith is reported a case of rattlesnake bite with recovery in which the antivenine apparently failed to stop the hemolysis of the red blood cells, but the quick action of transfused blood restored the bleeding and coagulation time to normal.

304 Third Avenue.

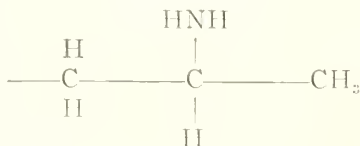
BENZYL METHYL CARBINAMINE (BENZEDRINE)

A Study of the Rapidity and Duration of Its Shrinking Action in the Nasal Turbinates

ANTHONY A. S. GIORDANO, M.D.,* PHILADELPHIA

Recently there has been a widespread interest in drugs of the ephedrine-epinephrine type, and considerable research effort has been spent on finding some compound which would provide the lasting shrinkage of ephedrine without the disadvantages usually associated with that drug.

One of the most promising compounds developed recently is benzyl methyl carbinamine (benzedrine). A glance at the formula of this drug



shows that it has the fundamental grouping responsible for shrinking nasal mucosa. Its action, therefore, might reasonably be supposed to be comparable to that of ephedrine, to which it is structurally related. At the same time, the absence of the hydroxyl (OH) groups would tend to make its effects less transitory than those of epinephrine.

Benzyl methyl carbinamine was studied pharmacologically by Hartung and Munch, and also

by Piness, Miller, Hyman, and Alles, who observed that following its administration there was a suppression of the secretions of the mouth and nose. Bertolet and Byrne used benzyl methyl carbinamine carbonate clinically with marked success in the treatment of common rhinologic conditions.

It appears that the drug has a shrinking potency roughly equivalent to that of ephedrine and that its irritating properties are less. Accordingly, it was decided to study its action in the human nares on a group of patients suffering from the ordinary mixed rhinologic conditions such as are seen daily in office practice or in the clinic.

The initial part of the investigation may be said to cover the following points:

1. A study of the degree of shrinkage obtained with benzedrine.
2. A study of the rapidity of the shrinkage obtained with benzedrine.
3. A study of the immediate reaction to the drug.

Sixty-four cases were studied in this part of the investigation. These were seen partly in the University of Pennsylvania dispensary and partly in the writer's private practice. All of

* The writer wishes to express deep gratitude for the valuable suggestions made by Dr. George M. Coates during the progress of the observations.

them had congested nasal turbinates, and the use of a constrictor was indicated.

Benzyl methyl carbinamine was used either in a 1 per cent oil solution, a 1 per cent aqueous solution, or a 2 per cent aqueous solution with one-half of 1 per cent novocain. The majority of the patients were treated with the 1 per cent oil solution (benzedrine), which proved to be a perfectly stable and generally satisfactory preparation.

DEGREE OF SHRINKAGE OBTAINED

After the application of benzedrine each patient was observed at one or 2-minute intervals until maximum shrinkage was obtained.

The results may be summarized as follows:

	<i>Number of cases</i>	<i>Per cent</i>
Maximum shrinkage	60	93.7
Some shrinkage	4	6.3

RAPIDITY OF SHRINKAGE OBTAINED

On each patient the time of application was carefully recorded, and all subsequent observations were likewise noted. As would be expected, maximum shrinkage often occurred before observations were made. The average time for the shrinkage action of the drug to begin was 4.35 minutes, with a range of 1 to 9 minutes. The average time for maximum shrinkage to be affected was 5.9 minutes, with a range of 1 to 12 minutes. A relief of symptoms usually occurred concomitantly with maximum shrinkage.

IMMEDIATE REACTIONS TO THE DRUG

Patients were closely questioned as to any reactions or discomfort that they felt after the administration of the drug. In evaluating the figures obtained it should be borne in mind: (1) That all patients were suffering from definite rhinologic conditions with congested turbinates and inflamed mucosa; (2) that patients are proverbially more apt to complain when definitely questioned as to whether the treatment is painful or not.

The results obtained may be summarized as follows:

	<i>Number of cases</i>	<i>Per cent</i>
Distinct burning	1	1.6
Slight burning	18	28.1
Slight tickling or itching	4	6.3
Slight discomfort	2	3.1
Sneezing or coughing	2	3.1
	<u>27</u>	<u>42.2</u>

No serious complaints were made as to discomfort following the drug, and no really unpleasant reactions or untoward effects were observed. This checks with the observations of Scarano, who found benzedrine considerably less irritating than ephedrine.

COMPARATIVE STUDY OF DURATION OF SHRINKAGE FOLLOWING THE USE OF EPHEDRINE AND BENZEDRINE

Since benzedrine had thus proved itself a satisfactory and practical drug for office use, it was decided (at the suggestion of Dr. George M. Coates) to compare the duration of the shrinkage following its use with that which follows the use of ephedrine. In this phase of the investigation ephedrine and benzedrine were also used in the form of an inhaler, packed with benzyl methyl carbinamine .325 gm., oil of lavender .097 gm., and menthol .032 gm. This study was made in the wards of the St. Agnes Hospital, Philadelphia, under the personal supervision of Drs. Scarano, Leibner, and the writer.

Since the study was merely a comparative one, it was decided to take ward cases which could be easily observed over a period of time rather than those in which there was some rhinologic condition which might possibly obscure the issue. Thirty patients were sprayed with ephedrine, 1 per cent in oil; 30, with benzyl methyl carbinamine (benzedrine), 1 per cent in oil; and 30 were instructed to take 2 inhalations from the benzedrine inhaler.

The patients were then observed at regular intervals by one of the 3 physicians in charge, and a careful record was kept of the duration of shrinkage in each instance.

The comparative duration of shrinkage may be summarized as follows:

	<i>Ephedrine solution</i>	<i>Benzedrine solution</i>	<i>Benzedrine inhaler</i>
Average duration	1 hr. 32 min.	1 hr. 49½ min.	1 hr. 48 min.
Percentage	100%	119%	117%

Thus it will be seen that the duration of shrinkage following the use of benzedrine in the form of a solution or inhaler was approximately 18 per cent longer than that following the use of a 1 per cent oil solution of ephedrine.

CONCLUSIONS

1. A clinical study was made to determine the extent, rapidity, and duration of the shrinkage of nasal turbinates effected by applications of benzyl methyl carbinamine (benzedrine).

2. Sixty-four rhinologic cases were closely observed after applications of the drug.

3. Maximum shrinkage was effected in 93.7 per cent of the cases in an average time of 5.9 minutes.

4. The immediate reactions following the use of the drug compare favorably with those following the use of ordinary solutions of ephedrine.

5. The duration of shrinkage was studied in

90 normal noses. Benzedrine in a 1 per cent oil solution and in the form of an inhaler gave a shrinkage which lasted approximately 18 per

cent longer than that following applications of a 1 per cent oil solution of ephedrine.

1819 South Broad Street.

TREATMENT OF DIABETIC GANGRENE

WILLIAM A. STEEL, M.D., PHILADELPHIA

The chronic diabetic is always face to face with the specter of gangrene. Three potential etiologic factors are present: A slowly progressive endarteritis, cellular tissues favorable to microbic growth, and a tendency to peripheral vasoconstriction from diabetic neuritis. Clinically it begins as a wet gangrene, usually seen in the feet. It is equally common in men and women, and is most often seen in the overly fat, middle-aged individual who has had diabetes for years. A sore toe, the result of an inflamed callus or ingrowing nail, may be the first indication of an unsuspected hyperglycemia. If endarteritis is the chief cause and blood sugar is controlled by insulin, it may pass into the localized dry type. If progressive microbic invasion is present and diabetic treatment has been neglected, a spreading, oftentimes fatal wet gangrene results.

Before the introduction of insulin the mortality of diabetic gangrene approached 100 per cent. With proper insulin and dietetic control the present death rate is about that of other types of wet gangrene. In threatened gangrene, the result of obliterating endarteritis, local death can be prevented only by the establishment of an adequate collateral circulation. This may be accomplished by rest, heat, cardiac stimulants, and the use of vasodilator drugs and positions.

The patient is confined to bed with the lower half of the body in a continuous hot air electric light bath at a temperature of 105° to 110° F. Soak the foot twice daily in warm saline solution for 15 minutes at a temperature of 120° F. Spray the skin with mineral oil. Use Buerger's postural exercises 3 times daily. Digitalis and nitroglycerine are given to full physiologic ef-

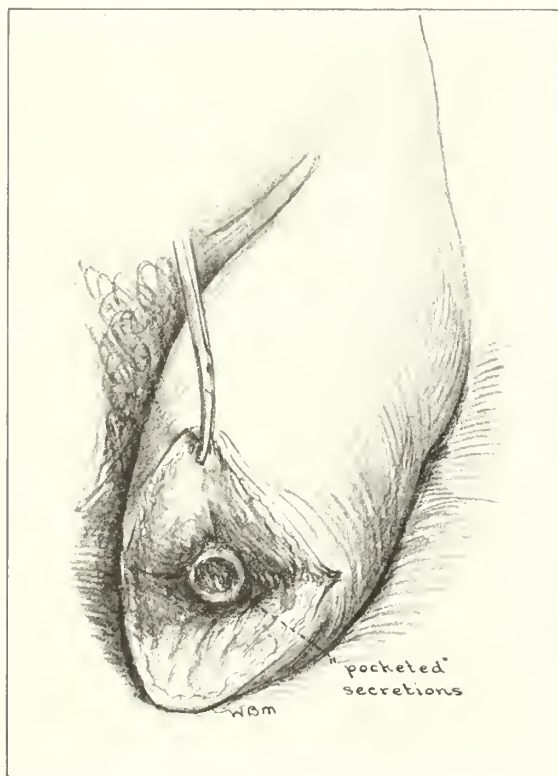


FIG. 1.—Wrong type of thigh amputation. Classical antero-posterior flaps. A retention pocket forms between the base of the posterior flap and the bone. The retained secretion tends to dissect up between the fascial planes.



FIG. 2.—Correct type of thigh amputation. Short lateral flaps made in one piece by transfixion. Good dependent drainage. Sufficient soft tissue to insure later approximation by adhesive straps.

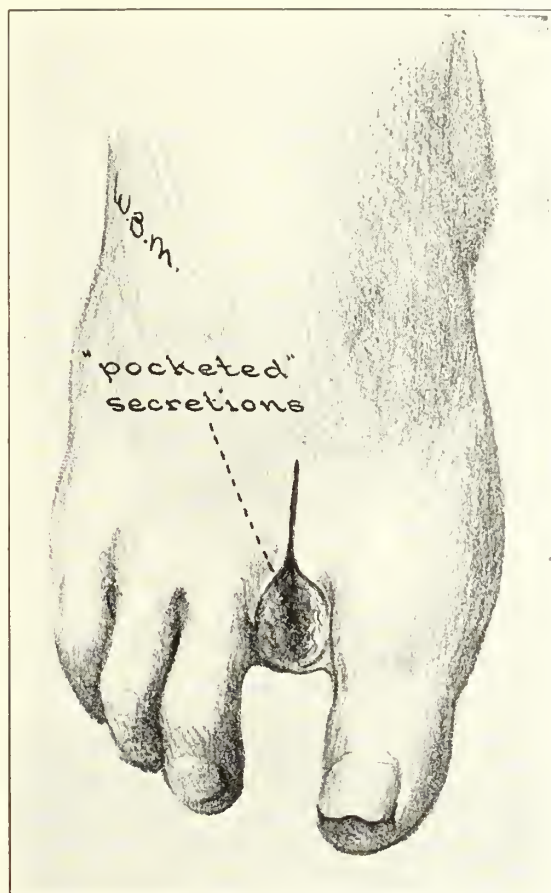


FIG. 3.—Wrong type of toe amputation. The usual racquet-shaped incision with the long arm on the dorsal surface. Poor drainage with retained secretion tending to dissect proximally along the tendon sheath.

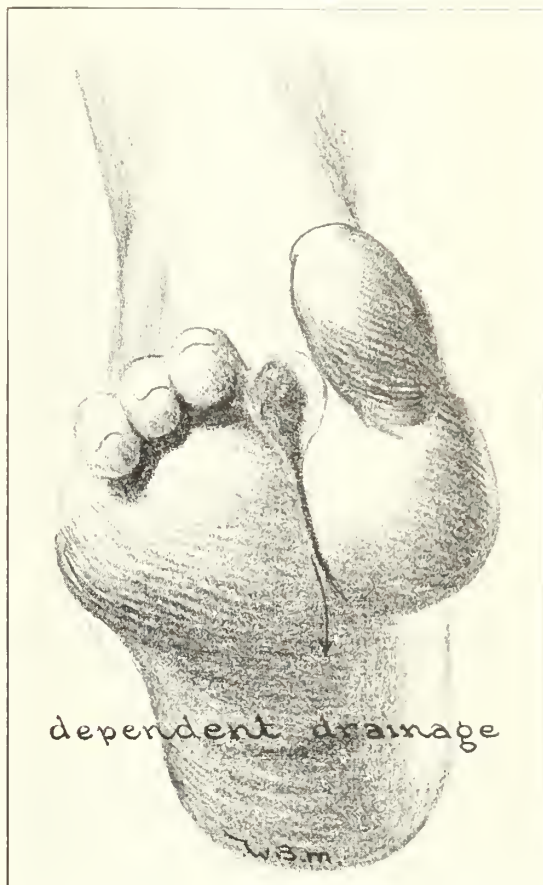


FIG. 4.—Correct type of toe amputation. Reversed racquet-shaped incision with long arm extending well down on the sole of the foot. Allows free dependent drainage with the patient lying on his back in bed.

fect. The effects of intravenous sodium citrate as a vasodilator, although less marked than in Buerger's disease and senile anemia, are often of value. A change in the skin color of the face, from a waxy pallor to a healthy pink, following several weeks of treatment, is indicative of success. The visible effect on the skin of the feet is less marked but may be sufficient to save a threatened member or limit an existing gangrene. Ten minims of Lugol's solution is given 3 times daily after the crisis is passed. Avoid local antiseptics and all mildly traumatizing types of physical therapy, i. e., high degrees of heat, intermittent therapeutic lamp treatment, diathermy, suction apparatus, and massage.

When gangrene has developed and systemic toxemia is slight, make an effort to save the leg. If infection is the predominating cause, incise the area freely in such a way that there is dependent drainage and no retention pockets. Apply a wet saline dressing until bleeding stops and then proceed as under threatened gangrene. If a pulsating artery is present in the foot the leg

can be saved in about 25 per cent of cases. If it is a case of advanced arteriosclerosis without foot pulse, success is attained in less than 10 per cent of cases. In spreading gangrene with toxic symptoms, amputate above the knee at once.

When high amputation is indicated, it should be done in the lower one-third of the thigh in such a way as to avoid all retention pockets. Drainage is the keynote of success. Even with perfect sugar control there is something in the blood of a diabetic which will necrose surrounding tissues in a poorly drained pocket. For this reason amputations of the Gritti-Stokes types, or below the knee, are rarely successful. In the thigh the classic anteroposterior flaps tend to form retention pockets and should be avoided. The guillotine operation gives perfect drainage but offers difficulties in later drawing the flaps together. A satisfactory technic is to make short lateral flaps by transfixion of skin muscle and fascia in one piece, and cut the bone flush with the soft tissues (Figs. 1 and 2). Do not suture.

Pack the wound with gauze wet with saline solution. Change to vaseline gauze on the third or fourth day after oozing stops. Draw the flaps together with adhesive strips when the surface is covered with granulative tissue, and union by third intention may be expected.

When toe amputation is indicated for localized gangrene, wait until nature has loosened the spaciulus. Then remove the digit with the head of the metatarsal bone by a racquet-shaped incision with its long arm on the sole of the foot, instead of on the dorsum as usually recommended (Figs. 3 and 4). Extend the vertical incision far enough toward the heel that there is complete dependent drainage of the depths of the pocket with the patient lying on his back.

Statistics from the surgical service of the Temple University Hospital show that, of 147

diabetics admitted during the past 2 years, 17, or 12.3 per cent, had or developed gangrene of the feet. The average age was 66. Diabetes had existed for approximately 9 years before gangrene developed. About 50 per cent had received insulin treatment for periods ranging from one month to 5 years. In no case did gangrene develop outside the feet, nor was gas gangrene a complicating factor pre- or postoperatively. The mortality was 29 per cent in thigh amputations. Death occurred from one day to 2 weeks following operation. Low mortality, with a tendency for the gangrenous process to localize, was in direct proportion to the length of time the individual had been under dietetic and insulin control. Six patients who had toe amputations, 35 per cent, recovered with functional feet.

3300 North Broad Street.

AN ANALYSIS OF 259 CASES OF SYPHILIS COMPLICATING PREGNANCY*†

MARIO A. CASTALLO, M.D., AND A. E. RAKOFF, A.B., PHILADELPHIA

It is generally taught that the adequate treatment of syphilis complicating pregnancy reduces the fetal mortality rate for that group. The consensus of opinion as expressed in recent papers is that consistent treatment started early in the pregnancy of syphilitic women insures a large percentage of live births.

From a review of 248 articles, Norman R. Ingraham and James E. Kahlor conclude that the results obtained by the early treatment of syphilitic mothers are scarcely paralleled in any other medical condition. They direct attention to the fact that among women with untreated syphilis the infant mortality rate is 5 times greater than the accepted average.

Since the statistics of numerous clinics have been extensively reviewed in several recent papers, one or two examples will serve to indicate the favorable results of treatment.

In a study of 943 patients treated in the Johns Hopkins Hospital, John L. McKelvey and Thomas B. Turner report 89 to 100 per cent live babies of syphilitic mothers receiving varying amounts of treatment.

Among 485 patients reported from Guy's Hospital, London, E. J. Pye-Smith obtained 91.8 per cent live births in syphilitic mothers receiving treatment as compared with 71.96 per cent in untreated syphilitic mothers.

The diagnosis of syphilis in pregnant women is based upon clinical manifestations and positive serologic tests. However, in the vast majority of instances clinical signs of the disease are absent, and the Wassermann and Kahn tests must be depended upon as indications for therapy.

Some workers are of the opinion that pregnancy institutes changes rendering the Wassermann and Kahn tests unreliable. Paul Guérniot believes that there is some factor in pregnancy which either attenuates the Wassermann reaction or renders it less positive, and that, therefore, we are not justified in basing treatment on the outcome of the Wassermann reaction alone.

Guérniot tested the blood of 1119 pregnant women, all of whom showed some clinical reason for suspecting syphilis. Only 3.75 per cent of these gave a positive Wassermann reaction.

J. R. McCord found that 93 per cent of positive Wassermann reactions on the first visit were positive during the puerperium.

Most workers agree that definitely positive Wassermann and Kahn reactions are dependable for the diagnosis of syphilis in pregnant women, especially when used in conjunction with the clinical findings.

Further, a comparison of groups of treated and untreated serologically positive pregnant women reveals that for all practical purposes these tests are highly satisfactory.

* Read before the Jefferson Society for Clinical Investigation, Philadelphia, December 20, 1934.

† From the Department of Obstetrics, Jefferson Medical College Hospital, Philadelphia.

Evidence of this fact is presented in the higher fetal mortality which is observed in the untreated serologically positive mothers as compared with the serologically negative.

Treatment of serologically negative pregnant women should always be inaugurated when there is a past history suggestive of syphilis such as repeated premature deliveries, macerated fetuses, stillbirths, when there has been a previous positive Wassermann reaction, when the paternal Wassermann reaction is positive, and when previous clinical signs of the disease have been elicited.

The problem is lucidly summarized by a group of workers¹ reporting 3817 cases of syphilis in pregnant women. "Every syphilitic mother," it is asserted, "no matter how much treatment she has received in the past, no matter what the physical condition or the status of her present Wassermann reaction, should receive early and adequate antisyphilitic therapy during each pregnancy to insure the birth of a living nonsyphilitic child."

The antisyphilitic therapy of the pregnant woman varies considerably in different clinics. Generally speaking, some type of arsenical preparation is given intravenously, with or without the addition of heavy metals intramuscularly. If intravenous medication is contraindicated, mercurials and iodides are often given by mouth together with intramuscular medication.

Irrespective of the type of therapy employed, the results of treatment reported in the literature are consistently favorable. It is generally agreed that the syphilitic mother tolerates treatment much better than the nonpregnant woman, provided ordinary precautions are observed. It has been stated that complications following treatment are 5 times less frequent than after the treatment of the nonpregnant woman.

A survey of the literature indicates that certain specific principles should govern the treatment of syphilitic pregnant women. The dose of the drug employed should be less than that administered to the nonpregnant syphilitic woman. The method of administration should be above reproach. Therapy should be instituted as early in pregnancy as possible, and it should be continued at regular weekly intervals. The foregoing should be practiced in order to administer an adequate amount of the drug before the late weeks of pregnancy, when passage of the spirochete to the fetus, it is said, is comparatively easy.

The question may be raised as to what constitutes adequate treatment. As used in the literature the term has reference to the minimum

amount of therapy which, when administered to the expectant mother, will insure the birth of a living nonsyphilitic baby. It is apparent that the necessary amount of therapy is dependent upon numerous factors, such as the extent of syphilis in the mother, the type of therapy employed, the time of starting treatment, the number of treatments given, the race of the individual, the outcome of previous pregnancies, and so on. Each individual case requires its own definition of adequate treatment.

In the treatment of a large number of patients it is convenient to define the type of treatment "adequate" for the group at large. Adequate treatment will, therefore, vary in different groups.

J. Whitridge Williams advised as adequate treatment the administration of 6 doses of diarsenol followed by mercurials and iodides with repetition until the Wassermann reaction becomes negative.

In the Coöperative Clinical Study adequate treatment was considered to consist of 10 injections of neoarsphenamine followed by 10 injections of a heavy metal.

McKelvey and Turner obtained the best results by using a total of 2 or more grams of arsphenamine plus mercury or bismuth compounds.

The advantages of starting treatment early in pregnancy are clearly indicated in various groups of statistics. In the Coöperative Clinical Study 78 per cent of the mothers in whom treatment was started before the fifth month bore living and apparently nonsyphilitic children, as contrasted with a rate of 61 per cent in whom treatment was started after the fifth month.

McKelvey and Turner also report a higher percentage of living nonsyphilitic babies when treatment was started before the fifth lunar month. The birth of a living nonsyphilitic baby is the criterion of proper treatment.

The cord Wassermann reaction has been widely used as a diagnostic criterion of syphilis in the newborn. Considerable discussion has developed as to the reliability of the procedure.

John A. Kolmer claims that, although a negative cord Wassermann reaction is inadequate evidence of the absence of syphilis, a positive

TABLE I

Total number of patients (1929-1933)	4369
Syphilitic	259 or 5.9%
Negro	211 or 81.3%
White	48 or 18.7%
Percentage of white patients	59.0%
White patients (syphilitic)	2.3%
Percentage of negro patients	41.0%
Negro patients (syphilitic)	16.1%

cord reaction means syphilis in both mother and child.

J. Roby and P. A. Lambecke claim the cord Wassermann reaction is merely an indication of the condition of the mother's blood at the time of labor. They point to the fact that a positive Wassermann reaction at birth will become negative at the end of 2 months if the child actually did not have syphilis. However, it may be stated that a positive cord Wassermann reaction is an indication for further study of both the baby and the mother.

In the present study it was found that 5.9 per cent of the 4369 consecutive patients visiting our antenatal clinic during the years 1929 to 1933 inclusive gave serologic evidence or a previous history indicative of syphilis (Table I). Approximately 60 per cent of the women attending this clinic were white.

The incidence of syphilis reported from different clinics varies greatly, even among those in the same localities. This is probably due to the different social status of the patients in attend-

6.0 per cent in white patients and 19.2 per cent in negroes; F. A. Hemsath, 2.5 per cent in white and 12 per cent in negro patients.

Table I further shows that, of the 259 patients, 81.3 per cent were negro and 18.7 per cent were white.

TABLE III

Type of Treatment	Number of Patients
No treatment	65
Neoarsphenamine	120
Acetylarsan	57
Neoarsphenamine plus acetylarsan	6
Neoarsphenamine plus mercurials and iodides by mouth	6
Treated elsewhere	8
	259

Some writers have noted the influence of the racial factor upon the outcome of pregnancy in syphilitic women. It is stated that the negress tolerates syphilis much better both as to the outcome of the pregnancy and clinical relapse than the white pregnant woman.

In the present series 256 patients were serologically positive. One patient gave a previous history of syphilis although she was serologically negative on registration. Two other patients who were serologically negative bore babies having evidence of syphilis (Table II).

Neoarsphenamine was administered to 120 of the 259 patients under consideration. Acetylarsan was given to 57. Eight patients were treated by private physicians or in other clinics, while 65 patients, because of lack of coöperation, received no treatment at all (Table III). In addition there were 12 patients who received combined treatment. Six of these received neoarsphenamine and acetylarsan. In the other 6 neoarsphenamine was supplemented by mercurials and iodides given by mouth, either because they did not tolerate arsenicals well or because intravenous therapy was not possible.

In general, treatment with neoarsphenamine consisted of the intravenous administration of 0.45 grams of the drug at weekly intervals.

Acetylarsan was given in 2 c.c. doses administered intramuscularly once a week. The mercurials and iodides were given by mouth in the usual therapeutic dosages.

The marked difference in the outcome of pregnancy between the treated and untreated syphilitic pregnant women is shown by Table IV. Among 65 untreated syphilitic patients there were 20.0 per cent stillbirths and 10.8 per cent miscarriages, whereas in 80 patients receiving 6 or more treatments there were 2.5 per cent stillbirths and no miscarriages.

In 37 patients in whom treatment was started

TABLE II

Results of Wassermann and Kahn Tests

	Number of Patients
Plus 4 Wassermann	199
Plus 3 Wassermann	6
Plus 2 Wassermann	17
Plus 1 Wassermann	32
Negative Wassermann, positive Kahn	2
Negative Wassermann and Kahn cord Wassermann positive	1
Negative Wassermann and Kahn baby's Wassermann positive	1
Negative Wassermann and Kahn previous syphilis	1
	259

ance at the various clinics. Figures quoted in the literature vary from 34 per cent in Atlanta, Ga., as reported by R. A. Bartholomew, to 1.2 per cent at the University of Oklahoma, as reported by W. A. Fowler, with an average value of 5 to 10 per cent in a cross section of recent papers.

In reporting the incidence of syphilis among any group it is most important to differentiate between white and negro patients. Invariably the percentage of syphilitic negroes is considerably higher, usually averaging from 3 to 5 times more than white women. In this series 16.1 per cent of the negroes gave evidence of syphilis, as contrasted with 2.3 per cent of the white women.

These percentages are in accord with the ratios in recently reported series. Williams reports an incidence of 2.5 per cent in white and 16.3 per cent in negro patients; A. W. Stillians,

before the sixth month, irrespective of the amount administered, there were no stillbirths and 5.4 per cent miscarriages. (Throughout this series the delivery of a dead baby of 28 or more weeks' gestation is considered a stillbirth, while the expulsion of a fetus between the fourteenth and twenty-eighth week of gestation is considered a miscarriage.)

The results for the entire group of syphilitic pregnant women, treated and untreated, reveals 8.3 per cent stillbirths and 3.5 per cent miscarriages. The high percentage of fetal mortality for the entire clinic is thus shown to be strongly influenced by the fact that there were only 69.1 per cent live births among the 65 patients receiving no treatment. Table IV further illustrates that there is a greater neonatal mortality among babies born of untreated pregnant women.

TABLE IV

SYPHILITIC MOTHERS RECEIVING NO TREATMENT

LIVE BIRTHS	69.1%
STILLBIRTHS	20.0%
NEONATAL DEATHS	9.1%
MISCARRIAGES	10.8%
TOTAL = 65 PATIENTS	

STARTED TREATMENT BEFORE SIXTH MONTH

LIVE BIRTHS	99.6%
STILLBIRTHS	.0%
NEONATAL DEATHS	2.5%
MISCARRIAGES	5.4%
TOTAL = 37 PATIENTS	

RECEIVED 6 OR MORE TREATMENTS

LIVE BIRTHS	97.5%
STILLBIRTHS	2.5%
NEONATAL DEATHS	2.6%
MISCARRIAGES	.0%
TOTAL = 80 PATIENTS	

RESULTS FOR ENTIRE SYPHILITIC CLINIC

LIVE BIRTHS	88.1%
STILLBIRTHS	8.3%
NEONATAL DEATHS	5.7%
MISCARRIAGES	3.5%
TOTAL = 259 PATIENTS	

Efficacious treatment was obtained with the various types of therapy employed in this study, as is shown in Table V. Equally good results were obtained with neoarsphenamine and acetylarsan, the 2 principal drugs employed in this study, although in the pediatric follow-up clinic it was found that acetylarsan did not protect the baby from acquiring syphilis as satisfactorily as did neoarsphenamine. The figures referred to indicate that when at least 6 injections of either drug are administered a high percentage of live births resulted.

The cases treated with mercurials and iodides

TABLE V

RESULTS OF TREATMENT WITH NEOARSPHENAMINE

1. ENTIRE GROUP		120 PATIENTS
LIVE BIRTHS		95.0%
STILLBIRTHS	4.2%	
NEONATAL DEATHS	3.3%	
MISCARRIAGES	10.8%	

2. GROUP RECEIVING 6 OR MORE INJECTIONS

		44 PATIENTS
LIVE BIRTHS		96.7%
STILLBIRTHS	2.3%	
NEONATAL DEATHS	4.4%	
MISCARRIAGES	.0%	

RESULTS OF TREATMENT WITH ACETYLARSAN

1. ENTIRE GROUP		57 PATIENTS
LIVE BIRTHS		96.5%
STILLBIRTHS	3.5%	
NEONATAL DEATHS	1.8%	
MISCARRIAGES	.0%	

2. GROUP RECEIVING 6 OR MORE INJECTIONS

		29 PATIENTS
LIVE BIRTHS		96.6%
STILLBIRTHS	3.4%	
NEONATAL DEATHS	.0%	
MISCARRIAGES	.0%	

given by mouth were not sufficiently numerous to warrant any conclusions (Table III).

The importance of starting treatment even late in pregnancy cannot be overemphasized.

Table VI shows that the results obtained in syphilitic pregnant women by starting treatment as late as the eighth month are excellent. The favorable effect of starting treatment even later in gestation is quite worth while. The earlier treatment is instituted, however, the more satisfactory will be the outcome for both the mother and baby.

In the recent Coöperative Clinical Study, figures were cited which offer a very strong argument in favor of administering treatment to aborting syphilitic women. Table VII illustrates how early treatment tends to prevent premature fetal mortality as well as mortality at term.

TABLE VI

FETAL MORTALITIES CLASSIFIED ACCORDING TO MONTH DURING WHICH TREATMENT STARTED

NO TREATMENT	30.8%
STARTED IN 9TH MONTH	26.7%
8TH MONTH	.0%
7TH MONTH	6.0%
6TH MONTH	.0%
5TH MONTH	3.7%
4TH MONTH	.0%

TABLE VII

SHOWING PROTECTIVE INFLUENCE OF EARLY TREATMENT ON OUTCOME OF PREGNANCY

MONTHS BEFORE TERMINATION OF PREGNANCY DURING WHICH TREATMENT STARTED	FETAL MORTALITY
NO TREATMENT	30.8%
ONE MONTH	20.0%
TWO MONTHS	3.2%
THREE MONTHS	2.5%
FOUR MONTHS	.0%
FIVE MONTHS	.0%

Pregnant women receiving treatment for a comparatively short time before the end of their pregnancy will have a greater percentage of both premature and full-term mortalities than patients starting treatment several months before the pregnancy is terminated.

In this series of cases those patients who received no treatment and who had previous fetal mortalities showed a greater percentage of stillbirths and miscarriages than those who had no previous fetal mortalities. Even more important is the fact that in the former group only 54.5 per cent of the mothers left the hospital with live babies, whereas in the latter group 72 per cent were discharged from the hospital with living children.

Of those mothers who had previously given birth to dead babies but who received treatment

TABLE VIII

OUTCOME OF PREGNANCY IN PATIENTS WITH PREVIOUS FETAL MORTALITIES

1. HAD NO TREATMENT THIS PREGNANCY	
LIVE BIRTHS	68.2%
STILLBIRTHS	22.7%
NEONATAL DEATHS	3.7%
MISCARRIAGES	9.1%
TOTAL = 22 PATIENTS	

2. RECEIVED TREATMENT THIS PREGNANCY	
LIVE BIRTHS	89.7%
STILLBIRTHS	7.7%
NEONATAL DEATHS	0.0%
MISCARRIAGES	2.6%
TOTAL = 39 PATIENTS	

PATIENTS WITH NO PREVIOUS FETAL MORTALITIES RECEIVING NO TREATMENT THIS PREGNANCY

LIVE BIRTHS	76.7%
STILLBIRTHS	13.9%
NEONATAL DEATHS	4.7%
MISCARRIAGES	9.3%
TOTAL = 43 PATIENTS	

in their present pregnancies, 89.7 per cent left the hospital with live babies (Table VIII).

McCord reports that 33 per cent of mothers with a positive Wassermann reaction who had live births did not leave the hospital with live babies, and of those who did 11 per cent lost their babies during the first few months of life, while 20 per cent of the other babies developed a positive blood Wassermann reaction.

Our statistics show that 13.1 per cent of the patients with a positive Wassermann reaction who received no treatment and had live births

TABLE IX

CORD WASSERMANN RESULTS ENTIRE GROUP

259 PATIENTS	174 SPECIMENS TAKEN
NEGATIVE	62.1%
POSITIVE	31.7%
ANTICOMP.	6.2%

GROUP RECEIVING NO TREATMENT

65 PATIENTS	37 SPECIMENS TAKEN
NEGATIVE	59.5%
POSITIVE	35.1%
ANTICOMP.	5.4%

GROUP STARTING TREATMENT BEFORE 6TH MONTH

37 PATIENTS	26 SPECIMENS TAKEN
NEGATIVE	61.5%
POSITIVE	26.9%
ANTICOMP.	11.6%

GROUP RECEIVING 6 OR MORE TREATMENTS

80 PATIENTS	61 SPECIMENS TAKEN
NEGATIVE	72.3%
POSITIVE	21.3%
ANTICOMP.	6.4%

lost their babies before discharge from the hospital.

Among the group of patients who received treatment prior to the sixth month of pregnancy, only 2.9 per cent of the babies died before the mothers left the hospital. Among the patients who received 6 or more treatments, only 2.6 per cent of the babies born alive died before discharge.

Attention has already been called to the doubtful value of the cord Wassermann reaction as a diagnosis of syphilis in the child. Table IX shows 35.1 per cent of positive cord Wassermann reactions among patients who received no treatment, whereas there was an incidence of 26.9 per cent among patients starting treatment before the sixth month of pregnancy, and 21.3 per cent among patients who received 6 or more treatments. These results are not in accord with the excellent results of treatments otherwise obtained in these groups and are probably indica-

tive of the unreliability of the cord Wassermann reaction.

In the 259 cases reviewed there was one maternal death from septicemia following cesarean section after the patient had been in labor 54 hours. There were no deaths attributable to the antisyphilitic treatment. There were, however, 3 cases of clinically evident complications directly attributable to the treatment. Two of the patients presented an arsenical hepatitis, while the third had an arsenical dermatitis. They responded well to treatment. In addition to these there were occasional cases in which the patients experienced temporary gastro-intestinal disturbances, syncope, and nitritoid reactions.

SUMMARY

1. A report is made of 259 cases of syphilis complicating pregnancy. The outcome of pregnancy in relation to treatment is discussed, together with the questions of incidence, diagnosis, complications, and other related topics.

2. It is concluded that the Wassermann and Kahn reactions, when used in conjunction with the clinical data, constitute the best available method for the diagnosis of syphilis in pregnant women.

3. An incidence of 5.9 per cent among 4369 patients from a clinic in which 60 per cent of the patients are white is reported. The incidence among the negro patients was more than 7 times greater than that among the white patients.

4. The beneficial results of antisyphilitic

treatment are demonstrated. After receiving 6 or more treatments 97.5 per cent of the women had live births, as contrasted with 69.1 per cent of the women who received no treatment at all.

5. The importance of starting treatment early in the pregnancy is outlined. There were no stillbirths among the patients in whom treatment was started before the sixth month of pregnancy.

6. Evidence of the importance of treatment is offered in the prevention of fetal mortality.

7. The value of the antenatal treatment of syphilitic women who have previously given birth to dead babies is stressed.

8. Equally good results are reported from the administration of neoarsphenamine and acetylarsan, although the latter did not protect the live baby as well as did neoarsphenamine.

9. The results of the cord Wassermann reactions are given. This procedure does not appear to be of great value in the diagnosis of syphilis of the newborn.

10. Two cases of arsenical hepatitis and one case of arsenical dermatitis are reported. It is concluded that the pregnant woman tolerates antisyphilitic treatment well, and the results for both the patient and her unborn child justify its practice.

248 South Twenty-first Street.

NOTE: We wish to express our appreciation to Dr. P. Brooke Bland, without whose aid this study would have been impossible.

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THE COMMON SENSE OF MATERNAL MORTALITY

OWEN JONES TOLAND, M.D., PHILADELPHIA

During the past few years the social consciousness of the medical profession and, to some extent, the lay public has been in a state of upheaval about that rather ambiguous term "maternal mortality." This condition of mental unrest centers largely around the findings of 2 extensive, thorough, and well-conducted investigations on the subject recently completed in New York City and Philadelphia. These reports have disclosed certain facts related to the subject of maternal mortality which at first glance have caused consternation and dismay among our ranks. Meetings have been held by interested medical groups, at which recommendations have been made that are somewhat out of proportion with either the supposed seriousness of the situation or the gravity of the presumably new facts disclosed.

It is apparent at a glance to anyone medically trained that there are actually in the ranks of the medical profession a small number of thoroughly incompetent practitioners. Their results in maternity work are glaringly bad, just as they would be in any other branch of medicine in which integrity, intelligence, and skill are required. Why this fact should cause surprise when the medical profession is, and always has been, notoriously unwilling to discipline its incompetent members is difficult to understand. Even if the medical profession were not somewhat lax as to the action of its own members, it is obviously impossible that so large a body could escape from having within its ranks a fair quota of incompetents. No other profession or vocation is exempt from them.

However, in the first flush of surprise that

this should be the case, the following recommendations, apparently made in all seriousness at regular medical meetings, have emerged:

1. That all maternity practice from now on be turned over to the midwives, as "it is statistically proven" that their results are far better than ours.

2. That since a hospital is unquestionably the most dangerous place for any mother to be delivered, she should henceforward stay at home to give birth to her offspring.

3. That although this is hardly a recommendation, it is *not* within the province of organized medicine to do anything about these regrettable facts!

The author asks why organized medicine can do nothing about it? And he suggests that, instead of carrying out these recommendations, organized medicine in a very quiet and unostentatious way do a little house-cleaning within its own ranks; very little would be necessary.

As a *modus operandi*, the author would suggest that in cases in which the facts surrounding a maternal death are found by the Committee on Maternal Mortality, which is now state-wide, to be apparently glaringly discreditable to our profession, the practitioner concerned be invited to explain his actions in that particular case to the board of censors of his county medical society. In all probability no further admonitions or penalties would be necessary.

The other finding of the Committee on Maternal Mortality which has caused an unwarranted amount of consternation and surprise is the fact that approximately one-quarter of all maternal deaths are the result of septicemia following induced abortion. Why this fact should cause surprise when the induced abortions in our country aggregate several millions annually is hard to understand.

The recommendations made in all seriousness at medical meetings for the betterment of this social evil are about on parity with those previously cited in this paper. Among other things, it has been suggested that we should have a campaign to instruct the lay public regarding the dangers of induced abortions. The fact has been entirely ignored that induced abortions occur and will continue to occur because they are the lesser of 2 evils, the greater being the bearing of the thoroughly unwanted child.

Since the medical profession until recently has complacently allowed the entire subject of contraception, which should be a dignified and legalized branch of preventive medicine, to remain an illicit and bootleg trade, shamelessly monopolized and exploited by commercial interests on an ever-increasing scale, it is small wonder that

one-quarter of the maternal death rate is due to induced abortion. The author suggests that, inasmuch as 75 per cent of urban deliveries take place in hospitals, the inclusion of advice as to how to avoid pregnancy as a routine part of postpartum care in cases in which plain common sense would indicate its necessity might have a more beneficial effect in lowering the maternal mortality rate than any publicity campaign we could hope to conduct. We might even venture a step further and suggest permanent sterilization of such individuals who are so mentally retarded as to make the avoidance of pregnancy, either by physiologic or artificial means, a practical impossibility.

The maternal mortality rate in the United States, although capable of improvement, should not cause serious alarm; it is in all probability not much better nor worse than it has been at any time during the past 50 years. The factors responsible for it are many and complex. Among them may be mentioned the ignorance and shiftlessness of a large portion of the lay public, the touchiness of the medical profession and their hesitancy to admit and view dispassionately their own shortcomings, and the failure of recognition on the part of the public, both lay and medical, that the sex side of life demands intelligence and a scientific recognition rather than the ignorance and superstition which have heretofore led to so much confusion. The maternal mortality rate is not a new entity. We have merely suddenly become conscious of it. Any efforts towards its betterment will not be fully effective until the medical profession as a whole views the subject dispassionately and from a common sense viewpoint rather than with the hysteria which has been produced by the first revelation of the fact that, like other mortals, doctors of medicine are not yet altogether perfect.

323 South 20th Street.

CANCER HEALS ITSELF; ONE CASE IN 100,000

The rare case of a cancer that spontaneously regressed or healed itself, an event that is estimated to occur "but once in 100,000 cases" is reported by Dr. M. Viola Rae of the University of Toronto and Toronto General Hospital (*American Journal of Cancer*, Aug. 16).

The malignant tumor, discovered in the kidney during an exploratory operation upon a woman 61 years old, had been surrounded and penetrated by calcium deposits and thus had died. After the removal, the patient "made an uneventful postoperative recovery." There was only one small piece of the tumor that was found to be alive.

Just what caused the cancer to heal itself is not known. Dr. Rae suggests that "some complex form of local or general immunity developed, which established retrogressive changes in the tumor."—*Science News Letter*, Aug. 24, 1935.

EDITORIALS

THE NEW HYPNOTIC DRUG LAW

There will be no call for an inventory of products under the Hypnotic Drug Law at the time that it went into effect. However, when investigations are made—and *they will be made*—the dispensing physician must show the amount of these products he had on hand at the time the act went into effect (July 15, 1935) and the amount that has been dispensed subsequent thereto, with the name and address of patient. Any physician who is in the habit of dispensing who has no such record it will be construed to mean that he is violating the act and will be subject to prosecution.

The law in full appeared in the August PENNSYLVANIA MEDICAL JOURNAL, with additional comments in the September issue.

THE OPERATING ROOM FACE MASK

It is of interest to observe the technic of wearing the face mask in the operating room: To cover the nose or not to should not be the question.

Undoubtedly the object of the face mask is to reduce to a minimum infection of the field of operation via the exhalations by the operating room personnel and visitors.

The rules of some operating rooms require the mask to cover the mouth only, while others make it mandatory to cover both the nose and the mouth.

Which is the scientifically accurate procedure? If it is necessary to cover the avenues of entrance and exit of the respiratory tract, then it should be done in toto by covering both the nose and the mouth. Exhalation practically occurs entirely through the nose, and those operating rooms requiring the covering of the mouth only must be observing a flaw in technic. Yet it is of interest to observe that nurses or others called hurriedly into the operating room for some transient reason, even in those hospitals requiring the covering of the mouth only, invariably will hold the mask to the face to cover both the nose and the mouth.

Certain rhinolaryngologists claim it is unnecessary to wear the mask in removing tonsils with or without removal of adenoids, and some proctologists claim it is unnecessary to wear a mask in operations upon the rectum.

Some institutions require the wearing of a mask in the delivery room, even rubber gloves and a mask in circumcision of the newborn; some hospitals ignore the mask in the obstetric service.

It is of paramount importance to wear a mask in all operating rooms and delivery rooms, and the nose and mouth should be efficiently covered.

The mask should be of ample size to cover the nose and mouth comfortably and not interfere with vision of the operative field.

The individual known to perspire about the head, face, and neck should always wear the gauze sweat bands made for this purpose and which should be supplied by all operating rooms. It is unnecessary and annoying to hold up procedures while a nurse gives first aid to the perspirant.

The face mask is an essential part of operating room technic and should be universally standardized.

The writer has seen many operating rooms depicted in motion pictures and in every instance the face mask covered, and extensively so, the nose and mouth. The cinema industry is to be congratulated in its consistency in this detail.

STATUTE OF INTEREST TO OUR MEMBERS

In 1913 the law known as "Woman's Act No. 466 P. L. 1024, as amended in 1915 and in 1929," was placed on the Statutory Books of Pennsylvania.

It concerns all employers of women. This includes your secretary, nurse, technician, stenographer, and any other female help you may use in the conducting of your business. The only exemptions are female farm help and domestic employees in private families.

The Department of Labor and Industry will furnish you a digest of the law and a blank on which you must give the name of the employed, the starting and stopping time of the day, the interval between working hours, the total hours for day or night, and the total for the week. The penalty for not complying is a fine of not less than \$10 nor more than \$200, or imprisonment for not more than 60 days. The digest must be kept posted in a conspicuous place in each room where any woman is employed.

If you have not complied with the requirements of this Act, it had best be done.

For the digest and the schedule apply to the Department of Labor and Industry, Harrisburg.

A CORRECTION

Owing to the absence from the country of Dr. Isaac Starr, Jr., of Philadelphia, he was unable to correct the proof of the article entitled "The Conservative Treatment of Vascular Spasm in Peripheral Vascular Disease," which was published on page 848, in the August, 1935, number of the PENNSYLVANIA MEDICAL JOURNAL. The JOURNAL regrets that the wording and style of the published article were not entirely as he wished it.

VENEREAL DISEASE CONTROL

One of the most important problems confronting the medical profession to-day is venereal disease control, and being a social problem it will always present its difficulties.

The 1935 report of the Committee on Venereal Disease Control of the Philadelphia County Medical Society appears in *The Weekly Roster and Medical Digest*, July 13, 1935.

The committee has continued through the year its efforts toward lay education regarding the venereal diseases. A number of lectures have been given by members of the committee that not only were well attended but evoked great interest. It is apparent that not only is there a great need for such enlightenment but a large proportion of our citizens are desirous of having it.

Shocked by conditions reported in the Philadelphia Hospital and Health Survey of 1929 regarding the drug store treatment of these diseases, the committee deemed it necessary to investigate existing conditions, as it was estimated, as the result of this most extensive survey, that the druggists treated over two and a half times as many of these cases as were treated by the recognized medical agencies.

Owing to a lack of funds, the committee was unable to carry out a new survey that would show the full extent of this illegal treatment of these 2 social menaces. It considered, however, that a slight idea could be gained from the answers of patients as they presented themselves at the various dispensaries in the city. With the cooperation of the staffs of 13 of the largest venereal disease dispensaries in Philadelphia, 1514 patients were asked the question, "Where did you receive treatment for this condition before coming to this dispensary?"

The answers to the question showed a most unfortunate amount of drifting from dispensary to dispensary. They also showed that 200 or 20.5 per cent of the 973 patients with gonorrhea had been treated by druggists and 9.6 per cent by charlatans, and that of the 541 cases of syphilis 42 or 7.8 per cent had been treated by druggists and 2.9 per cent by charlatans.

It will be recognized that this represents only a small proportion of those patients who leave the druggist for

the dispensary and takes no account of those who do not. The committee has it on good authority that there are druggists in Philadelphia who not only prescribe for these patients but go so far as to treat them manually. That communicable diseases of such far-reaching importance should be treated by either druggists or charlatans is a blot upon the retail drug trade, as well as the city at large. Particularly does it reflect upon those many high-minded druggists who would not stoop to such practices.

There can be no doubt that many druggists carry out an enormous amount of counter-prescribing, but it is difficult to see how they would go so far as to include these diseases. Particularly is this true of syphilis. Here, however, it is probable that a diagnosis of syphilis is rarely made by them, the true condition not being known until the patient eventually reaches a physician. They do, however, treat genital sores and there is urgent need that they thoroughly realize that most such sores are the initial lesions of syphilis and that it is criminal to deny such patients the right of diagnosis of the disease in its most curable stage.

It is the sense of the committee that these conditions should be called to the attention of the Philadelphia Retail Druggists Association, to the Philadelphia Board of Health, and such authorities as have to do with the laws pertaining to the matter. A list of the addresses of druggists by whom patients claimed to have been treated is appended to the report for whatever use the Board of Directors of the County Medical Society sees fit to make of it.

The committee sees little hope of reduction in the incidence of these diseases so long as present conditions exist.

Druggists who prescribe over the counter are practicing medicine illegally, and it would seem distinctly in order that druggists who are known to be treating venereal disease should be brought to account for this nefarious practice, as should the charlatans.

This condition of affairs to a varying extent exists in all communities, and appropriate action should be taken.

FAIR PLAY FOR INTERNS

In the month of July several thousand recent graduates in medicine entered upon internships constituting the final educational step in their preparation for private practice. Many of these young men and women will receive no monetary compensation for this arduous apprenticeship. The lucky ones who are paid will get a mere stipend. Such is the tradition of their profession, however, that one and all are grateful for the opportunity to supplement their theoretical knowledge with practical experience, even at the price of delaying financial productivity for another year or two.

The return on which these young graduates count for their many services is training, in both the spirit and practice of their profession. It is up to every staff member no less than to administrative officials to see that each intern receives his full educational quid pro quo.

Obedience is essential in an intern but his primary purpose is to acquire experience and judgment. A just and generous staff can do more by example and encour-

agement, to temper initiative with discipline, to combine keen observation with discreet action, to instill habits of careful thoroughness, than years of didactic admonition.

Organized medicine does its part for the intern by investigating available openings and listing approved opportunities. On the hospitals devolves the obligation to supply adequate physical facilities and see that necropsy requirements, and so on, are strictly observed. The transmutation of occurrences into experience, of factual knowledge into an instrument of judgment—the most difficult task of all—is most likely to be accomplished under the guidance of a sympathetic, liberal, visiting staff which understands the problems and educational needs of the medical tyro.—*N. Y. State Jour. of Med.*, Aug. 1, 1935.

The text of the preceding editorial has been covered in the editorial columns of this JOURNAL on divers occasions, yet it would seem in some communities that a perennial reminder is necessary.

An intern is entitled to adequate instruction for services rendered.

Every member of a hospital staff has more or less pedagogic ability. The real crux of the situation is a willingness on the part of a staff member to take the time each day to instruct the interns with whom he comes in contact. Remember that an intern is no longer to be treated as an orderly. He must be permitted to do things under instruction. There are many phases of practice presenting other than history-taking, diagnosis, and treatment which will provide informative topics.

A few to be mentioned are: The art of control of the patient and the family; the need for text-reading of each case on the service; how to secure a necropsy, and the value of attendance thereon; medical ethics; the proper procedure of issuing birth, death, sickness, and insurance certificates; the need for contributions to medical literature; the value of membership in a county and state medical society and the A. M. A.; the advantages of prescribing drugs and preparations in the U. S. P. and the National Formulary rather than the proprietary group (although many staff members seem to have forgotten there is a Pharmacopeia); etc.

A hospital having a courtesy staff should interest this group in giving instruction; as a rule little or no interest is shown.

An intern may or may not be anticipating applying for licensure in a state requiring an examination by a state board of medical examiners. Whether he is or is not, if indifferent to his duties, he should be duly advised. There is a small group of interns frightfully bored because they must serve an internship; such individuals must be properly admonished. Then there is the

intern who wonders what each service is all about and who needs frequent prodding.

The following facts were culled from the State Board Number of the *Journal of the A. M. A.*, April 27, 1935:

In 1934 the various states, territories, and possessions of the United States licensed 5435 new physicians, 358 more than in 1933 (439 in Pennsylvania). There were 3400 deaths among physicians in 1934. Thus 1800 have been added to the already overcrowded medical profession.

An internship is required by the medical licensing boards of the following 19 states (date of enactment given in parentheses; Pennsylvania was the first state to enact the requirement): Alas. (1917); Dela. (1924); Dist. of C. (1930); Ill. (1923); Ia. (1924); Mich. (1922); N. J. (1916); N. Dak. (1918); Okla. (1933); Ore. (1933); Pa. (1914); R. I. (1917); S. Dak. (1925); Utah (1926); Vt. (1934); Wash. (1919); W. Va. (1932); Wis. (1927); Wyo. (1931).

In some of these states the examination for licensure may be taken before the internship is begun, and the license withheld until the satisfactory completion thereof; in the other states, the examination is not permitted until after the internship is satisfactorily terminated.

Let us be fair to the intern!

BARTON COOKE HIRST, M.D.

Dr. Barton Cooke Hirst of Philadelphia, gentleman, physician, teacher, author, emeritus professor of obstetrics in the University of Pennsylvania School of Medicine, and professor of obstetrics in the Graduate School of the University of Pennsylvania, died from heart disease at his home, September 2, 1935, aged 74. Dr. Hirst was born in Philadelphia, July 20, 1861, a son of the late William Lucas Hirst and Lydia (Barton) H. Hirst. He received his A. B. degree from the University of Pennsylvania in 1880, and in 1883 was graduated from the University of Pennsylvania School of Medicine. Following his graduation he took courses at the universities of Heidelberg, Berlin, and Vienna, later serving an internship at the Royal University Hospital at Munich. He was the distinguished professor of obstetrics in the University of Pennsylvania School of Medicine from 1889 to 1927 when he was made emeritus, and was then appointed professor of obstetrics in the Graduate School of the University of Pennsylvania.

For many years it was the custom when an occupant of a chair in a medical school resigned

from the school that he be requested the following year to give a clinic or a lecture at the annual meeting of the alumni association. Dr. Hirst told the writer that during the spring following his election to the chair of obstetrics to succeed the late Dr. Richard A. F. Penrose, the faculty suggested that he call and see Dr. Penrose and request him to give a clinic or a lecture during alumni week. Dr. Penrose appreciated the courtesy and requested Dr. Hirst to extend his thanks to the faculty and to say to the faculty that there was one man resurrected for the benefit of mankind, and he was not the Lord.

Dr. Hirst had an international reputation in the field of obstetrics and gynecology, was an indefatigable worker, an ardent and devoted teacher, and a warm friend of the younger physicians whom he protected on all occasions.

He was the founder of the Southeastern Dispensary of Philadelphia in 1908, where many students of the University of Pennsylvania School of Medicine received their practical training in obstetrics, which institution remains as a monument to his memory.

He was a member of the following societies: Philadelphia County Medical Society (past president), The Medical Society of the State of Pennsylvania; a Fellow of the American Medical Association (chairman of the Section on Gynecology, Obstetrics, and Abdominal Surgery 1932-1933); the Obstetrical Society of Philadelphia (past president); the American Gynecological Society (past president); the American Obstetrical Society (past president); the College of Physicians of Philadelphia (past president gynecologic section); a Fellow of the American College of Surgeons; a corresponding member of the Society of Obstetrics and Gynecology of Paris; a consulting surgeon of the Paris Society of Foreign Surgeons, and an honorary member of the Obstetrical Society of Edinburgh.

He served for many years, active or consultant, on the staff of the University of Pennsylvania Hospital; Howard Hospital; Philadelphia Hospital; Lying-in Charity Hospital; Graduate Hospital; Orthopedic Hospital; Preston Retreat, Pottstown (Pa.) Hospital and Newport (R. I.) Hospital.

He was an extensive contributor to the medical literature. He was the editor of *American System of Obstetrics*, and the author of: *A Textbook of Diseases of Women* (second edition 1905); *Textbook of Obstetrics*, which ran through 8 editions; *Atlas of Gynecology*, 1919; and with the late Dr. George A. Piersol was co-author of a book on *Human Monstrosities*.

In 1916 the honorary degree of doctor of laws was conferred upon Dr. Hirst by the University of Pittsburgh, and subsequently the University of Pennsylvania conferred upon him the honorary degree of doctor of science.

He was married April 22, 1890, to Miss Elizabeth Haskins Dupuy Graham, who with a daughter and 2 sons survive, one of whom is Dr. John Cooke Hirst, of Philadelphia, assistant professor of obstetrics, University of Pennsylvania School of Medicine. He was a member of the Racquet, University, and Philadelphia Country Clubs and the University of Pennsylvania Club in New York.

Dr. Hirst was blessed with a quick intellect built on a solid university foundation by continued, voluminous, selective reading, and he became one of the best educated of men and an entertaining one.

WHAT IS "PUBLIC" SERVICE?

There has grown up in the United States and elsewhere great confusion of thought due in no small part to the inaccurate use of the words "public" and "official," in the opinion of Nicholas Murray Butler, president of Columbia University, as stated in his annual report for 1934.

President Butler says: "In the United States by far the greater part of that which is public is not official at all, and the highest and finest type of public service is not, and never has been, official. The administration of the post office is both official and public; but philanthropy, the advancement of science and letters and the fine arts as well as the enhancement of the religious life of men, while always public, are very rarely official. . . .

"It is established policy in the United States, and has been for an indefinite past, that nonprofit-making public service formally undertaken in the sphere of liberty through the voluntary cooperation of individuals or groups, shall not be called upon to meet any share of the cost of government. Therefore, property held for these public purposes is pretty uniformly exempt from taxation, as are gifts made for these purposes. . . .

"The convincing reason for this policy should be quite obvious. It is that this public service in the sphere of liberty is not only on a par with any public service which can be rendered in the sphere of government but usually is quite superior to it. This formal recognition by the people, through their government, of the public service character of undertakings in their sphere of liberty, whether religious, educational, or philanthropic, is so well established that it cannot be departed from or abandoned without completely wrecking all that is best in American public life. When a people desires to undertake any course of action collectively, it may carry out its purpose either by appeal to government or by voluntary and self-directed action. The latter is the course always to be followed until its impracticability in any given case shall have been clearly demonstrated."—Editorial, *The Modern Hospital*, Mar., 1935.

THE MORAL OBLIGATION

When a hospital accepts a pupil nurse it undertakes a serious moral obligation. In effect it promises to house and feed her properly and to provide for her healthy recreation when her hours of duty are past. It asserts its intention of providing a thorough didactic and practical education in the science and art of nursing. It agrees to refrain from exacting from her too great a proportion of hours of menial or noneducational labor. It announces that it can and will provide a nice adjustment of didactic and practical experience so that neither will be willfully and deliberately stressed at the expense of the other.

Few hospitals that conduct nursing schools will demur in these statements. Nevertheless, the following state of affairs is too often found—living arrangements and recreational facilities are sometimes less than mediocre, and teaching methods and personnel are ineffective preponderates and evening finds the pupil too physically fatigued to study intelligently.

Some hospitals save money by conducting their schools. When this is true a careful inspection of nursing school methods is always justified. To educate the nurse properly is almost as expensive as to use graduate nurses to care for patients. The hospital that for any reason takes lightly its responsibilities to pupil nurses should care for its patients with graduates and pay the current rate for their services.—Editorial, *The Modern Hospital*, Mar., 1935.

A COUNTY MEDICAL SOCIETY PRESIDENT'S ADDRESS

It is customary in many of our county medical societies for the outgoing president to deliver the president's address. In the Allegheny County Medical Society the president delivers an address on installation in which address he takes the membership into confidence and outlines such measures and plans which he as president considers essential for the society's progress and welfare. Much of this address equally applies to any other county medical society. The following is an abstract of the address which appears in the *Pittsburgh Medical Bulletin*, June 29, 1935:

It is needless to tell those who are constantly experiencing the effects of the present social disorganization and readjustment that now is a propitious time for the medical profession; for it is in the present and to-day that the medical profession must with clear vision and steadfast purpose formulate plans for the future and evolve policies which undoubtedly will be the basis on which the social economic structures vitally associated with the medical profession will be erected.

It is not only that the doctors demand, but also that the people of the community expect leadership to be assumed by the organized medical profession in the planning and the reorganization of means and of methods of taking care of the sick, especially the indigent sick. Therefore, since this problem is directly placed upon the medical profession for its solution, it is necessary that we as doctors should study all the essential factors involved in this maze of conflicting interests, and in a philosophic and dispassionate manner should so analyze divergent viewpoints that we may properly articulate the desires of organized medicine and decide on a rational basis for future action.

We as physicians undoubtedly are all in accord with the idea that the medical profession should guard its

future by surrounding it with the best of the traditions which the profession of medicine has evolved from its centuries of glorious service to mankind. Yet we must not be unmindful that the future of medicine depends most essentially on the actions of its followers of to-day, and this responsibility should cause us to govern our deliberations in the formulation of policies so that future generations of doctors will not regard the profession of to-day with anathema for having saddled on their backs additional heavy burdens of increased and uncompensated public service.

Our efforts should be expended toward making the future generations of medical men more secure in the possession of sufficient leisure and a placid old age.

We should build with a sure hand and a sound judgment, retaining in our possession what is valuable and necessary, but likewise without fear we should discard what is useless.

Especially should we weigh well the economic problems of the present and their relationship to the future security of the members of the medical profession. After due consideration of the multiple and complex relations of the public to ourselves we should adopt definite policies which are expedient for the conditions which we now regard as temporary, and should also formulate plans adaptable for the conditions which are likely to be permanent.

We should attempt to solve immediately the problems which are presented to us and the answers should be such that they will bear antagonistic scrutiny, and be capable of logical and adequate defense against public and legislative criticism.

After this orientation we should assume an active leadership in the promotion of legislation favorable to the professed objectives of the medical profession.

The point is that we should be active and not passive. In other words, we should direct the tendencies and trends and should control all the medical and social activities of organizations which base their excuse for existence on the necessity of providing adequate care of the sick by taking advantage of the charitable inclination of doctors of medicine.

If we stand together in a democratic yet united group we can reassume leadership in many of the social medical activities which are rapidly passing out of our control. Likewise our national medical organization should be made more democratic. The unit of all activity should be the county medical society. Therefore it seems only proper that the county medical society should instruct its delegates to the State Medical Convention; at least it should indicate to them in a broad, fundamental manner what it desires them to support in the House of Delegates of the State Medical Society. At the annual meeting of the county medical society delegates to the State Society should not be chosen in the roundabout way at present in vogue, but they should be nominated at the same time and in the same manner as the other officers of our society.

A NEW SCIENTIFIC METHOD OF IDENTIFICATION

Drs. Carleton Simon and Isidore Goldstein, both of New York City, presented at the annual convention of the International Association of Chiefs of Police, Atlantic City, N. J., July 9, 1935, a new method of identification, the foundation of which is based upon the correlation of the optic nerve with the many variations of patterns made by the network of the blood vessels of the retina or background of the human eye.

It answers the challenge of the criminal element who constantly seek in chemistry and surgery an avenue through which they may be enabled to destroy the earmarks of their identity. The use of this new method aims to discourage such surgical attempts, being itself exempt from any similar interference.

It is not intended that this new method is to replace the fingerprint system, but that it may be utilized under certain circumstances and render service as a valuable adjunct in criminal science.

With the use of a retinal camera, an instrument that has been used for the diagnosis of various eye diseases, the optic nerve and the net-work of blood vessels of the retina or background of the eye can be expeditiously photographed through the pupil of the eye. This requires no special medical skill nor experience, but is an easy mechanical procedure. Although such photographs were readily secured, there was no provision or contrivance by which the background of the eye, with its irregular patterns created by the branching of the blood vessels, could be charted, measured, and classified. For purposes of identification, it was necessary that various differences in individual eyes be noted in numerical values.

After considerable experimentation, success was achieved through the employment of a transparent screen which was divided into meshes, each one of which measured $2\frac{1}{2}$ millimeters or approximately $\frac{3}{32}$ of an inch. This screen, devised to fit the photographic plate holder, was placed in front of the emulsion side of the plate. The resulting segmentation permits measuring in relation to each other the various points that appear on the photograph. Although it was very desirable to have the meshes as small as possible, a finer division was tried and rejected, as it tended to obscure detail. The actual size of the retinal image is 30 millimeters or approximately $1\frac{3}{16}$ inches.

After such a meshed photograph was taken, which enabled measurement of the distance from the optic nerve to where certain blood vessels bifurcated, it became essential that the directional point where this occurred should also be noted. This problem was solved by the use of an especially constructed transparent 360-degree protractor placed over the photographic positive, the center of this protractor being superimposed immediately over the cup or papilla of the optic nerve. In all calculations, the optic nerve was used as a fixed point, a central spot, or hub. With the known dimensions of the segmentations and the precise radiation angle, an exact localization of a definite point can be registered, no matter how much the photograph may be enlarged.

The entire background of the eye may be seen as a clear, well-lighted circular picture, and when the optic nerve is centered in the visual field, it is automatically centered on an exposed photographic plate in a reflex camera attachment. The taking of the photograph requires but a fraction of a second and practically while still observing the retina.

Both the veins and the arteries may be utilized in the measurement of their patterns, but it makes the classification less complex by selecting the veins, as these have a more distinctive appearance than the arteries, being larger and photographing darker. The veins and arteries may be used jointly, the veins given numerically an odd number and arteries an even one.

To simplify the classification further, it was deemed expedient arbitrarily to select the right eye as the one to be photographed. Both eyes may be used, however, and their individual patterns given a numerical value,

one serving as an enumerator and the other as a denominator. Should the left eye be used, such selection must be specified.

With the aid of the known dimensions of the screen meshes and the angle determined by the protractor, the manner in which the vein enters the optic disk, the number of bifurcations of branches and their position and change of direction, are as easily charted as is a given point mapped out on the high seas by a navigator.

Age or disease may change in tortuosity the lumen of the blood vessels, but their position and their correlation remain unchanged through life, and what is of greatest interest, they cannot be altered or effaced.

They offer this new system as a contribution to criminal science, and as an adjunct to the present fingerprint system of identification. They believe that it may render signal service in this field, and that in the science of anthropology it may also open the road to other research of benefit to mankind.—*N. Y. State J. M.*, Sept. 15, 1935.

GUNSHOT WOUNDS WHICH CAUSED THE DEATHS OF THREE OF OUR PRESIDENTS

Under the above title there appeared an article in *The Military Surgeon*, July, 1935, by Dr. James W. Davis, Col. Med. Res., United States Army, which article is reprinted from *Southern Medicine and Surgery*, Charlotte, Volume 97, No. 1. As 3 of the presidents of the United States have been assassinated, all by gunshot wounds, a review of these cases is interesting as to the manner in which the injuries were inflicted, the nature of the injuries, and the treatments given. The following is an abstract of this informative article which should prove of interest to our members.

PRESIDENT LINCOLN

In the evening of Good Friday, April 14, 1865, at about 10:30 o'clock, the first of the Chief Executives of the United States to lose his life by assassination was shot at Ford's Theater in Washington, D. C. The President's condition immediately after the shooting was so serious that he was removed to a house opposite the theater and placed in bed about 15 minutes after the time the wound was received.

The bullet entered the occipital bone and ranged obliquely from left to right through the brain to a point in the anterior right lobe of the cerebrum just behind the orbit. The opening made through the occipital bone was as cleanly done as if a punch had been used. The point of entrance was about 1 inch left of the longitudinal sinus. The bullet was fired by a Derringer type of pistol and was of lead.

Both orbital plates were fractured, but the dura mater covering them was not torn. The double fracture was supposed to have been caused by contre coup. The President survived nearly 9 hours and died at 7:20 Saturday morning, April 15.

President Lincoln was practically unconscious from the time he was shot until his death. No surgical treatment would have been of any help in his case.

Surgeon General Barnes, Colonel Crane, Assistant Surgeons Woodward, Curtis, and Notson, and Acting Assistant Surgeon Taft, all of the Army, and Dr. Stone, were in attendance during his last hours and were present at the necropsy.

PRESIDENT GARFIELD

On the morning of July 2, 1881, President James A. Garfield went to the Baltimore and Potomac depot at

Washington to start on a trip through the New England States. While walking arm-in-arm with Secretary of State James G. Blaine across the ladies' reception room on the way to the train, the President was shot twice—the first bullet inflicting a slight flesh wound of the right arm, the second entering the right side of the body. Both were fired from the back.

The second shot, fired an instant after the first, felled the President to his knees. Those about him caught him and laid him on the floor until a mattress could be obtained. He was carried on this to the second floor of the depot. Dr. Smith Townsend, the District Health Officer, the first doctor on the scene, arrived within 4 minutes after the shooting. It looked as if the President were dying when he was removed to an upstairs room. Drs. Puris and Bliss arrived about this time.

The President was shot by Charles J. Guiteau, an attorney of Chicago, who was captured before he could escape from the station.

Examination of the patient revealed a very feeble pulse with a rate of 40 beats per minute, marked pallor, and the skin was cold and covered with a clammy perspiration. The respiration was slow and sighing, its rate 14 per minute. The President was removed to the White House in an ambulance; Dr. D. W. Bliss was put in charge and selected Surgeon General Barnes and Surgeon Woodward of the Army, and Dr. Robert Reyburn as his associates. These selections were approved by the patient.

Dr. D. Hayes Agnew, Philadelphia, professor of surgery at the University of Pennsylvania, was called in consultation on July 4. Dr. Agnew arrived at 4:30 a. m., but postponed his examination until the arrival of Dr. Frank Hamilton of New York at 6 o'clock. The consultation was held at 7:30 in the morning, an hour and a half after the arrival of Dr. Hamilton.

For the first few days it was thought that the kidneys, intestines, and peritoneum had not been seriously injured because of the passage of normal urine, the passage of natural feces, the discharge of flatus, and the absence of other symptoms of peritonitis. The exact course of the bullet could not be determined. At the time of the consultation the patient's temperature was 99.4° F., pulse 104, respiration 19.

It was evident that there was some septic infection present. At times it was necessary to open the wound, which was done and drainage inserted. Two drainage tubes were inserted on August 8. During the course he developed an inflammation of the right parotid gland on August 17 which gave him considerable pain. A few days later incision and drainage was necessary.

On September 6, at his own request, he was taken by train to Elberon, on the New Jersey coast, where he arrived at 11:09 p. m. and was taken to the Francklyn Cottage. On September 18 the President himself realized that the end was near. He faced the end gravely and unafraid. President Garfield lived until September 19, the eightieth day after being wounded. At 10:00 p. m. of this day he became suddenly worse and died in a half hour.

Findings at necropsy: The second bullet had entered the right side of the back 4 inches to the right of the spinal column at the level of the twelfth dorsal vertebra; had passed forward and fractured the eleventh and twelfth ribs on the right side, and had been deflected by these ribs to the left, and passed through the body of the first lumbar vertebra in an oblique direction to the left; and had continued on to stop behind and below the pancreas where it was found at postmortem exam-

ination. In its route, however, the bullet penetrated some of the branches of the mesenteric arteries and grazed the splenic artery. It did not enter the peritoneal cavity.

The immediate cause of the death of President Garfield was a spontaneous rupture of a traumatic aneurysm of the splenic artery which was probably due to an abrasion by the bullet as it passed over the artery. The proximate cause of his death was the profound condition of septic poisoning which would have proved fatal even had the aneurysm not ruptured.

The pistol with which he was shot was an English revolver of "Bull Dog" pattern.

The history of gunshot wounds of the body of the vertebra up to this time indicates that the vast majority of those so wounded died, no matter what treatment was given. Where the spinal canal itself was invaded by the bullet, death was almost always certain.

The medical and surgical attention given President Garfield was of the very finest, and even in this day a careful review of every detail of the care and treatment given shows no reason for adverse criticism of the management of his case. So far as we can see, no different course of treatment would have saved his life.

PRESIDENT MCKINLEY

While holding a reception at the Academy of Music, Buffalo, as a feature of his visit to the Pan-American Exposition, President William McKinley was shot down by an anarchist named Czolgosz, at 4:07 p. m., Sept. 6, 1901. Eleven minutes afterward the patient arrived at the Emergency Hospital. Two wounds were found: one was a mere skin wound, but the other was a penetrating wound of the abdomen. This wound was 1 cm. to the right of a line drawn from the umbilicus to the left nipple, 15.5 cm. from the left nipple, and was 16.5 cm. from the umbilicus. This wound was made by what was supposed to be a .32 caliber bullet.

An immediate abdominal section was advised and accepted. The administration of ether was begun at 5:20 p. m. by Dr. Eugene Wasdin, and at 5:29 the President was asleep. Dr. Matthew D. Mann was the surgeon, Dr. Herman Mynter, first assistant, and Dr. Parmenter and Dr. Lee assistants. Also present and assisting were Dr. E. C. Mann, Dr. Hill, and Dr. Rixey.

A ventral incision through the bullet wound was made and the stomach exposed. A piece of cloth carried in by the bullet was removed from the abdominal incision. About the middle of the greater curvature of the stomach, 1½ cm. from the omental attachment, was a perforating wound of both walls. Both these wounds were closed with a double row of silk sutures. All the bleeding points were tied off and the intestines were examined.

At 6:23 p. m., during the progress of the operation, Dr. Roswell Park arrived at the operating room. The abdomen was irrigated with sterile salt solution and the abdominal wound sutured. The operation was completed at 6:50 p. m., and the anesthetic stopped at 6:51. A bandage was applied and the patient was ready to leave the operating room at 7:01 p. m. At this time the pulse was 122, respiration 32.

The President was removed to Wilburn House and when put to bed the pulse was 127, temperature 100.6° F., respiration 30. At 7:00 p. m., a bulletin was issued stating that his condition at that time justified hope of recovery. The bulletin further stated that one bullet struck him in the upper portion of the breast bone, glancing off and not causing any serious injury. The

second bullet penetrated the abdomen 5 inches below the left nipple and 1½ inches to the left of the median line and penetrated both walls of the stomach. Both openings in the stomach were carefully closed with silk sutures, the abdominal wound closed without drainage.

The patient's condition ran a variable course. Everything that could possibly be done was done, but on September 14, the eighth day after being shot, at 2:15 a. m. the President died.

Dr. Rixey's report states that, in addition to those mentioned, there were present in the operating room of the emergency hospital, at the time of operation: Mr. Simpson, medical student; Dr. Charles G. Stockton, of Buffalo; Dr. P. W. Van Paymen, of Buffalo; Dr. Joseph Fowler, of Buffalo; Dr. D. W. Harrington; Dr. W. D. Storer, of Chicago.

The reports on the necropsy which was done on September 14 showed that the injuries of the stomach wall had been repaired by suture and that the repair was effective. Adhesions had formed about the openings of the anterior and posterior walls of the stomach reinforcing the sutures. There was a necrosis of the stomach walls surrounding the wound, but this was probably terminal in nature and developed as a result of lowered resistance.

There was an injury to the pancreas, due to the indirect action of the bullet rather than to any direct action, resulting in very extensive necrosis of the pancreas. It is very likely that this was the principal cause of death. The wound of the left kidney was too slight to be of any importance.

The heart wall, as shown by macroscopic and microscopic examinations, indicated atrophy and diffuse fatty degeneration, which explained the rapid pulse during the entire illness. The toxic products from the devitalized and degenerated tissues and the impairment of the heart muscle were important factors in the fatal outcome.

COMMENT

In the case of each of the Presidents the medical profession rose to the occasion. Looking backward, in the light of the knowledge of the time that each was shot, the medical and surgical treatment is seen to have been of the highest order, and there could be no reasonable adverse criticism of anything that was done for any of the distinguished patients.

Continued study of gunshot wounds of the body has brought great improvement in the methods of treatment. The progress made in medicine and surgery and the various methods and technic of the surgical treatment of gunshot wounds now enable us to save many patients who could not have recovered years ago.

Unfortunately, however, many gunshot wounds are fatal because of the destructive injury of organs which cannot be repaired or because of the injury of large blood vessels with a resulting hemorrhage that kills within a few minutes and before aid can be given.

Other injuries also, such as those of the liver, may produce death after several days due to extensive destruction of vital structures or to infection which may follow such injuries.

In modern civilization high-powered weapons, many of them of the rapid-fire type, in the hands of the lawless element, have caused such an increase in the number of gunshot wounds that this has become almost a special department in itself.

The medical profession, fortunately, is solving prob-

lems, if and when presented, and as lethal weapons come more and more into use and gunshot wounds become more frequent, newer and better methods are devised for the treatment of these wounds and many lives are now saved which would otherwise be lost.

Experimental work is being carried on with various types of firearms which it is hoped will add greatly to our knowledge and will enable still better methods to be devised for treating patients who have suffered gunshot wounds.

(The reports herewith submitted are of inestimable value because they are based upon findings revealed by necropsy; here again scientific medicine prevails. Many of our readers will be more than surprised to learn that the assassinated Presidents had necropsies done.—EDITOR.)

CORRESPONDENCE

TO THE EDITOR:

Your editorial in the June, 1935, number of the PENNSYLVANIA MEDICAL JOURNAL, entitled, "The Prescription Is Sacred," should receive the unqualified approval of every pharmacist worthy of his calling. But it seems to me that you failed to grasp the true nature of the problem and the solution thereto. You ask, "Can the druggist be taught the sanctity of the prescription." My dear editor, the druggist has long ago been taught and accepts the sanctity of the prescription.

The tampering with the prescriptions of which you speak does not occur when U. S. P. or N. F. drugs are prescribed or when drugs that require compounding are used. Every druggist has a good stock of U. S. P. and N. F. drugs and chemicals. The trouble with prescriptions to-day is that they do not contain U. S. P. or N. F. drugs but are chiefly proprietary medicines. The druggist to-day must keep duplicate or triplicate stocks of certain items to satisfy the whims of doctors who specify certain manufacturers. Items such as Bland tablets are carried in stock made by 6 different companies. Would it be sacrilegious to dispense, say Lilly's Bland pill, if one happens to be out of Park, Davis and Company pills and so on with many another item?

You say, "The doctor orders such remedies as his judgment and experience deem best in a given case." He should, but does he? The doctor writes for some proprietary medicine, the ingredients of which he does not know. Most of the contents of these preparations are not U. S. P., N. F., or N. N. F. If these drugs had any value, don't you think they would be included in one of these books? The effectiveness of these remedies usually depends on one drug such as codeine, sodium bromide, or perhaps phenobarbital, which the doctor could order as such. Yet the doctor orders the proprietary because some high-powered detail man says it is good for this or that. Is it to prescribe for some proprietary with a nice sounding name that a physician spends years of study, or is it to benefit these manufacturers that the prescription is sacred?

Unwittingly the doctor is using his influence to further the interest not of himself, his patient, or the druggist, but of the manufacturer. At the doorstep of the doctor must be placed the blame that so many of the so-called ethical products formerly sold on prescriptions are now so widely sold over the counter. The pernicious practice of many doctors in promiscuously distributing labelled samples as well as writing for preparations

whose names the patient can easily read is responsible for a great deal of the present-day "doctors' dilemma."

Yours truly,

A. LITMAN,
2130 Murray Avenue, Pittsburgh, Pa.

September 19, 1935.

TO THE EDITOR:

May I correct a mistake which appeared on page 1058 of the September issue of the JOURNAL?

The correct sixth recommendation of the physicians' group, as given to you over the signature of the subcommittee, reads as follows:

"6. That the accompanying Rules and Regulations be adopted by the Pennsylvania State Emergency Relief Board."

It was the particular set of Rules and Regulations that had been discussed and adopted, first by the physicians' group and then by the combined healing arts groups, which were recommended for adoption by the Relief Administration and not merely "a new set" as the JOURNAL incorrectly stated.

Will you kindly publish this letter in the next issue of the JOURNAL?

Very sincerely yours,

MYER SOLIS-COHEN, M.D., *Chairman,*
Subcommittee from the Physicians' Group.

SEMINARS ON ANESTHESIA

Graduate seminars for six Friday afternoons and evenings will be given under the joint auspices of the Philadelphia County Medical Society and the Philadelphia County Dental Society as per the program herewith.

There is no charge for admission and it is hoped that the surgical, medical, and dental professions will avail themselves of the opportunity of attending any or all of the seminars.

Oct. 18, 1935

Clinic 4:30 p.m. *Evaluation of the Normal Patient.* Charles L. Brown, M.D., professor of medicine, Temple University Medical School. Clinic held at the Philadelphia County Medical Building.

Lecture 8:30 p.m. *The Biologic Nature of Anesthesia.* Edward Lodholz, M.D., Isaac Ott professor of physiology, University of Pennsylvania Graduate School of Medicine.

Oct. 25, 1935

Clinic 4:30 p.m. *Evaluation of the Abnormal Patient.* Henry K. Mohler, M.D., associate professor of medicine, Jefferson Medical College. Clinic held at the Philadelphia County Medical Building.

Lecture 8:30 p.m. *Some Physiologic and Pharmacologic Aspects of Anesthesia.* Carl F. Schmidt, M.D., professor of pharmacology, University of Pennsylvania Medical School.

Nov. 1, 1935

Clinic 4:30 p.m. *Dental Anesthesia.* John H. Gunter, M.D., D.D.S., operating, Edward W. Beach, M.D., anesthetizing. Clinic held at the Evans Dental Institute, University of Pennsylvania, 40th and Spruce Streets.

Lecture 8:30 p.m. *Inhalation Anesthetic Agents.* Ralph M. Waters, M.D., professor of anesthesia, University of Wisconsin Medical School; chief anesthetist, State of Wisconsin General Hospital.

Nov. 8, 1935

Clinic 4:30 p.m. *Demonstrating Difficulties Encountered in General Anesthesia with Their Remedies.* John D. Reese, M.D., operating, John A. Stiles, M.D., anesthetizing, Henry S. Ruth, M.D., lecturing. Clinic held at the Philadelphia General Hospital, 34th Street below Spruce Street.

Lecture 8:30 p.m. *Signs and Symptoms of General Anesthesia.* Philip S. Woodbridge, M.D., Department of Anesthesia, Lahey Clinic, Boston, Mass.

Nov. 15, 1935

Clinic 4:30 p.m. *Anesthesia for Oral Surgery.* James R. Cameron, D.D.S., operating, Fred W. Clement, M.D., Toledo, Ohio, anesthetizing. Clinic held at the Pennsylvania Hospital, 8th and Spruce Streets.

Lecture 8:30 p.m. *Inhalation Anesthetic Methods.* E. A. Rovenstine, M.D., head of Department of Anesthesia, New York University, and chief anesthetist at Bellevue Hospital, New York.

Nov. 22, 1935

Clinic 4:30 p.m. *Local Anesthesia.* L. Wallace Ohl, D.D.S., Pittsburgh, Pa. Clinic held at Temple University Dental School, 18th and Buttonwood Streets.

Lecture 8:30 p.m. *Regional Anesthetic Agents and Methods.* John S. Lundy, M.D., head of the section on anesthesia, Mayo Clinic, and professor of anesthesia for Mayo Foundation, Graduate School, University of Minnesota.

All events unless otherwise designated will be held in the Philadelphia County Medical Building, S. E. Corner 21st and Spruce Streets. Seminars and clinics are offered only to graduates in medicine and dentistry and to authorized medical and dental senior students.

COMMENTS AND EXCERPTS

Chemistry of Digestion Goes on Without Stomach.—Food when eaten frequently in small amounts can be digested even when the stomach has been removed, as is sometimes necessary in cancer of the stomach, it appears from studies reported by Dr. Edward S. Emery, Jr., of Boston.

Dr. Emery was investigating the problem of decreased digestion which follows removal of the stomach. The latter is of course responsible for only part of the digestive process. Dr. Emery's studies showed that decreased digestion after its removal is not due to disturbance of the chemistry of digestion, because of lack of stomach juices. Instead it is due to disturbance of the mechanics of the digestive tract. This can apparently be overcome by feeding small amounts at frequent intervals. His studies were made on dogs.—*Science News Letter*, June 15, 1935.

Epileptics Seem Cured After Brain Operation.—Apparent cures of epileptic patients by surgical removal of the affected part of the brain in 25 cases were reported to the Second Neurological Congress, London, by Dr. Wilder Penfield, American physician who is

professor of neurosurgery at McGill University, Montreal.

Whether the cures are complete and lasting can only be ascertained after the subjects eventually die, because a recurrence is always a possibility. Some of the cases, however, have been without convulsions for 6 years.

In 75 operations for this affliction only 2 patients have died as the result of the operation.

Brain surgery is not suitable for all types of epilepsy, the Montreal physician indicated, but works well in cases due to focal atrophy and brain scars.

Brain scars may be acquired at birth or by injuries such as local meningitis and may precede the onset of epilepsy from one to 15 years.—*Science News Letter*, Aug. 10, 1935.

New Disease Found; Immunity Studies Now Being Rushed.—Discovery of a new disease and progress already made toward its prevention are announced simultaneously by 2 physicians in the U. S. Government service.

The malady, which has appeared in isolated instances in a number of states, has features resembling meningitis, infantile paralysis, and epidemic encephalitis.

Pronouncing it a new disease, Dr. Charles Armstrong, of the U. S. Public Health Service, and Lieut. Com. Paul F. Dickens, of the Navy Medical Corps, suggest the scientific name "acute lymphocytic choriomeningitis" for it. The agent causing the disease is found by the 2 physicians to be a filtrable virus.

Cases of this disease have been reported in California, Maryland, District of Columbia, Illinois, Ohio, and Virginia. The disease runs its course in 10 days to 2 weeks, and recovery is complete without paralysis or other after-effects.

Monkeys, mice, and guinea pigs are susceptible to the virus causing the malady, and the 2 physicians suggest that "a reservoir of the disease may exist in animals."

Tests show that a blood serum of patients who have recovered serves to protect experimental animals from the virus. The serum has not yet been used in human patients to test its power to forestall development of the disease.—*Science News Letter*, July 20, 1935.

Cancer Experts Warn Against Hope from Lead Treatment.—Warning against entertaining hope for the successful treatment of cancer by lead has been issued by the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City.

The warning was given by the experts on the staff of this cancer hospital following reports from the American Chemical Society meeting in San Francisco of improved technic in utilizing lead for cancer treatment.

The reports were "received with skepticism and regret" at Memorial Hospital where lead treatment was given an extensive trial and then abandoned because the general poisonous effects of lead were found too severe.

"No method of combating the chronic toxic effects of lead has been found," says the statement issued by the hospital.

"Neither lead, nor any heavy metal, has any special affinity for tumor tissues. Lead deposits, especially in the liver and bones, exert anemic effects for a long time afterwards.

"No new results of newer lead therapy methods seem to justify raising new hopes that lead will prove a desirable method of treating advanced cancer."

Dr. Bradley L. Coley especially, from personal experience, endorsed this view.—*Science News Letter*, Sept. 7, 1935.

MEDICAL ECONOMICS

State Medicine Debate Topic for School Year.

—Interest in the subject of providing adequate medical and hospital care for the American people will be stimulated in several thousand communities during the coming school year through debates on the question of state medicine.

The National University Extension Association, an organization comprising the extension divisions of the leading American universities, has for 8 years been sponsoring nationwide debates on topics of current interest. The proposition chosen this year, after an exhaustive canvass of debaters over the country, is: "Resolved, That the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense."

The extension association will publish a debaters' handbook on "Socialized Medicine" about September 1. This will consist of 2 volumes of approximately 220 pages each. Included will be an extensive annotated bibliography, articles prepared exclusively for the handbook, and selected reprints from a variety of sources. The material will be both for and against state medicine and will also cover health insurance, contract practice, group practice, annual fee payment, and related topics. The book is edited by Professor Bower Aly, department of English, University of Missouri.

More than 100,000 students in high schools, colleges, and universities throughout the country will debate this question and the debates will be held before large and small audiences and over the radio.

A nation-wide radio debate on the subject has been arranged for November 13 with W. T. Foster, Ph.D., director, Pollak Foundation for Economic Research, New York City, and Professor Aly taking the affirmative and Dr. Morris Fishbein and Dr. R. G. Leland of the American Medical Association taking the negative.—*The Modern Hospital*, Aug., 1935.

Allegheny County Committee on Medical Economics.—The Committee on Medical Economics of the Allegheny County Medical Society held its first meeting on Nov. 20, 1934.

The business which has been transacted by the committee may be considered under 5 headings:

1. Investigation of complaints from the membership on subjects relating to medical economics.

2. Services established for the benefit of members. The only matter carried to fruition is the establishment of a service in the county society office to assist members in finding a satisfactory location or relocations. If conscientiously conducted this service may be of great benefit to the membership.

3. Propaganda relating to medical economics. One of the major efforts has been an attempt to acquaint the membership with what has been done in other localities and also what is being proposed by both medical and lay groups that may affect the economic side of medical practice. They have also made an effort to bring before lay organizations and the public the views of the medical profession regarding various social and political activities vitally concerned with the practice of medicine. To this end there were held 2 special meetings of the county society devoted to the subject of medical economics. They have also supplied speakers for the radio for various lay organizations and clubs and for various medical societies, including their own branch societies and the Allegheny County Homeopathic Society.

4. Conferences with other committees and individuals.

5. Special studies and investigations. The first of these was a questionnaire which was sent to the membership in order to obtain information on the economic status of the physicians of the community, as well as their opinions and desires regarding important questions of economics.—*Pittsburgh Medical Bulletin*, June 29, 1935.

An Unethical Procedure.—Professional ethical procedures have stood the test of time because they not only protect patient and doctor, but they constitute, in effect, a code of fair play. Anything done by a physician which by any stretch of the imagination would result in the advantage of one over another almost automatically falls under the disapproval of some part of the accepted rules.

The relationship of the medical profession to that of pharmacy has long been close and cordial; and between these 2 professions there too has developed an ethical method of dealing. This condition should be preserved at all hazards.

There has come to our knowledge recently an effort by a commercial agency to purchase from physicians samples of pharmaceuticals which drug manufacturing firms have been wont to distribute free to the profession. Exactly what the "King Exchange Company" does with the samples it purchases in a "confidential" and "reliable" manner is not known to us. We would venture the guess, however, that these drugs eventually reach market at "cut rates."

We contend that the selling of such drug samples obtained gratis is a violation of the ethical standard which our society sets. In the interest of fair play to the pharmaceutical profession, we should discountenance this practice. Nor should we have commercial dealings with any agency which buys gratuitously distributed samples, no matter how "confidential" or "reliable" the services offered may be.—Editorial, *N. Y. State J. M.*, Aug. 15, 1935.

Dispensary Policies and Practices.—The following is a report of the Auxiliary Committee on Dispensary Policies and Practices of the Allegheny County Medical Society which appears in the *Pittsburgh Medical Bulletin*, June 29, 1935.

The Public Relations Auxiliary Committee on Dispensary Policies and Practices has continued during the past year in its supervision of the plan regulating admission to free dispensaries which was adopted in 1933.

In order to keep members of the Allegheny County Medical Society informed in some measure regarding the working of this plan, arrangements have been concluded to publish in the *Pittsburgh Medical Bulletin*, once a month, the record of the dispensary visits per month in all of the institutions in the county. Up to the present 2 reports have been published but it is expected that hereafter monthly reports will appear regularly in the *Bulletin*.

Owing to the fact that many individuals seem to believe that physicians in free dispensaries are being paid for their services, it was found advisable to print and post notices in various dispensaries of the county to the effect that physicians working in these dispensaries do not receive any compensation.

The committee, in the course of its work, found that certain types of patients were being referred to and being accepted into dispensaries from individuals other than their family doctor. This is particularly true of patients coming to eye clinics, and seems to be due to misapprehension on the part of someone in the Bureau of Education; steps are being taken to correct this mis-

understanding. The supervision of the committee in matters of this kind seems to be indispensable, in view of the fact that in a number of instances patients have been sent to dispensaries by agencies other than their family physician; such agencies have been school nurses, social workers, and public health nurses. The prime object of the plan adopted in 1933 is to have patients, except in emergencies, referred to the dispensaries by their family physician and by no other persons.

The total number of visits to the hospital dispensaries in 1934 was 443,962 as compared to 479,238 in 1933. This is a reduction of 35,276 visits or approximately 8 per cent. Every dispensary in the county, with the exception of 3 showed a reduction in the number of dispensary visits in 1934 over 1933.

MEDICOLEGAL

Death by Leaping from a Window.—A married woman about age 40 consulted a general surgeon with respect to complaints of abdominal pains. This examination resulted in the diagnosis of a gallbladder ailment and he suggested an operation. As a private patient she entered a hospital and was given a private room on the seventh floor. The doctor put her under spinal anesthesia and upon opening her abdomen found adhesions of the gallbladder and free fluid about the appendix. He removed the gallbladder and appendix and she was returned to her room in satisfactory condition. The day following the operation she suddenly became very irrational and tried to get out of bed. She made an attempt to go to the window; she was put back in bed, put into a strait-jacket and carefully watched by the nurses and house physicians. Various sedatives were given to her and the following day she seemed to be resting quietly in bed when suddenly she again displayed irrational symptoms and without warning made a leap from the bed and jumped out of the window.

The surgeon was notified and he found that she was suffering from multiple fractures and lacerations as well as shock. Her condition as a result of the fall was hopeless, and within 2 days she died.

An action was brought against the defendant physician upon the theory that he was negligent in permitting the plaintiff to be kept in a bed in the hospital in close proximity to a window which was not properly closed and barred; that he did not provide properly adequate attendants upon the patient to prevent her from injuring herself, as a result of which it was claimed that the defendant doctor was responsible for the death of the patient. The case came on for trial and at the close of all the testimony the judge directed a verdict in favor of the defendant, exonerating him from all responsibility in connection with the woman's death.—*N. Y. State J. M.*, Aug., 1935.

Burn Discovered Subsequent to Operation.—Dr. X, a general surgeon, was treating a patient for subacute appendicitis. After a particularly severe attack the patient was placed in a private sanitarium and under general anesthesia her appendix was removed. While the patient was in the hospital Dr. X saw her daily. About the third day postoperatively, the surgeon was told by a member of the patient's family that the patient's ankle was bothering her. An examination revealed external redness with 1 or 2 blebs. The doctor advised dressing and made a diagnosis of first-degree burn. The patient had a normal recovery postoperatively and left the hospital about 11 days after the op-

eration. There was a slight infection of the burn which healed, leaving only a slight discoloration.

The patient subsequently sued the doctor and upon the trial of the case it was proved that immediately after the operation a nurse, following the usual routine care, placed a hot-water bag upon the patient's foot. This was done after the patient had been removed to bed, but not under the direction nor supervision of Dr. X. After this proof was elicited on behalf of the defendant at the trial, the court directed a verdict in favor of Dr. X. *N. Y. State J. M.*, Aug., 1935.

INDUSTRIAL MEDICINE

Supervision of Adolescents in Industry.—Dr. Langelez, "inspector general" of the Service médical du travail, Belgium, has an article in the *Revue du travail* on the sanitary supervision of adolescents. In 1920 the work begun by Dr. Glibert in this field was sanctioned by a royal decree. Dr. Langelez, who for a number of years has been in a position to observe how the prescribed measures are applied and what results are secured, gives a summary of his observations.

The sanitary supervision of adolescents in industry, as organized in Belgium, is designed to render to the adolescent man power in the industrial plants constant service. In guiding youth's first step in the industrial life, in aiding young persons in the choice of a means of livelihood and in their adaptation to the trades, in supervising their first years of industrial activity, in watching over the less alert and in discovering at the start disturbances of health, this organization deserves a special place among the movements whose avowed task is the protection of workers. As Dr. Glibert said one day, "What finer service can physicians render than to watch over the normal development and the physical growth of the future generation of producers of wealth?"

To say that the organization as it exists is perfect would be an error. But does it reach all those that it is designed to aid, namely, boys and girls from 14 to 18 years of age in all industries except that of the home and the exploitation of agricultural work? One may reply that the organization functions efficiently in the major industries, in the middle-sized industries, and in a large portion of the minor industries. Its principles are the most difficult to apply in the minor industries in which there are only one or two apprentices; but in the trades presenting appreciable dangers the health of adolescents is periodically observed.

"Are the medical examinations made with sufficient care?" "Is there, in the organization of this service, nothing mechanical in the administration and in the paper work?" In reply to these questions, it should be said that sanitary supervision is as all other human endeavors. The better the physician, the better the work is done that is entrusted to him, whether it is a question of industrial medicine, inspection of schools, consultations for nurslings, or antituberculosis dispensaries. There are, however, certain organizations that are practically perfect, in which the physicians perform their tasks with the zeal and conscience of an apostle. Men of their caliber understand that the medicine of to-day demands more than formulas for treatment and prescriptions of drugs. The physician of the future must not devote his entire attention to therapeutics but must take on new activities born of modern hygiene and of preventive medicine. The protection of childhood, the medical surveillance of school children, and the sanitary supervision of adolescents in industry are movements the social value of which is apparent to every

one; but their value in an individual case depends on the type of physician that administers them.

In one sense, the sanitary supervision of adolescents is only a continuation of the guardianship to which school children in Belgium are subject. The mode of functioning of the service may be summarized as follows: Examination one month after the new work is begun; an annual general survey of adolescents with supplementary examinations after one month, 3 months, or 6 months. The examinations are given either by the medical inspectors of the ministry of health or by physicians selected by the industrial heads.—*Foreign letters, J. A. M. A.*, Aug. 31, 1935.

PHYSICAL THERAPY

Therapy with the Cold Quartz Lamp in Dermatology.—C. S. Wright (*Archives of Dermatology and Syphilology*, 31:374-383, March, 1935) notes that the cold quartz lamp has a constancy of output that "makes possible an accurate estimate of dosage." He has treated 180 cases of various skin diseases with this lamp; 94 of these were acne vulgaris, in which good results were obtained. Most of these patients had been previously treated with roentgen irradiation or were given roentgen irradiation conjointly. In the cases treated with the quartz lamp alone, a larger number of treatments were required. In most cases, the patients were freed from lesions and the degree of scarring was lessened. Other skin conditions that responded well to the cold-quartz-lamp treatment are: Acne rosacea, various types of alopecia, eczema of the dry, squamous, and thickened type (not vesicular eczema), and a few cases of psoriasis and molluscum contagiosum. The rays of the cold quartz lamp cause erythema and desquamation, even with small doses, but no appreciable pigmentation of the skin. The author is convinced that cold quartz ultraviolet irradiation is of definite value in a number of skin diseases, but it should not be used in conditions that are unfavorably affected by sunlight.

COMMENT

The effective use of the cold-quartz-lamp irradiation in a group of various skin diseases, 94 of which are acne vulgaris, with good results, is a notable achievement. It is noted that most of these cases had been previously treated or received roentgen irradiation conjointly; it therefore seems reasonable to attribute the success to combined irradiation effects rather than cold-quartz-lamp irradiation alone.—*Medical Times*, June, 1935.

HOSPITAL ACTIVITIES

What Surgical Procedures Are Permissible in Private Rooms?—The hospital superintendent is often requested to allow certain minor surgical procedures to be performed in the room of a private patient. Such steps as the removal of casts, the treatment of fractures of small bones, the incision and drainage of abscess cavities, the performance of cystoscopy, or the packing of the uterus are procedures that fall in this class.

Sometimes the reasons underlying these requests are bona fide, such as the difficulty of moving the patient, or the avoidance of fear of operating or dressing room surroundings. Not infrequently, however, an effort is made to evade the payment of the operating or anesthesia fee, which has been set by the hospital for patients treated in surgical clinics or in minor operating rooms.

When this is the motive, the superintendent should refuse to grant such requests unless the procedure is one of the most minor proportions. Transfusions may be safely performed within the patient's room, if they consist of the injection of citrated blood withdrawn elsewhere from the donor. The setting of fractures should be discouraged as a private room procedure, but if the patient cannot be conveniently moved, arrangements should be made to grant such requests.

The fewer the procedures performed without an operating or dressing room, the better for the patient and the hospital. The fee schedule of the institution must be flexible enough to care for such emergencies, and it would be far better to lower operating and anesthesia fees than to permit inferior work to be carried out under far from aseptic conditions and in the absence of a trained nursing personnel.—*The Modern Hospital*, Aug., 1935.

The Need for More Rural Hospitals.—The fact that 1300 of the 3073 counties of the United States containing 18,000,000 persons have no hospitals within their borders does not necessarily imply that local hospitals are required in all of them. But what does the absence of a local hospital mean? It may imply merely that good hospitals exist in a city just over the border of the neighboring county; it may imply that the county is mostly mountain, desert, or grazing land with too few people to utilize or justify the existence of any hospital.

But when a hospital is needed and is lacking, what does its absence mean? It means that gravely sick people cannot secure surgical operation when they need it without a long, dangerous, and expensive trip; that difficult cases of women in labor cannot be properly cared for with sufficient promptness to save life; that the roentgen-ray facilities needed for diagnosing a fracture or an internal cancer are not available; that the physicians of the area are deprived of opportunity for self-education through professional association, and through the use of diagnostic and treatment facilities, without which medical men cannot keep abreast of the advancing science and art of their profession.

The study reported in the March issue of *The Modern Hospital* brings forcibly before the people of this country the lack of hospital service in hundreds of rural areas. It is apparent that the county is often too small a unit to maintain a satisfactory hospital, and that hospitals should often be so located and organized as to serve the people of several neighboring counties. The need for a hospital in an area will be determined by the number and distribution of its population, the accessibility and sufficiency of existing hospitals as determined by distance, roads, topography, and climate, and the practicability of providing a satisfactory professional staff from the locality, although it must be remembered that the establishment of a hospital is likely to bring additional physicians to the area, as well as to facilitate an improvement of its preventive health services. The practicability of maintaining a new hospital financially after it is constructed must be considered, but it is known that the existing county hospitals in small towns and rural areas are now substantially supported by paying patients, so that only a fraction of their cost needs to be met by taxation.

In some rural areas now without hospitals the establishment of a new hospital providing opportunities for major surgery would be neither necessary nor wise. Medical buildings, or "cottage hospitals," as the English call them, are desirable in such places, furnishing

offices for physicians, simple roentgen-ray and laboratory facilities, space for the county health officer and his staff, and a few beds for the temporary care of patients, without facilities for major surgical work.

In a period when the needs of our rural population are justifiably receiving special attention, and when unoccupied hospital beds in most of our cities are raising the question of a surplus of urban hospital facilities, the attention of the public works authorities should be directed toward the construction of hospitals and medical buildings in the 500 or 600 rural sections that need them. The proper governmental agencies can readily undertake studies for the location of such buildings as public works or work-relief projects, in which state and local communities should cooperate and which would be permanent contributions to the health and welfare of millions of American citizens.—Editorial, *The Modern Hospital*, Mar., 1935.

The Need for More Hospitals in Rural Areas.—Alden B. Mills, managing editor, *The Modern Hospital*, and Patsy Mills, state that an adequate number of general hospitals of sufficient size to care for the needs of the people and within reasonable distance of them are necessary for good medical care and are essential facilities in any modern and progressive community.

A casual perusal of occupancy ratios for 1933 of the existing hospitals even in some of the most poorly provided sections reveals that they had many empty beds. This does not indicate that the need for hospital facilities is nonexistent, but rather that large groups of people either did not know what they needed or, knowing it, could not afford to pay for it on the present basis.

Obviously the question of providing more hospital facilities has 2 aspects—the physical or scientific, and the economic. This study is directed primarily toward the former and the question of how the hospitals built in rural areas which are now poorly served would be financially supported is deferred to a later discussion.

Before actually locating a hospital, however, consideration must be given to the following factors affecting scientific as well as economic questions: (1) Size of population; (2) size of area to be served; (3) density of population; (4) number and training of physicians in the area; (5) extent to which the provision of hospital facilities would improve conditions of medical practice through assisting present practitioners or attracting new ones; (6) distance to other hospitals; (7) road conditions, summer and winter; (8) the health knowledge of the people and the extent to which they could be trained to use hospitals when necessary; (9) the suitability of home conditions for caring for less serious illnesses; (10) financial resources of the population, that is, occupational and income groupings, and the extent to which new methods of paying for medical service may be devised which will facilitate support of rural hospitals.—*The Modern Hospital*, Mar., 1935.

PUBLIC HEALTH

The First World Physiologic Congress to be held in the Union of Soviet Socialist Republics was held in Leningrad during the month of August. The prepared agenda and synopses of lectures and discussions indicate little novel or startling in the way of discoveries. On the other hand there is a general feeling that physiology is on the verge of a wholly new conception, or rather has already formed a new conception, of the human

body, with consequences that cannot yet be estimated.

Until quite recently it was thought that the nervous system was chiefly mechanistic. Now it is known that nerve stimulus causes the production of a chemical substance that passes into the blood stream and can have all sorts of different effects.

Professor Walter B. Cannon of Harvard read a paper describing how he had been able to isolate such a substance—called sympathine, because it is derived from the action of sympathetic nerves—which produced certain effects when injected into the eye membrane of a chicken.

Thus far the experiments chiefly concern the effects of nerve stimulation, but it is believed and will probably soon be demonstrated that inhibitory effects are part of the same mechanism.

Investigation of the structure and functions of the nerves, which clearly is one of the chief lines of present physiologic research, was presented from a different angle by Professor Kato, a Japanese, who demonstrated a microscopic dissection of a single nerve fiber, which gives a similar reflex to stimulation as a whole nerve containing thousands of such microscopic threads.

No less interesting was the lecture of Dr. Hallowell Davis and Fred Gibbs of Harvard, who showed that the human brain produces electrical waves, the differences in the frequency and strength of which vary and can be measured in natural sleep and anesthesia and in epilepsy and other maladies.

Many delegates are eagerly looking forward to their visit to Moscow in order to examine the investigations there and Professor Koltzoff's genetic laboratory, which claims to have found an electrical method of distinguishing male-producing spermatozoa from those that produce female animals. The method is said to be 80 per cent correct.

This is enormously important in stock breeding, and although it naturally involves artificial insemination it might readily be applied to human beings.

The foreign scientists are also greatly interested in Soviet birth-prevention clinics as providing a legal way of obtaining human embryos in all stages, which for obvious reasons cannot be obtained in most other countries. Yet they are most important for experimental purposes.

Pure Water.—"Man is born to thrive with pure air to breathe, pure water to drink, and pure soil to live on. The impurities which render water and soil unfavorable to his own development are the products of his own life; and their removal his own responsibility."

This quotation, of unknown authorship, came to mind while contemplating the results of an analysis of the waters of one of the 2 large rivers (the Schuylkill) supplying the aqueous needs of Philadelphia's urban population.

Approximately one ounce of sludge and slime and solubles was contained in a gallon of this unfiltered water, which however when delivered to the household and the factory, thanks to the chemists and engineers, is relatively safe to drink and satisfactory for most industrial uses, containing less than 5 grains of harmless solids to the gallon.

Yet while admitting the splendid supervision and protection which the municipal water engineers and chemists give their employers—the citizens of Philadelphia (each with a daily per capita consumption of 168 gallons of treated water!), it is unbelievable that such arrant pollution of water sources should be tolerated in any community.

Listen to this recital of the industrial wastes that find their way to Schuylkill's waters.

First, there are the animal materials such as those from stockyards and abattoirs, packing plants, tanneries, woolen industries; second, wastes of vegetable origin such as those from cotton, paper mills, and rubber factories; third, wastes of mineral origin such as those from dye and gas plants, coal mines, chemical plants, bleacheries, etc. Gloriously enough the raw water of the Schuylkill is polluted by all 3 types of industrial wastes. And that makes Aqua Schuylkilliensis or any other aqua a pretty strong drink.

No one in his senses would ever deny that the raw water as it comes into the intakes from the 2 Philadelphia rivers is anything but a compound infusion of slime and sickly sewage, totally unfit for human consumption.

Modern civilization laughs at the primitive practices of cannibals and savages, who bathe their bodies and wash their clothes in their village drinking ponds. But the pollution of Philadelphia's water sources is much more savage and reeks with more filth than ever did the uncivilized and primitive combination of swimming pools and drinking fountains.

Furthermore the watersheds of the Delaware and Schuylkill carry a population of nearly a million and a half, and these 2 creeks bring to Philadelphia every day on their way to the sea the sewage and industrial pollutions of this whole contiguous community of a million and a half people. Recall, too, that every normal adult excretes about 5 billion *B. coli* every day. No wonder our creeks are dirty.

Nor must we forget that after the Philadelphia engineers temporarily remove the muck and slime from this raw water, they return it, as sedimented sludge and slime, from the laundered sand filters back to the rivers again and along with it the excreta, biologic and industrial, of another 2,000,000 parasites and with their compliments to Chester, Wilmington, and the deep blue sea. But that is another story.

Where there is no water, there is no life. No matter whether life elects to serve its time in the simple single-celled ameba, or in the trillion-celled, complicated, and concealed creature called man, short indeed would be its stay unless it has the varied services of its versatile ambassador—water. Life comes to us wrapped up in water, and death, so often the solution of all our problems, is also always a water reaction. Indeed, water gets us even after death, for it is largely through its agency that Nature uses our substance over again in the fabrication of other creatures which are generally improvements over the originals.

In the animal body, water serves in manifold ways, and every tissue has its share of fluid. No physiologic action could take place without it and every tissue in the body needs its share as indicated by the following table:

Blood	70%	Brain and nerves	70-77%
Muscles	75%	Hair	5%
Fat	8%	Nails	5%
Bones	14-44%		

Solvent, cleanser, purging agent, vehicle of the vital forces, regulator of body heat, lubricant, these are but a few of water's biologic functions.

Yet in spite of this obvious biologic importance of clean, natural water, we tolerate a needless pollution of our sources and a much needed though damaging chemicalization of this tainted material to make it safe for democracy and the few stalwart republicans left.

Anyone knows that a truly potable natural water is far kinder to our systems than any purified or chemicalized dirty or polluted water.

There is a biologic something in clean natural waters—an undefined elusive something that has escaped the attention of the sanitarian scientists of this day and generation—which must be injured in the several heroic processes of large scale purification.

The foregoing is an empiric statement which, if noted, would only invite a laugh from some of our modern, armadillo-minded magisters of science.

But the writer ventures the prediction that this something will some day, and some day soon, be made as tangible and real as have the vitamins, which for generations were empirically well known to the laity and yet sneered at by many a crop of one-eyed and addle-headed theorists before their eventual discovery.

Of course, it is admissible that pure natural waters are no longer available for the vast array of consumers in the congested areas, but it is equally admissible that the pollution of our water sources can and should be held down to a minimum, so that by the same token, chemicalization can be equally minimized.

And it is little wonder that the new Pharmacopeia, recognizing the hazards of ordinary water for the making of medicines, will give official sanction only to "Aqua Destillata."—Editorial, *Am. Jour. Pharm.*, July, 1935.

The Home Accident Problem.—The entirely proper emphasis that is being placed upon the increasing number of automobile casualties in a measure has obscured the sad fact that home accidents have also reached alarming proportions.

Four million of anything is a huge number. However, when this figure is applied to accidents in that imagined isle of safety known as the American home, it becomes a very real calamity. And that exactly is what happened during the immediate past 12 months, according to recent compilations. Moreover, the fact that 24,000 persons lost their lives through this cause alone makes the picture, already black, even more so.

Of course, everything Americans do they are prone to do in a big way. But to apply this principle to such an extent that a devastating thoughtlessness results is carrying matters just a bit too far. And indeed little else can be blamed for this disturbing accident rate.

Never has there been a time in the history of man when health officials, welfare agencies, and "foundations" have been so generously and genuinely interested in the well-being of the average citizen as they are to-day. But, on the face of it at least, it cannot be stated that the individual is displaying more than a minimum of interest in his own health and happiness; that is, if the home accident situation can be used as a guide in this connection. Indeed, carelessness and indifference seem to rule more than caution and thoughtfulness.

No one can deny that pure water, safe milk, protection against communicable disease, and preventive medicine generally have actually worked miracles in terms of health and happiness in the last decade or so. Because of these spectacular advancements life itself has been made infinitely more enjoyable and fundamentally safe.

On the other hand, this progress counts for absolutely nothing to that person who, through sheer carelessness, is guilty of some act that results in a fatal home accident. In matters of this character science and health officials are as helpless as a little child.

Thus when it is discovered that nearly 40 per cent of the casualties were caused by falls on floors, on walks, over objects, from ladders, tables, chairs, benches, and in bathtubs, those interested in public health can but sigh and officially lament.

They are equally helpless regarding accidents caused by sharp instruments, burns, hot water, matches, cigars, acids and chemicals, by stepping on broken glass or nails, by explosions of fireworks and gasoline, and by asphyxiation.

Caution and reasonable care are the only antidotes for the present home accident incidence. Those who really enjoy life and seriously wish happily to remain "among those present" for a long time will realize that the home accident situation is a real challenge—and then will govern themselves accordingly.—Editorial, *Pennsylvania's Health*, May-June, 1935.

The Joint Subcommittee on the Deaf and Hard of Hearing of the New York State Medical Society issued the following annual report for 1935: Coöperation of the medical profession is earnestly sought by this committee. Since its activities are chiefly concerned with children, the attention of pediatricians, family physicians, and physicians active in school health work is especially desired.

The committee's objectives are twofold: (1) Conservation of hearing in all children; (2) raising the standard of otologic care of children in schools for the deaf.

The committee advocates an annual school hearing program for all children, with the purpose of early discovery of potential, as well as permanent, hearing impairment. It is well known that many cases can be cured by medical care promptly given and that many others may be arrested or improved by means of treatment. Neglected cases suffer a heavy life handicap which limits earning power and induces numerous personality problems. These misfortunes may be prevented if early discovery is made the rule and if parents are encouraged to refrain from concealing a condition which some feel to be disgraceful.

The preschool child should be examined for hearing defects in order that proper steps may be taken to correct or check the progress of the condition at the earliest possible age.

This committee urges coöperation with the State Department of Education Hearing Program which includes a hearing test for all school children. Those found defective will be examined by otologists, who recommend the treatment to be carried out. Provision will be made in the schools for children found to be hard of hearing. Those with hearing losses sufficient to warrant it will be placed in special classes with lip-reading instruction and such aids as may be required. Special schools are not for the moderately deafened child. All cases of impaired hearing in children should be reported to the Bureau for Handicapped Children.

Children who are completely deaf present a different problem. These children include the congenital or hereditary types, as well as those who lost usable hearing before speech was acquired.

Children found to be deaf and in need of special care should be reported by physicians to the Bureau of Special Schools of the State Education Department for admission to a school for the deaf. There are 7 such schools in various parts of the state available to the public school child. At present they are caring for about 1700 children who are totally deaf or very hard of hearing. The committee has made some progress

in bringing about an improvement in the otologic supervision of the children in these schools.—*N. Y. State J. M.*, No. 15, 1935.

Anti-Tularemia Serum and Vaccine to Get Trial. A serum and vaccine, devised by Dr. Lee Foshay, department of bacteriology, University of Cincinnati Medical College, as preparedness against tularemia, or rabbit disease, has been supplied the Public Health Center in Cincinnati, Ohio, for inoculation of hunters in preparation for the approaching opening of the hunting season. The vaccine is to immunize against the disease, and the serum is for treatment of infected persons.

These preparations were supplied the Cincinnati Health Center last year by Dr. Foshay and were found to have provided a high degree of protection against the disease to approximately 100 persons who were inoculated with them.—*Science News Letter*, Oct. 5, 1935.

Morbidity in Pennsylvania in July, 1935

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	0	4	0	0
Allentown	0	14	0	0	20
Altoona	2	1	2	1	20
Ambridge	0	0	0	0	0
Arnold	0	0	1	0	0
Beaver Falls	0	3	3	0	0
Bellevue	0	1	0	0	0
Berwick	0	0	1	0	5
Bethlehem	0	0	0	0	4
Braddock	0	0	1	0	5
Bradford	1	1	0	0	1
Bristol	1	0	0	0	1
Butler	0	1	0	0	2
Canonsburg	0	0	0	0	0
Carbondale	0	0	0	0	0
Carlisle	2	0	0	0	4
Carnegie	0	0	0	0	0
Chambersburg	0	8	0	0	0
Charleroi	0	1	1	0	4
Chester	1	2	1	1	1
Clairton	0	1	2	0	2
Coatesville	0	0	0	0	1
Columbia	0	0	0	0	0
Connellsville	0	0	1	0	0
Conshohocken	0	2	0	0	2
Coraopolis	0	5	0	0	0
Dickson City	0	0	0	0	0
Donora	0	0	1	0	0
Dormont	1	2	0	0	0
Du Bois	0	3	1	0	0
Dunmore	1	0	2	0	0
Duquesne	0	1	0	0	1
Easton	1	0	0	0	7
Ellwood City	0	1	0	0	2
Erie	0	52	1	1	14
Farrell	0	0	0	0	0
Franklin	0	0	4	0	7
Greensburg	0	0	0	0	0
Hanover	0	0	0	0	0
Harrisburg	0	0	3	0	3
Hazleton	0	2	0	0	0
Homestead	1	1	0	0	0
Jeannette	0	1	1	1	0
Johnstown	1	5	4	0	4
Kingston	0	0	1	0	2
Lancaster	0	4	2	0	2
Latrobe	0	0	0	0	3
Lebanon	0	1	1	0	2
Lewistown	0	1	0	0	1
McKees Rocks	0	0	0	0	0
McKeesport	0	0	3	0	0
Mahanoy City	0	1	0	0	0
Meadville	0	0	2	0	3
Monessen	0	0	0	0	2
Mount Carmel	0	2	0	0	0
Munhall	0	0	1	0	0
Nanticoke	0	0	0	0	0
New Castle	0	7	11	0	0
New Kensington	0	0	0	0	0
Norristown	0	3	1	5	26
North Braddock	0	0	0	1	0
Oil City	1	8	0	0	16
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	12	93	61	8	262
Phoenixville	0	0	0	0	1
Pittsburgh	5	66	63	8	115
Pittston	1	0	0	0	3
Plymouth	0	0	1	0	0
Pottstown	0	0	0	0	8
Pottsville	0	0	0	0	2
Reading	0	56	6	1	10
Seranton	1	2	4	0	7
Shamokin	0	0	0	0	0
Sharon	0	0	1	0	4
Shenandoah	0	0	0	0	0
Steelton	0	0	0	0	0
Sunbury	0	6	1	0	9
Swissvale	0	1	0	1	0
Tamaqua	1	2	10	0	7
Taylor	0	0	0	0	0
Turtle Creek	0	0	0	0	1
Uniontown	0	0	1	0	0
Vandergrift	0	16	1	0	1
Warren	0	4	0	0	0
Washington	0	2	5	0	0
Waynesboro	0	1	1	0	0
West Chester	0	0	0	0	0
Wilkes-Barre	1	10	1	0	19
Wilksburg	0	2	1	0	5
Williamsport	0	5	0	0	30
York	0	0	0	0	2
Townships					
Allegheny County:					
Harrison	0	0	0	0	0
Mt. Lebanon	0	0	0	0	0
Stowe	0	0	2	0	0
Delaware County:					
Haverford	0	0	3	0	0
Upper Darby	0	3	2	0	32
Luzerne County:					
Hanover	0	0	0	0	0
Plains	1	0	0	0	0
Montgomery County:					
Abington	1	2	0	0	8
Cheltenham	0	1	0	0	10
Lower Merion	0	1	3	1	9
Total Urban ..	36	408	223	29	712
Total Rural ..	51	450	168	36	501
Total State ..	87	858	391	65	1213

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

TUBERCULIN tests surveys of school children conducted in numerous communities have directed attention to the problem of discovering tuberculosis among teachers who may be spreading infection to the children. An increasing number of school boards are demanding proof from the teacher that she is tuberculosis-free. Since this practice promises to become more widespread the physician should know about the procedures that are being tried and be prepared to participate with school boards in formulating the best plan. The method employed in Minneapolis is described in a recent article by Harrington, Myers, and Levine in the *Journal of the American Medical Association*, brief abstracts of which are here submitted.

TUBERCULOSIS AMONG SCHOOL EMPLOYEES

Some states have laws providing for the physical examination of teachers and the exclusion of those applicants who have tuberculosis. The attorney general of Minnesota has ruled that "the skin test for teachers is reasonable exercise of the police powers of the school boards if required for the purpose of safeguarding the pupils of public schools."

Previously the author demonstrated that children taught by teachers with open tuberculosis showed a much higher incidence of positive tuberculin reactions than those taught by other teachers. Ickert found that 93.5 per cent of the children taught by tuberculous teachers reacted to tuberculin as compared with about 25 per cent reactors in a control group. Frost reported 71 per cent reactions among pupils of a tuberculous teacher whereas only 11.4 per cent of children in adjacent districts taught by nontuberculous teachers were positive to the test.

Preparing the Way

The first step taken in Minneapolis to bring about a survey of school-teachers and employees was to arouse the school board to the need of requiring a health certificate of all teachers. At that time, October, 1921, the value of the tuberculin test and the roentgen ray was not thoroughly appreciated and therefore certificates in some instances seemed almost worthless. More publicity and education was patiently carried on to

prevail upon the board to demand from the teacher more specific evidence of freedom from tuberculosis.

The problem was discussed with the medical society which, after careful deliberation, supported the director of hygiene of the Minneapolis school board in his recommendation to the board that all teachers and employees who come in contact with school children submit to a Mantoux skin test, the expense of the test to be borne by the board.

Since there was some objection to the tuberculin test based on misunderstanding, the order adopted by the board was modified a few months later to permit the teacher to submit a roentgen-ray film of the chest in lieu of the skin test. Protests of obstructionists continued and therefore it was considered wise to postpone the execution of the order to Dec. 31, 1933. New objections arose but the authorities proceeded with the administration of tuberculin tests and the preparation of roentgen-ray films of the positive reactors. False and absurd rumors which tended to disparage the procedure circulated freely, but tactful execution of the procedure overcame most of the objection and in a short time a high percentage of teachers submitted to the test.

Procedure

A physician and a nurse visited each school building and applied the test to all employees who

wished it. Arrangements had been made with the local radiologic society for the taking of roentgen-ray films of the chests of all teachers and others concerned who were authorized by the school board to have such films made. Teachers who declined the skin test, as well as those whose tuberculin tests proved positive, were issued authorization slips for the making of the roentgen-ray films. The films when made were forwarded to the hygiene department for corroboration.

An option on this procedure was offered, permitting teachers to have the tuberculin test applied by their private physicians, a report of the results, certified over the physician's signature, to be sent to the director of hygiene. Further, the school personnel was permitted to submit roentgen-ray films of the chest taken by physicians of their own choice. These options were exercised at the expense of the teacher. All other costs were borne by the school board.

Results

Altogether 2190 persons were tested with tuberculin and 1384 elected an option. A single dose of 0.1 mg. of tuberculin was used. Retesting of negative reactors could not be done because it was necessary to simplify the procedure.

Of those tested 49 per cent reacted. The incidence of reactors varied curiously in different schools. In 2 schools in which there were less than 5 teachers, all were negative. The lowest number of reactors in the larger schools was 10 per cent and the highest was 82 per cent. As a group, school nurses showed the highest incidence, 91 per cent. Of the 2466 who were roentgen-rayed 59 per cent showed no evidence of disease.

All films were interpreted by one of the authors who classified them as follows:

No evidence of disease	1453
Scoliosis	2
Possible substernal thyroid	2
Change in cardiac outline	44
Evidence of increased bronchovascular markings	175
Evidence of fibrinous pleurisy	66
Evidence of first infection type and pleurisy	29
Questionable evidence of first infection type of tuberculosis	85
Evidence of first infection type of tuberculosis	532
Evidence of parenchymal lesions	78

The method employed is regarded by the authors merely as a means of screening out cases who should have a thorough examination of tuberculosis. The 78 persons with parenchymal lesions as well as those with changes in cardiac outline or other significant findings were all advised to consult the physician for further examination and final diagnosis. To keep a check on those with parenchymal lesions periodic roentgenographic examinations were requested at stated intervals, the films to be submitted to the director of hygiene of the school board. There was no interference with practitioners of medicine. The school board should not treat disease but it is definitely obligated to make sure that its employees do not disseminate tubercle bacilli in line of duty. Great care must be exercised by the board not to be too drastic in dealing with those who have parenchymal shadows. Every finding should be kept strictly confidential; even the tuberculin test should be applied on a part of the body where it is not visible to other teachers or pupils and the report on the test should be made only to the individual tested.

The costs of the survey are important to consider. All but 102 of the tuberculin tests were paid for by the school board. Of the 2476 roentgen-ray films 238 were not paid for by the school board. The total expense to the school board was \$5525.50.

Advantages of Survey

In the summary of the article the chief advantages of the survey are stated as follows:

"First, disease may be detected before it has produced significant symptoms and when it can be treated successfully in a short time, thus saving the teacher a long period of inactivity from work. Such cases, by adequate treatment, may be prevented from breaking down so as to be a menace to the children and other teachers. Thus, the environment so far as tuberculosis is concerned becomes much safer from the standpoint both of the teacher and of the child. Second, compulsory examinations often lead to investigation on the part of the teacher so that she becomes informed concerning the contagious nature of tuberculosis. Many such teachers become enthusiastic workers in the tuberculosis control program. This should lead ultimately to the enlistment and the support of great educational associations, which will be a valuable acquisition to the forces against tuberculosis.

Tuberculosis Among Employees of the Minneapolis Schools, P. E. Harrington, M.D., J. A. Myers, M.D., and Ida Levine, M.D., Journal of the Amer. Med. Ass'n., May 25, 1935.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

COUNTY MEDICAL SOCIETY MEMBERSHIP—A PRIVILEGE AND A SOCIAL OBLIGATION

To the despairing officer or committee chairman of any county medical society about to catalog as hopeless further endeavors to enlist as a new member of his county society an eligible but stubborn nonmember physician of the county, we suggest a final appeal based on every practicing physician's obligation to the pioneer medical men of his county, who served the public faithfully and well throughout the years when no other form of health service existed. The best traditions to which the practitioners of medicine of Pennsylvania have fallen heir are based on the manner in which county medical society members of 50 to 80 years ago assumed communal health responsibilities.

Recently, in preparation for a discussion of the subject at hand to be presented at the 1935 meeting of our Fourth Councilor District, the writer consulted a committee report penned by the hand of Dr. C. L. Bliss, chairman of the Sanitary Committee of the Bradford County Medical Society, in 1856, and addressed to the Pennsylvania State Medical Society.

The committee, following the usual custom of that period in the absence of any county or state health department, gave its report on (1) contagious diseases; (2) the more interesting clinical cases coming under the observation of the various members of the society; and (3) in that year the findings of at least one necropsy.

UNIQUE ETIOLOGY.—There were frequent references to the intermittent fever, which responded promptly to the administration of quinine, "which also relieved their shaking agues." Dr. Bliss expressed his personal opinion that "much of the typhoid fever, so-called, has re-

sulted from an injurious treatment of intermittents; small doses of antimony, calomel, and opium," continued Dr. Bliss, "are effective agents in the *conversion* of intermittents into the much dreaded typhoid fever."

Dr. Bliss, giving full credit to his everyday remedy—4 grains of quinine 3 or 4 times in each 24 hours—stated that he had given "relief to severe cases of intermittent fever, even those with marked dyspnea, pains in the chest and head, with expectoration of bloody mucus."

CONTAGIOUS DISEASES.—He reported 5 cases of smallpox in the month of May, at Laceyville, Wyoming County. Two of the cases terminated fatally. In concluding his comments on the smallpox epidemic Dr. Bliss said, "This was the fourth time smallpox has visited us since I have practiced medicine, the first in 1831." He practiced vaccination, frequently with no success, by the application of a crust from a pustule taken from a victim to the abraded skin of those exposed.

The report by Dr. Bliss was based upon written reports to him from other members of the society, among them Drs. G. F. Horton (who served as president of the State Society in 1862), T. F. Madill, and Daniel Holmes, each individual physician reporting on all varieties of cases treated by him within a year. They apparently averaged about 350 cases each, "exclusive of office cases and cases visited in consultation with other physicians." Among this number one physician reported 18 deaths; another, 19, including 7 who died from apoplexy.

DIPHTHERIA A FASHIONABLE NAME.—That which was evidently diphtheria but called croup was reported in 2 contrasting cases by one physician; a lad, age 4, died on the third day in spite of a successful tracheotomy; also, a girl,

age 5, showing "frightful dyspnea and wildest terror," he immediately "placed in a warm bath, where he opened the external jugular vein and bled the patient almost to the point of fainting, with immediate relief of the most distressing symptoms." Vomiting produced by emetics resulted in dislodging "several pieces of the pseudo-membrane 1 to 1 $\frac{1}{4}$ inches long," with recovery. Another physician reporting on his experiences for the year 1862 mentioned 421 cases, with 17 deaths; "of these fatal cases 6 died of sore throat, or to employ a popular and fashionable name—diphtheria."

SURGERY AND MALPRACTICE SUITS.—Reminiscent of some present-day comments we find the following noted under the heading "Surgery": "The necessity for the skilled surgeon is increasing, but it is impossible for every practitioner to be a good surgeon and keep a full set of surgical instruments; even if there were no prosecutions for malpractice it would not pay by any means at the present rates of charges. In many instances the practitioner would not even get the interest on money invested in a good set of instruments and library. Then, considering the mania so prevalent in the community to prosecute for malpractice for every little trifling mistake places the practice of surgery in rather a delicate position. Should not the practice be more divided, surgeons take more pains to qualify and equip themselves, be better paid for their services, and be more cautious about favoring malpractice suits?" (A reference, no doubt, to suits inspired by derogatory criticisms of treatment by fellow practitioners.) "It has now even got to that extent that we are held responsible for even the simple operation of bleeding. Is this right? I think that is a matter that requires investigation."

EXPOSURE AND HIGHER FEES.—Apropos of the subject of obstetrics we learn that in the given year "attacks of puerperal fever have been very rare, and when they did occur generally one slight bleeding and a mercurial given in the commencement put a stop to the mischief in a short time." Obstetrics is referred to as "a very hard and important part of medical practice," with fees "much too small to remunerate for the time spent, the derangement of other business, and the exposures we were necessarily obliged to endure." Most practitioners of that day charged "\$1 to \$3 for ordinary attendance, regardless of the distance traveled, whereas it should be from \$5 to \$7."

Having read this brief sketch based on the itemized reports of the heroic activities of the physicians of 80 years ago, we trust that physi-

cians of to-day with their superior advantages will be inspired to carry on in the same professional spirit that characterized the laborious services to private patient and community alike of the practitioners who comprised the membership of our county and state medical societies of 80 years ago.

A HEALTH SURVEY BY AMATEURS

Aug. 29, 1935.

To Officers and Committee Chairmen (Public Health Legislation, Public Relations, Medical Economics) of The Medical Society of the State of Pennsylvania, and of its Component Societies.

Through Dr. Paul Correll of the Public Health Legislation and Public Relations Committees of the Northampton County (Pa.) Medical Society, we learn to-day of a proposed WPA project suddenly proffered to non-professional social agencies of that county for "a county-wide survey of the physically handicapped adults and children."

In the *New York Times* of Aug. 28, 1935, we read also for the first time of a "Census of the Ill to Begin Oct. 15. A Federal Inventory of Chronic Ailments from 19 States, House to House Canvass" (Pennsylvania included).

It is apparent that this survey planned ostensibly to give employment to "white-collared" people on relief is not to be confused with any health surveys made by the U. S. Public Health Service.

From material furnished us by Dr. Correll we enclose copies of the outlines of the plan as it was offered in Northampton County.

One will note at a glance that the information sought, if obtained by *any but* trained physicians and trained social workers making such investigations together, will be worthless, *but it may make fine propaganda* in support of legislation for some form of state or socialized medical service.

Until more definite information is available we offer the enclosed as a source of *preparedness* so that the various county medical societies may be alert as was the Northampton County Society.

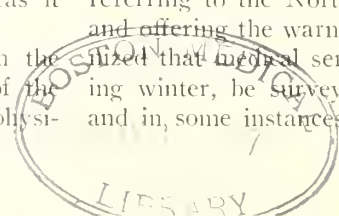
If health surveys are to be made and paid for by federal funds, they should be under the direct supervision of the U. S. Public Health Service, which this year completed such a service in Montgomery County and last year in Delaware County, in Pennsylvania.

Should we not strive in each county to prevent health surveys, at the ultimate expense of the taxpayers, that are not completely under the control of the medical profession aided by other trained workers?

Sincerely yours,

WALTER F. DONALDSON, *Secretary.*

On Sept. 17, after the distribution of the above communication, we received from the Committee on Legislative Activities of the American Medical Association a circular letter referring to the Northampton County situation, and offering the warning that "it must be recognized that medical service will, during the coming winter, be surveyed from the most critical and in some instances unsympathetic viewpoint."



Statistical and quasi-statistical information will be forthcoming. It would therefore seem wise that the respective state associations give attention to the status of medical service and the facilities and quality of medical care offered, in order that ill-judged conclusions may be successfully controverted."

Prompt and energetic endeavors have been made by representatives of The Medical Society of the State of Pennsylvania to influence wisely the character of the health surveys that may be made in Pennsylvania as WPA projects. Nevertheless, it is obvious that representatives of county medical societies should be diligent and steadfast in their endeavors to seek out and work with those who will direct all health and welfare projects under federal, state, county or municipal direction.

WHO WILL ACT FOR YOUR COUNTY MEDICAL SOCIETY?

Sept. 10, 1935.

To President, Secretary, Chairman Medical Economics Committee, and Chairman and Members of Medical Advisory Committee of Component County Medical Societies.

As must be well known to all of you a great effort is being made in Pennsylvania to transfer many "employable" men and women from unemployment *direct* relief to employment under *works* relief. This transfer may eventually involve extensively the present set-up for emergency medical service under state and county emergency relief boards, *but we are not* discussing such in this communication.

We are, however, discussing local medical services to people receiving traumatic injuries while employed on local works relief projects under the WPA.

The attached* relates exclusively to and is quoted from a pamphlet entitled "Rules and Regulations No. 1, Governing Compensation and Medical Expense for Works Progress Administration, U. S. Employees' Compensation Commission, July 15, 1935."

A careful reading of said rules apparently discloses no reason for discontinuing the arrangements that existed in Pennsylvania for medical care to those injured under RWD, formerly a SERB project, except for the fact that WPA represents a new set-up and no doubt a new managing personnel in many counties.

It is believed therefore that the proper representatives of the county medical society *should not wait* for "the State Compensation Officer or his local representatives to contact the local medical societies," *etc.*

Rather, it is believed that a county medical society representative should contact at once the county representative or the local representative of the Works Progress Administration prior to the beginning of local works projects giving employment to any considerable number of relief beneficiaries with the idea in mind that former agreements such as we had with RWD and SERB should be carried out in respect to the WPA projects.

The county medical society may speak or act publicly in ways and by means that may not be adopted by the individual member.

It is believed that with the many possibilities of physicians being called upon to serve the government in connection with recent and prospective federal and state social legislation, county medical societies must act for the individual physician in the development of proper relationships.

Consequently their representatives should not hesitate to seek conference with governmental representatives who will be in control of the medical phase of such activities.

Who will act for your county medical society?

(Signed) WALTER F. DONALDSON, *Secretary.*

Since the distribution of the above communication we received, on Sept. 21, a circular letter from Secretary Olin West of the American Medical Association, which concluded with the following paragraph emphasizing the need for county medical societies seeking out the local authorities who will eventually have direction of the county or municipal relief program:

"It would seem that, if direct relief is to be made the responsibility of the individual states, counties, and municipalities, plans for providing medical relief service must be based on the conditions actually existing in the individual states, counties, and municipalities, and that constituent state medical associations and component county medical societies would do well to establish immediate contact with state, county, and municipal authorities who will have direction of the relief programs, with a view to working out arrangements that will adequately serve the public interest and, at the same time, secure the best possible agreements with respect to the delivery of medical relief service."

Who Will Act for Your County Medical Society?

* Write Secretary's office for copies.

THE PACKAGE LIBRARY

In order that the various specialties may be covered in the selection of material for the package library service, a subcommittee has been appointed composed of the following physicians: Drs. Carson Coover, Robert Denison, Henry R. Douglas, Jr., George R. Moffitt, Paul H. Schraer, Mathew H. Sherman, Harvey F. Smith, and J. Landis Zimmerman. All of the members of this subcommittee are residents of Harrisburg, and consequently are able to maintain close contact with the librarian.

Authors of surgical, medical, or special articles published within the past 10 years are requested to submit 2 reprints of each article to the Librarian, The Medical Society of the State of Pennsylvania, 230 State Street, Harrisburg. By this coöperation we hope to build up an adequate package library service as quickly as possible.

LIBRARY COMMITTEE.

CORRESPONDENCE

August 8, 1935.

MR. W. B. McDANIEL, 2d,
Librarian, College of Physicians,
Philadelphia, Pa.

Dear Mr. McDaniel:

Dr. Frank C. Hammond, of Philadelphia, editor of the PENNSYLVANIA MEDICAL JOURNAL, and a member of our State Society's Library Committee, has referred to me your letter of recent date.

Permit me in behalf of the Board of Trustees of The Medical Society of the State of Pennsylvania and its Library Committee to thank, through you, the College of Physicians of Philadelphia for their generous offer to contribute to the library of The Medical Society of the State of Pennsylvania the numbers of the Quarterly Cumulative Index Medicus, January to March, 1927 to 1933, and July to September, 1927 to 1933.

This gift represents not only a considerable saving in money to our society for its library mail package service for members, which will be inaugurated late in 1935, but will also be recognized by our membership as another evidence of the devotion of the time-honored Philadelphia College of Physicians to the spread of knowledge of medical progress.

We will greatly appreciate your kind offer to forward the numbers by express, collect, to the librarian, 230 State Street, Harrisburg, with bill to the office of the undersigned for any additional expense incurred in preparing same for shipment.

Sincerely yours,
WALTER F. DONALDSON, *Secretary*.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledge the following contributions to the Fund:

Woman's Auxiliary to Center County Medical Society	\$50.00
Woman's Auxiliary to Clinton County Medical Society	25.00
Woman's Auxiliary to Clarion County Medical Society	16.00
Woman's Auxiliary to York County Medical Society	65.00
Woman's Auxiliary to Wyoming County Medical Society	10.00
Woman's Auxiliary to Montgomery County Medical Society	150.00

Total contributions since 1935 report \$316.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to September 12:

ALLEGHENY: *Death*—Frederick H. Heck, Pittsburgh (Univ. Pgh. '97), July 25, aged 65; George J. McKee, Pittsburgh (Harvard Univ. '06), Aug. 14, aged 55.

BRADFORD: *Removal*—Melvin S. Martin from Dushore to Sedan, Minn.

CENTER: *Removal*—William A. Barrett from State College to 899 Park Ave., New York City.

CUMBERLAND: *Removal*—George S. Watkins from Mechanicsburg to 154 S. 19th St., Harrisburg (Dauphin Co.).

DAUPHIN: *Removal*—Charles R. Brandt from Harrisburg to Arch & Simpson Sts., Mechanicsburg (Cumb. Co.); Henry R. Shallenberger, from Union Deposit to 103 W. Chocolate Ave., Hershey. *Death*—John Loy Arnold, Harrisburg (Jeff. Med. Coll. '11), July 26, aged 48; George G. Snyder, Harrisburg (Med. Chi. Coll., Phila., '99), July 13, aged 60.

FAYETTE: *Removal*—Alex. McG. Duff, Jr., from Republic to CCC Camp S-90, Cedar Run, Pa.

LANCASTER: *Death*—William H. Herr, Lancaster (Univ. Pa. '97), Aug. 26, aged 62; James P. Ziegler, Elizabethtown (Univ. Pa. '80), Aug. 14, aged 86.

LAWRENCE: *Reinstated Member*—Charles H. Whalen, 125 E. North St., New Castle. *Removal*—Theodore R. Shrop from Portersville to Garrettsville, O.

LEHIGH: *Transfer*—Pasquale G. Damiani, 1034 Hamilton St., Allentown (formerly of Philadelphia) from Philadelphia County Society.

LUZERNE: *Removal*—Joseph F. Dreier from Nanticoke to Dushore; Nicholas D. Mauriello from Buffalo, N. Y., to 407 Wyoming Ave., Wyoming. *Death*—Harry J. Owens, Hazleton (Jeff. Med. Coll. '96), Aug. 29, aged 63.

McKEAN: *Removal*—Donald Y. Shaffer from Marinerville to 518 Ontario Ave., Renovo; Christopher J. Mogan from Indianapolis to CCC Co. 1595, Ft. Benj. Harrison, Indiana.

MIFFLIN: *Transfer*—George M. Irwin, Lansdale (formerly of Lewistown) to Montgomery County Society. *Removal*—Roderick R. MacNeil from Belleville to 320½ Allegheny St., Hollidaysburg (Blair Co.).

PHILADELPHIA: *Reinstated Members*—William F. Hebsacker, 3200 Cottman St.; Harry N. G. Kline, 1331 Ruscomb St.; J. Bernhard Mencke, 1816 Spruce St., Philadelphia; Alice M. Seabrook, 612 N. Canon Drive, Beverly Hills, Calif. *Resignation*—Michael M. Wolfe, Philadelphia. *Removals*—Virginia E. Lane from Philadelphia to Boston, Va.; James Greenwood, Jr., from Philadelphia to Main St. Road, Houston, Texas; Frank H. Krusen from Philadelphia to 428 Fourth St. S. W., Rochester, Minn. *Deaths*—John H. Dubbs, Philadelphia (Univ. Pa. '91), Sept. 6, aged 67; Albert E. Smethurst, Philadelphia (Med. Chi. Coll., Phila., '98), June 12, aged 63; Simon S. Brumbaugh, Philadelphia (Miss. Med. Coll. '78), Aug. 13, aged 83; Barton Cooke Hirst, Philadelphia (Univ. Pa. '83), Sept. 2, aged 74; John I. Fanz, Strafford (Jeff. Med. Coll. '12), Aug. 26, aged 44.

SCHUYLKILL: *Reinstated Member*—George S. Hensyl, Mahanoy City.

WASHINGTON: *Transfer*—Frederick C. Stahlman, Charleroi, from Greene County Society.

WESTMORELAND: *Removal*—W. J. Salisbury from Wilmerding to Folks Run, Eockam Co., Va.

YORK: *New Member*—Richard A. Brown, 14 E. College Ave., York.

PAYMENT OF PER CAPITA ASSESSMENT

The following payment of per capita assessment has been received since Aug. 12. Figures in first column indicate county society numbers; second column, State Society numbers:

Aug. 30	Philadelphia	2103-2105	8019-8021	\$22.50
	Lawrence	74	8022	7.50
Sept. 4	Schuylkill	159	8023	7.50
	*Schuylkill	159	8062	7.50
	York	144	8024	3.75

EMERGENCY MEDICAL RELIEF IN PENNSYLVANIA

HAROLD A. MILLER, M.D., *Director*
Harrisburg

Aug. 23, 1935.

DR. HAROLD A. MILLER,
Director, Emergency Medical Relief,
State Emergency Relief Board,
Harrisburg, Pa.

Dear Sir:

Mrs. ? ——— ? ——— for whom I requested syphilitic treatment, and you sent me the necessary medication for her, has failed to report for treatment. I am forwarding to-day a report of her condition which is 4—plus.

Please advise me as to what disposition to make of this case.

Yours very truly,

H. C. BRIDGERS, M.D.

Aug. 28, 1935.

TO: DR. HAROLD A. MILLER,
Emergency Medical Relief.

FROM: EDGAR S. EVERHART, M.D.,
Chief, Division of Genito-Urinary Clinics.

In conformance with request from your office, the enclosed copy of letter to Dr. Bridgers is for your files. I shall keep you informed of the outcome.

Aug. 28, 1935.

DR. H. C. BRIDGERS,
Blue Ridge Summit, Pa.

Dear Dr. Bridgers:

Dr. Harold A. Miller's office has transmitted the information to this office that the woman for whom free medication recently was sent to you for antisyphilitic treatment has failed to report after one treatment.

Will you kindly give me the name of the woman in order that this office may take appropriate steps to have the nurse in the district interview the woman and attempt to induce her to continue her treatment?

In addition, will you please state whether in your opinion this case is in the contagious stage of the disease?

I shall be glad to give you a report following the visit of the nurse.

Very truly yours,

EDGAR S. EVERHART, M.D.,
Acting Assistant Surgeon, U. S. P. H. S.

County Society Reports

CHESTER

Aug. 20, 1935

The meeting was held at the Chester County Hospital; Vice-President Margolies presided. Luncheon was served. As this was the semiannual business meeting, the entire program was devoted to the activities of the society.

The Executive Committee announced that meetings were being held under the auspices of the Economics Committee for the purpose of gathering material to be

used by speakers in the program of the Medical Society to take place this fall. A list of speakers for this educational campaign will be announced later. Robert T. Devereux stated that he would be glad to supply any doctors with the necessary material if they would care to take part in this campaign. Pamphlets from the A. M. A. were distributed relative to the cost of medical care.

In the matter of the use of vaccines in the prevention and treatment of anterior poliomyelitis, it was announced that at the present time no vaccine or serum has been proven to be of any great value, and it would be unwise to make any public announcement concerning the disease at this time, as it might cause a great deal of unnecessary hysteria on the part of the general public.

The Washington (D. C.) Plan for medical care of the indigent was discussed, and a committee was authorized to make a trip to Washington to make a thorough study of this plan.

The resolution which had been sent to State Society Secretary Donaldson concerning contract practice was read, and the society voted that its delegates to the State Convention should take this matter before the House of Delegates and obtain a definite opinion as to whether some of the present abuses of contract practice are consistent with our Code of Ethics.

The District Councilor Meeting to be held at Reading in September will deal with the subject of maternal mortality. Coöperation of all physicians in the program of the State Society Maternal Mortality Committee now investigating the cause of all maternal deaths throughout the state was requested.

The Public Health Doctor Committee announced it had recommended the name of S. J. Dickey, of Harrisburg, for appointment as county health doctor. There still exists some uncertainty as to when Dr. Dickey will take up his duties, if appointed by the society, but it is hoped that he will be available by September 1. His appointment was unanimously recommended by the society.

The Public Health Commission was assigned the task of providing the Health Day Program as part of the state-wide activity this fall.

Meyer K. Amdur spoke at some length concerning the advantages of the treatment of mild cases of mental disease in private homes throughout the county.

A communication was read by the secretary stating that the case of Dr. Mathues was now in the hands of the State Licensing Board in Harrisburg. As there was no further business, the meeting adjourned.

JOSEPH SCATTERGOOD, JR., *Reporter.*

HUNTINGDON

Aug. 21, 1935

The annual picnic was held at the Juniata Valley Colony Club, near Mount Union, with outdoor games in the afternoon, and indoor amusements in the evening.

Sept. 12, 1935

The society met at the J. C. Blair Hospital at 3:00 p. m. President Paul Maxwell presided. J. Roy St. Clair was welcomed back after a long illness.

The society expressed opposition to a proposed public health survey being contemplated by the WPA, and employing lay workers; such a survey would accumulate much extraneous material.

Wm. B. West gave a talk on the common diseases of

childhood, touching upon the latest methods of treatment. Summary: Measles is too often considered lightly by parents and physicians alike. Pneumonia as a fatal complication accounts for a majority of deaths in infants up to age 2. Tuberculosis is often a sequela. Convalescent serum or whole blood in doses of 15 to 40 c.c. is a great aid in shortening the course.

Whooping cough proves to be more serious to children under age 3 than to older children. Quarantine is very important to prevent its spread. Pet animals easily carry the contagion. Fairly good results have been achieved by the gold salts therapy. The best prophylaxis is achieved with the Sauer vaccine. In established cases the Kruger vaccine in 2 c.c. doses lessens the severity and length of the infection. Children at the age of 6 months should be immunized routinely.

Chickenpox is not a serious disease except for the occasional anemia that may result. There is little in the treatment of mumps except rest, bland diet, and either hot or cold applications if the glands are swollen appreciably. Convalescent serum has been of some aid. In scarlet fever the reactions occurring through the use of antitoxin must be considered. In some series of cases reactions occurred in 45 per cent of the cases. Its use is advocated mainly in cases that show a fever of 102° F. or more and if the case is seen within the first 3 days. Rapid subsidence of symptoms may then be looked for. Banks, in a series of 1200 cases, had only .08 per cent fatality and serious complications limited to 4 per cent of the cases. In very toxic cases it is advisable to give 20,000 units repeated at 12 to 24-hour intervals. Some cases, however, are refractive to serum treatment.

In smallpox prophylaxis it is recommended that vaccination be done at age 6 months, 6, 12, and 20 years. In diphtheria the toxoid should be used at age 7 months. The 2-dose toxoid is preferred, and should not be given to children over age 5, when the toxin antitoxin is preferred.

Diagnosis is often very difficult in anterior poliomyelitis. It can easily be mistaken for other conditions, and vice versa. It occurs more often in the late summer, disappearing with the early frosts. Spinal fluid examinations are the chief diagnostic aids. The Kolmer serum has some value in treatment, although the Brody-Parke serum has gained more popularity and seems to be more valuable.

Exudative diathesis or infantile eczema is a serious disease because the pruritus and restlessness cause inanition. Most deaths result from exhaustion. The infection spreads over the whole body with the exception of the palms and soles. There are hereditary and familial causes, with asthma often succeeding the eczema. Proteins are often the causal factor. In the treatment an elimination diet is first tried, succeeded by the pollen extracts. It is also important to eliminate the foci of infection in the nasal and respiratory tract.

WALTER ORTHNER, *Reporter*.

LACKAWANNA

June 4, 1935

The business meeting was called to order by President Ray J. Garvey in the auditorium of the Chamber of Commerce. Prior to the regular order of business, an open forum was conducted relative to better coöperation between the members of the local society and the Visiting Nurse Association. The latter organization was represented by its superintendent and chairman of the board of directors. Cases under discussion will be handled by the medical advisory committee.

Frederick J. Bishop reported a very busy period for the Committee on Public Relations. The first of a series of talks on "Appendicitis Mortality," was given at Central High School, illustrated with lantern slides. The remainder of the high schools and junior high schools will be reached during the week. During May, 13 public health meetings were held throughout the county, and at 22 toxoid clinics 2207 children were given diphtheria toxoid and 816 vaccinated for smallpox. These clinics, meetings, and the weekly examinations for a series of broadcasts to be given this fall over shine have all been manned by volunteers from the Lackawanna County Medical Society.

The central rating bureau, which has been in operation for 2 months, is to be conducted by a special subcommittee from the society with full power to act. Joseph Patrick Riley, Lawrence G. Arnese, and Edward P. Swartz were elected to membership. James D. Lewis was elected delegate to the State Convention at Harrisburg with John Manley and Arthur E. Davis as alternates. J. Norman White was elected district censor to take the place of Charles B. Noecker, whose term had expired. It was announced that material had been received from the American Medical Association for a series of broadcasts to be given this fall over station WGBI at Scranton. The date has not been definitely set for the inauguration of this series, but it was decided to give the talks during an afternoon period.

The summer season has been quite prolific with entertainment. A large number of our members spent the full week of the national convention at Atlantic City. At least 40 physicians and their wives attended the councilor district meeting on July 31, at Skytop. Nathan B. Van Etten, of New York City, speaker of the House of Delegates of the A. M. A., gave an address on "Medical Economics."

The annual outing of the society was held at the Abington Hills Country Club on August 15. After a golf tournament and a program of varied sports, dinner was served at the clubhouse; 150 were in attendance.

FREDERIC B. DAVIES, *Reporter*.

WARREN

Aug. 19, 1935

A paper was read by Donald Guthrie, of the Packer Hospital, Sayre, Pa., on "The Surgical Treatment and Symptomatology of Acute Perforations of Duodenal Ulcer." (This paper appeared in full in the Lancaster County report of Apr. 3, 1935, published in the August, 1935, number of the PENNSYLVANIA MEDICAL JOURNAL.)

The experience of Dr. Guthrie would indicate that a primary drainage and suture for closure of the perforation and later, if necessary, a gastro-enterostomy gives a more favorable result than if the more radical operation is performed immediately. The members of the society and guests were entertained at dinner by the Warren General Hospital where the meeting was held.

MICHAEL V. BALL, *Reporter*.

SEVENTH COUNCILOR DISTRICT

The Seventh Councilor District meeting was held at the Williamsport Country Club on July 12. Golf and

tennis occupied the morning. At 12:30 p. m. luncheon was served, after which the following program was rendered: District Councilor David W. Thomas, of Lock Haven, presided.

The order of business included the introduction of visiting councilors, and recognition of the district censors, among whom are Wesley F. Kunkle, Lycoming, J. C. McCall, Elk, Edwin C. Blackburn, Clinton, Solomon P. Hakes, Tioga, and John H. Page, Potter.

President Moses Behrend of the State Medical Society read a paper entitled "The Differential Diagnosis of the Upper Abdomen as a Factor in Reducing Morbidity and Mortality." Dr. Behrend criticized the practice of some men in diagnosing conditions as "rare" when a more common diagnosis can usually be found. There are 2 groups seen in daily practice: (1) Those with masses in the upper abdomen; (2) those with pain peculiar to the upper abdomen. When carcinoma is palpable it is usually too late for any remedy. Tumor of the transverse colon may feel very similar to carcinoma. In cases of suspected intestinal obstruction barium should not be given by mouth. A barium enema usually can be given although at times this may be dangerous, too. In mesenteric cyst roentgen ray is of some help in that it shows displacement of adjacent organs but as a rule there is little other than the feeling of a mass to guide the diagnostician. Such a mass is usually immobile but if mobile is not moved by respiration. A mediastinal growth may bulge into the epigastrium.

He commented on the hypochondriac regions and named the gallbladder, kidney, duodenum, and hepatic flexure as organs of suspicion on the right side, with the spleen, omentum, kidney, splenic flexure, *etc.*, on the left. Gummas and echinococcus cysts are usually not toxic unless late in the disease. Amebic abscess presents fever, and amebae in the stool. Echinococcus cysts are usually found in foreigners who are in frequent contact with dogs. Hydrops of the gallbladder will present a swelling which moves with respiration, is painful on palpation, and produces tenderness on the ventral portion of the abdomen. A kidney tumor will show more tenderness in the lumbar region. A tumor of the pylorus is practically always diagnosed by roentgen ray, stomach symptoms, *etc.* Tumor of the colon is conspicuous from the standpoint of anemia, at times resembling pernicious anemia. Abscess of the mesentery or great omentum is rare but may occur. Tumor of the kidney may be felt in the loin, or even ventrally at times. The pyelogram may be of great help. Tumors of the rectus muscles, such as rhabdomyomas, are very rare. Ventral hernia is distinguished by feeling the ring, although the same is not true of lipoma. Carcinoma of the pancreas frequently is characterized by painless jaundice. Abscess of the pancreas is usually diagnosed at operation.

Differential diagnosis of pain in the upper abdomen: Reflex pains in the upper abdomen are those commonly due to the gallbladder and there is frequently a history of fullness after eating, belching, *etc.* The Meltzer-Lyon test in which pigment and cholesterol crystals are found in the gastric analysis is practically pathognomonic of stone. In gallstone colic the main tenderness is in the right hypochondrium. In kidney stone colic it is in the loin space. Stone in the common duct causes persistent jaundice; also hemolytic and hepatogenic jaundice. The icteric index is most popular now in differentiating these forms of jaundice. Colic due to flare-ups of chronic pancreatitis may simulate gallstone colic, but

is temporary and fleeting. Operation usually decides the diagnosis. Before removal of the gallbladder in the absence of stones the condition of the pancreas should be ascertained. Internal drainage may be necessary.

In acute pancreatitis there is marked shock and a sense of dissolution. The pain is not relieved by morphine in ordinary doses as in gallstone colic and there is no board-like rigidity as in perforated ulcer. Ruptured gallbladder is rare except in the hands of the incompetent. After ruptured gallbladder there is a low-grade peritonitis. The abdomen is less board-like but other symptoms of peritonitis are present. Pain from ruptured gallbladder is of less intensity than from pancreatitis. The gallbladder and pancreatic patients are usually robust and love their food and drink, whereas the ulcer patients are usually thin and emaciated. Food frequently aggravates gallbladder conditions, the opposite being true in duodenal ulcer, the distress coming on 3 or more hours after eating. In differentiating between disease of the gallbladder and appendix, a mass is usually felt earlier in the former. In the case of gallbladder disease vomiting usually precedes the pain. In appendicitis pain usually comes first.

In colitis there will be mucus and sometimes blood in the stool, along with pain. In the case of hernia through the foramen of Winslow there is apt to be difficulty in making a diagnosis; the condition is usually discovered only at operation. In tuberculous peritonitis almost any other abdominal condition may be simulated, but ordinarily the abdomen will be doughy and leukopenia is usually present. The patient is frequently a negro.

Charles C. Wolferth, of Philadelphia, discussed "The Treatment of Heart Disease." He confined his remarks mainly to the forms of treatment developed in the last few years. In regard to total thyroidectomy for congestive heart failure, he believes that it may be of some value in certain refractory cases of angina pectoris not controlled by medical measures, and in some cases of congestive heart failure that show slight response to medical measures. Among the disadvantages he noted: If the thyroid is not removed entirely there is no benefit; even in the hands of the best surgeons the recurrent laryngeal nerve may be damaged, and this is especially serious if it is damaged on both sides; and the patient is slowed up mentally, tires easily, does not stand cold well, and may show signs of myxedema.

Certain other surgical measures have been employed in the case of hypertension but may or may not be successful: Subtotal removal of the adrenals; resection of the splanchnic nerve on both sides. This is often followed by a temporary reduction in blood pressure; cutting the anterior roots from the tenth dorsal to fourth lumbar nerve, about 6 roots in all, is followed by a drop in blood pressure, but it is too early to estimate the end-results of this procedure.

Coronary Occlusion.—Usually the pain will be low substernal or epigastric, at times severe and again not severe. It simulates in some cases gallbladder disease or ruptured ulcer. In the acute attacks, relieve the pain, give morphine and give enough. For the circulatory collapse give caffeine, glucose intravenously, and oxygen if available. Digitalis does no good. One of the main points is to keep the patient in bed long enough, 6 or 8 weeks.

Diet in heart disease is rather important, especially in congestive cases. It should be low in calories and continued to the extent of reducing the basal metabolic rate to minus 15. When the coronary patient gets up and around all mental or nervous tension must be

eliminated. The habits should be revised and the patient's psychology readjusted to a mild manner of living.

Angina Pectoris. Dig deeply into the history and eliminate any unfavorable influence. Direct the treatment by considering hypertension, thyroid, anemia, diabetes, focal infection, or tobacco as a possible cause of the condition.

Cardiac Asthma.—This is really due to congestion. In the treatment of the attack give plenty of morphine and atropine. Venisection if the veins are engorged, apply external heat if the extremities are cold, give oxygen if available, and later on digitalis.

The Use of Digitalis.—It is of little value in coronary occlusion, acute heart failures, or acute infections. It makes angina pectoris worse. Its great field of usefulness is in congestive heart failure, and in the rapid irregular cardiac rhythms.

In conclusion, Dr. Wolferth warned against having a patient on too complicated a course of treatment and advised that each case be considered an entity.

Secretary Walter F. Donaldson, of the State Medical Society, congratulated the medical profession of the State of Pennsylvania. There are 504 more members in good standing now than one year ago, which is a tribute to organized medicine. In the Seventh Council District only 6 or 7 eligible men do not belong to the society. More than \$40,000 was spent by the State Society on various activities during the past year, such as the work of the cancer commission, medical economics committee, etc. A \$50,000 medical building at Harrisburg was dedicated free from debt last year, which belongs to the members of the State Medical Society. Very shortly there will be a package library opened from which any doctor in the state may receive by request reprints of the latest developments in medicine along any line. Along the line of emergency medical relief service he advised against our being in a destructively critical frame of mind if we are to hold fast to 2 of our main principles, viz., free choice of physician and medical service on a fee basis. In conclusion he read some historical notes from Bradford County written in 1856, in which he pointed out that their problems in that day were very similar to ours in the present generation and that they were met successfully along similar lines.

Ruth Hartley Weaver, of Philadelphia, read a paper on "Maternal Mortality in the United States." She said it is stated there is a far higher maternal death rate in the United States than abroad, and this in spite of the fact that we have a steadily increasing number of hospital deliveries. She pointed out, however, that this estimate of our obstetrics is unfair, due to the lack of uniformity in statistics and registration. The regulations concerning the registration of births in the United States are very strict and after taking into account the methods of writing out statistics among our foreign neighbors our figures are really 40 per cent too high. For instance, live births may mean anything from breathing at birth to a child living 3 or 4 days after birth. In the United States even abortions are at times included in the figures. She admits that there is still far too high a maternal death rate in our country.

There have been 3 main maternal surveys: (1) The Fifteen-State Survey by the United States government; (2) the New York City survey; and, (3) the Philadelphia survey. She listed the main causes of maternal deaths in this country as tuberculosis, heart disease, puerperal fever, cancer, pneumonia, and kidney disease. There are 15,000 maternal deaths in the United States each year which are largely preventable.

There are 2 factors in regard to response of the laity in this matter, viz., ignorance and lack of coöperation. The public must be taught that this death rate must be reduced. These patients must register for prenatal care as early as possible and must return as directed. At the first visit of each obstetric case the physician must give a general examination, also abdominal and pelvic, the latter including the estimate of the pelvic measurements and any other facts interfering with successful delivery. In each successive visit temperature, pulse, respiration, urinalysis, and blood pressure must be taken.

She commented on the interference with normal labor, in order to shorten the same and relieve the patient, as being detrimental and contributory to the maternal death rate. The responsibility of the physician is to discover eclampsia early, to give strict attention to bleeding during pregnancy, to guard against and give proper treatment to prolonged labors with extensive blood loss. She also criticized the practice of obstetric operations on the part of those not qualified to perform them.

Packing the uterus in case of hemorrhage and inversion was emphasized. In the postnatal care she recommended contraceptive advice to families in order to time the babies properly. She also spoke of the proper care of the baby. One-fifth of all baby deaths are abortions. Most criminal abortions are not among the illegal cases, but are the result of economic conditions among those who are married. Certain foreign countries have faced this issue by legalizing contraceptive advice, and even abortion.

William H. Mayer, of Pittsburgh, chairman of the Public Relations Committee of the State Society, gave an address on "A Broader Concept of Public Health Service." He recognizes the changing social order and believes that the world at large, including our country, is in a transitional stage. He spoke of medical service for the low-income group on an adequate basis and commensurate with their incomes. He believes wholeheartedly that the future holds in store for us regimentation and a steady march to the left. He defended the dole as being an expedient which was obligatory on the part of our government when used properly and for the deserving class. The white collar group is the nerve center of our social order, and he insisted the reason for the cutting of medical bills in Harrisburg is lack of money. He also pleaded for coöperation in the medical profession in the present set-up, and believed it to be the best in the long run.

LA RUE M. HOFFMAN, *Reporter.*

TIME

If Time be of all things the most precious, wasting Time must be the greatest prodigality, since lost time is never found again; and what we call Time enough always proves little enough. Let us then be up and doing, and doing to the purpose; so by diligence shall we do more with less perplexity. Sloth makes all things difficult, but Industry all easy; and he that riseth late must trot all day, and shall scarce overtake his business at night; while Laziness travels so slowly, that Poverty soon overtakes him. Drive thy business; let not that drive thee (Franklin).—*The Medical Program.*

About 20 per cent of the students preparing for the medical and dental professions in Germany are now women.—*Science News Letter*, Oct. 5, 1935.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

LEGISLATIVE NEWS

During this year, stringent economic and industrial conditions have cast their ominous shadows over the nation; chaotic social and political conditions fostered in the minds of men a desire to challenge the existence of established institutions and practice; professional malcontents found converts among oppressed people impoverished by forces beyond their control; new methods were conceived and put into operation on every side. The psychology of depression has been shown to be as real as the psychology of war. Here and there the citadels of established thought and practice tottered and collapsed and were replaced by ideals and concepts new and for the most part untried, the ultimate success or failure of which only the years can tell. Even the sacred ethics of the medical profession are being questioned by a skeptical world. No group or organization is immune; nothing can pass through the revolutionary fires unscathed.

Those of you who followed the erratic action of the recent legislature in Pennsylvania will realize the truth of these statements. The problems that constantly confronted the Committee on Public Health Legislation were of a nature unheard of in the past. Where normally a bill is either killed in committee by failure to report the same or, if reported, referred back to the committee perhaps once, yet in the present session action was taken on certain bills so often that it required the constant attention of your committee to a degree never previously demanded of them. As an example:

"House Bill No. 1082, an act further defining optometry. Referred to Committee on Education, Feb. 26. Reported as committed, Mar. 27. Passed first reading, Apr. 1. Passed second reading with amendments, Apr. 3. Passed third reading, Apr. 8. Defeated on final reading (Vote 68 to 100). Reconsidered Apr. 9. Postponed, Apr. 9. Passed third reading with amendments, Apr. 15. Passed finally, Apr. 16. In the Senate referred to Committee on Public Health, Apr. 16. Reported as amended, Apr. 24. Passed first reading, Apr. 24. Passed second reading with amendments, Apr. 29. Passed third reading with amendments, Apr. 30. Vote on third reading reconsidered, May 15. Recommitted to Committee on Public Health, May 15. Re-reported as committed, May 21. Vote on second reading reconsidered, May 27. Postponed for the present, May 27. Dropped from the calendar, June 3."

3

Three bills in which the healing arts profession was interested resulted in passage. These bills were:

House Bill No. 1789—Nurses registration bill.

House Bill No. 2742—Regulation of the prescribing of hypnotic and weight-reduction drugs.

Senate Bill No. 769—Changes in the Medical Practice Act, recommended by the Board of Medical Education and Licensure.

The following bills in which we were interested were defeated by being indefinitely postponed in committee or voted down:

House Bills Nos. 1081 and 1082—the optometrists' bills.

House Bill No. 297—the chiropody bill.

House Bill No. 494—the chiropractic bill.

House Bill No. 1759—defining drugless therapy.

Senate Bill No. 417—the naturopathic bill.

Senate Bill No. 1127—the chiropractic bill.

May I express, at this time, my sincere thanks for the effective work done by our members in the various counties, who responded immediately to our call, and also express my thanks to the members of the medical profession in the House and Senate, to Drs. Bowers, Hindman, Hartman, and Sarraf in the House, and to Drs. Hunsicker, Chapman, Woodward, and Kahle in the Senate, who so ably and consistently kept their colleagues informed.

Your chairman attended all hearings during the sessions and spent 3 days of each week for 25 weeks at Harrisburg. All indications point to a special session in January, when a social security program will be pushed with vigor. Much of the suggested legislation will have direct bearing on the healing arts professions, and it will be necessary for us to be particularly alert at this time.

EDNA M. (MRS. AUGUSTUS S.) KECH,
Legislative Chairman.

TO THE PUBLICITY CHAIRMEN FOR THE VARIOUS AUXILIARIES

In order to facilitate the publication of the reports of the meetings of the auxiliaries to the county medical societies and to expedite further the work of Mrs. George C. Yeager, editor for the auxiliary to the State Medical Society, your

attention is called to the following recommendations, which consist of a few routine methods of procedure that will make the arduous work less difficult.

(1) Mail all contributions so that they will be received by Mrs. George C. Yeager, 1419 E. Susquehanna Avenue, Philadelphia, not later than the tenth of the month in order that the reports will appear in the next month's issue of the JOURNAL.

(2) While written reports are accepted, it is preferable that they should be typed. In either instance allow a double space in between the lines. Use one side of the sheet of paper only. Be careful to have proper names very plainly written and spelled; and do not give the initials of the individual, but give the name in full.

(3) Do not send newspaper accounts or booklets and expect your editor to collect and to type from such material your auxiliary proceedings. It makes her work unnecessarily arduous, and she may miss the very thing you want to feature most.

(4) Do not place verse in your contributions as it is considered out of place in a professional journal.

(5) Do not mix your auxiliary news with a personal letter to the editor and then request her to select what she considers of most interest of your proceedings for publication.

(6) All meetings of each auxiliary should be reported as soon after the meeting as possible. It is most unfortunate to send in reports of 3 or 4 meetings at a time, several months having elapsed from the time some of the meetings were held.

The auxiliary reports have 2 values, one of which is the present value in properly submitting each month suggestions for new avenues of service that may be gained by knowing what the different auxiliaries are doing by spreading all publicity throughout the length and breadth of our state. The second value of these reports is that they become a matter of permanent record so that historians may be able to have authentic material to draw upon in writing up the proceedings of the county auxiliaries.

COUNTY AUXILIARY REPORTS

Allegheny.—The auxiliary opened the year, Sept. 24, at 2 p. m., at the William Penn Hotel. The officers and committee chairmen are: President, Mrs. Herbert E. Woelfel; first vice-president, Mrs. Bender Z. Cashman; second vice-president, Mrs. Harold H. Meanor; recording secretary, Mrs. Charles E. Reif; corresponding secretary, Mrs. Robert C. Hibbs; treasurer,

Mrs. Norman A. Hartman; directors, Mrs. Walter F. Donaldson, Mrs. Howard A. Power, Mrs. John A. Heberling, Mrs. C. Howard Marcy, and Mrs. Hunter H. Turner. Committee chairmen: Hospitality, Mrs. Joseph V. Grahek; legislative, Mrs. Joseph S. Baird; membership, Mrs. John R. Conover; music, Mrs. George A. Holliday; program, Mrs. John F. McCullough; publicity, Mrs. Vernon D. Thomas; public relations, Mrs. Daniel N. Bulford; student loan, Mrs. John A. Heberling.

Blair.—The auxiliary held a meeting in June at the Blairmont Country Club. It was approved to change the fiscal year to correspond with the State Auxiliary.

A contribution of \$75 was sent to the Medical Benevolence Fund. After the luncheon and business meeting, bridge followed.

Cambria.—Following the custom of the past 3 years, the auxiliary opened the fall program with a noonday luncheon at the Hotel Hendler, Sept. 11. State officers, chairmen of state committees, and county presidents of the Eleventh Councilor District were guests.

A musical program was arranged, and at the conclusion of the luncheon the auxiliary members and their guests were given an opportunity to inspect Johnstown's new Municipal Hospital.

Delaware.—The regular meeting of the auxiliary was held May 7, at the home of Mrs. V. B. Orr of Swarthmore. Miss Muriel Jaisohn spoke on "Illustrations and Art." It was approved to send \$100 to the Medical Benevolence Fund. On May 17, a trip was made to Longwood Gardens, the proceeds to be used for the Medical Benevolence Fund. On June 3, there was a board meeting, boating, and supper party at the summer home of Dr. and Mrs. Walter E. Egbert. In July a trip was made to Camp Sunshine for underprivileged and undernourished children. The auxiliary sponsored one child for 2 weeks. On Sept. 13, a board meeting and luncheon were held at the home of Mrs. Frank R. Nothnagle, at Chester.

Indiana.—The auxiliary held a business meeting at the home of Mrs. A. Hamilton Stewart, at 2 p. m., Sept. 12. It was approved to send \$50 to the Medical Benevolence Fund.

Mrs. Paul Reed and Mrs. William F. Weitzel were elected delegates to the annual convention in Harrisburg; alternates, Mrs. Benjamin F. Coe and Mrs. W. E. Dodson.

The following nominating committee was elected: Mrs. William F. Weitzel, chairman; Mrs. A. Hamilton Stewart; and Mrs. Benjamin F. Coe.

Lackawanna.—The auxiliary has remained very active during the spring and summer months. Many of the members enjoyed the sessions of the American Medical Association at Atlantic City early in June.

On June 18, a luncheon and bridge party was held at the Scranton Country club. Mrs. Harry M. Kraemer presided. Mrs. Robert R. Schultz gave a report of the meetings at Atlantic City. Mrs. Michael J. Noone gave a talk in which she discussed proposed legislation of interest to the medical profession. Mrs. Bernard Shair, president of the newly formed auxiliary to the Lackawanna County Dental Society; Mrs. Thomas Gardner, president of the woman's auxiliary to the Lackawanna Pharmaceutical Society; and Mrs. U. P. Horger, president of the Federation of Women's Clubs, were guests.

Cards were enjoyed by the 150 members and guests, and prizes were awarded for high scores.

On July 16, Dr. and Mrs. Thomas P. Martin opened their summer home at Crystal Lake to the auxiliary and their friends for a day's outing. Members of the auxiliary from the upper valley, headed by Mrs. Martin acted as hostesses. Luncheon was served followed by a program of entertainment. More than 100 were in attendance.

The regular monthly meetings of the auxiliary were resumed on Sept. 10, at the Chamber of Commerce.

Montgomery.—The auxiliary held its first fall meeting, Sept. 4, at the Nurses Home of Montgomery Hospital. The event of the day was a sewing party for the purpose of making garments for the county poor to be distributed by the Council of Social Welfare. Members met at 10 a. m., bringing a box luncheon. Following the sewing session a business meeting was held, Mrs. J. L. Eisenberg presiding. It was approved that \$150 be sent to the Medical Benevolence Fund. Delegates appointed to the State Society convention are: Mrs. Edgar S. Buyers, Mrs. J. Newton Hunsberger, and Mrs. John G. Wilson. Alternates are Mrs. Joseph M. Ellenberger, Mrs. Joseph E. Beideman, and Mrs. Harry C. Podall.

Schuylkill.—The auxiliary held a meeting during the summer at the home of Mrs. E. Wiesner at Mantzville. The following delegates and alternates were elected to the annual convention at Harrisburg: Delegates—Mrs. Rosa Santee, Cressona; Mrs. Ivor D. Fenton and Mrs. Clemens S. Burke, Mahanoy City; Mrs. Robert W. Lenker, Schuylkill Haven, and Mrs. Charles V. Hogan, Pottsville. Alternates—Mrs. Wilson Matten, McKeansburg; Mrs. J. J. Moore and Mrs. Henry A. Dirschedl, Pottsville; Mrs. Charles E. Bredt, Mahanoy City, and Mrs. Arthur B. Fleming, Tamaqua. A program of entertainment was arranged.

Seventh Councilor District.—The meeting was held July 12 in Williamsport, at the Woman's Club, preceded by luncheon at 12:30 o'clock. About 60 members were present. Mrs. John H. Page, of Austin, seventh district councilor, presided.

Mrs. J. L. Mansuy, of Ralston, gave the welcoming address, and Mrs. Frank P. Dwyer, of Renovo, responded. Reports were given by Mrs. James H. Burrows, president of Lycoming County Auxiliary; Mrs. Edwin C. Blackburn, president of Clinton County Auxiliary; and Miss Eloise Page, of Austin, for Potter County Auxiliary. Dr. Ruth Hartley Weaver, of Philadelphia, gave a talk on "Prenatal and Maternal Care." Mrs. Augustus S. Kech, of Altoona, state legislative chairman, presented an informative outline of the past session of the State Legislature. Mrs. David W. Thomas, state chairman of district councilors, complimented the Seventh District for its splendid work during the year. The following guests were present: Mrs. Laurie D. Sargent, Washington, president of the State Auxiliary; Mrs. Augustus S. Kech, Altoona; Mrs. Walter F. Donaldson and Mrs. William H. Mayer, Pittsburgh; Mrs. Frederick J. Bishop, Scranton; and Mrs. Kelterine, Philadelphia.

"Drivers of high school age start off as careful drivers until they have convinced the family they are entitled to use of the family car; then they turn reckless." —Miss Marian L. Telford, Field Representative, Education Division, National Safety Council.—*The Car*.

Medical News

Births

TO DR. AND MRS. LOUIS W. JONES, Wilkes-Barre, a son, June 10.

TO DR. AND MRS. MORRIS W. CURTIS, of Trout Run, a son, Aug. 18.

TO DR. AND MRS. J. L. LAVIN, Swoyerville, Luzerne County, a daughter, Aug. 15.

TO DR. AND MRS. ABRAHAM M. RAPOPORT, of Norristown, a son, Arnold Sayer, June 9.

TO DR. AND MRS. JOSEPH R. GINTHER, of Norristown, a son, Joseph R., Junior, July 31.

Engagement

MISS MARTHA MAE HARMON, daughter of Dr. and Mrs. Clair G. Harmon, and Mr. James John Quiney, Jr., son of Dr. and Mrs. James John Quiney, all of Easton. Mr. Quiney is now a student at Jefferson Medical College.

Marriages

MISS MARGARET ALLEN POLE to Dr. Jefferson Neafie Richardson, both of Philadelphia, July 24.

MISS NANCY BURGOWNE STACK, of Alexandria, La., to Dr. Francis M. Thigpen, Jr., Philadelphia, July 25.

MISS ELIZABETH STEWART COGILL, daughter of Dr. Lida Stewart Cogill, Philadelphia, to Mr. A. Rex Naugle, of Morton, Pa., Sept. 14.

MISS EVANGELINE A. H. KOENIG, daughter of the late Dr. and Mrs. Adolph Koenig of Edgewood, to Mr. Edgar Marburg, Jr., of Ardmore.

Deaths

CLARENCE BARTLETT, Merion; Hahnemann Medical College and Hospital of Philadelphia, 1879; aged 77; died suddenly on a railroad train, Aug. 26, from heart disease. Dr. Bartlett was born in New York in 1858. He was emeritus professor of medicine at the Hahnemann Medical College, having retired from active practice several years ago. He was an extensive contributor to the homeopathic literature and was the editor of the *Hahnemannian Monthly*. He was a member at the time of his death of the Board of Medical Education and Licensure of the State of Pennsylvania and had served most efficiently. He was a member of the American Institute of Homeopathy, Pennsylvania Homeopathic Society, Philadelphia Academy of Medicine, honorary member of the New York State Homeopathic and Medical Society, Virginia Homeopathic Society, and the British Homeopathic Society. He is survived by his widow and a daughter.

SIMON D. BASHORE, Palmyra; Jefferson Medical College, 1896; aged 63; died Aug. 22, from a heart attack. Dr. Bashore served 18 months overseas during the World War and was twice cited for bravery. He was a first lieutenant in the Medical Corps of the 27th Division and was also affiliated with the 28th Division. He is survived by his widow, 2 daughters, and 2 sons.

BERNARD BERENS, Philadelphia; University of Pennsylvania School of Medicine, 1880; aged 78; died Sept. 12, after an extended illness. Dr. Berens was connected with the Wills Eye Hospital for a number of years. He is survived by a daughter and a sister.

MR. C. W. BIXBY of Wilkes-Barre, father of Dr. Edward W. Bixby, died June 24.

STANLEY A. E. BRALLIER, Conemaugh; Medico-Chirurgical College of Philadelphia, 1899; aged 66; died Aug. 29, at the Conemaugh Valley Memorial Hospital, following a heart attack. Dr. Brallier was born at Cherrytree, Indiana County, and had practiced medicine for 36 years. Prior to entering the medical school

he had been a pharmacist, having graduated from the Philadelphia College of Pharmacy in 1894. He was surgeon for the Pennsylvania Railroad at Conemaugh and also a member of the Board of Health for many years. Dr. Brallier was a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by his widow, a brother, and 2 sisters.

HARRY LEE BRUSH, Conneaut Lake; Starling Medical College, Columbus, 1889; aged 69; died June 22, of cerebral hemorrhage.

MISS SUSAN CARSON, aged 81, died Aug. 26, at the home of Dr. Horace Darlington, Concordville, Pa. She was the daughter of the late Dr. Joseph and Mary Hollingsworth Carson. Her father was a member of the faculty of the University of Pennsylvania Medical School for many years. She was a sister of the late Hampton L. Carson, Attorney General of Pennsylvania under Governor Pennypacker. Among those who survive is a nephew, Dr. John B. Carson of Philadelphia.

JOHN H. DUBBS, Philadelphia; University of Pennsylvania School of Medicine, 1891; aged 67; died suddenly Sept. 6. Dr. Dubbs was a graduate of Muhlenberg College; a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by his wife, a daughter, and a son.

FREDERICK H. HECK, Pittsburgh; University of Pittsburgh School of Medicine, 1897; aged 65; died July 25. Dr. Heck was a member of his county and State medical societies and a Fellow of the A. M. A.

WILLIAM HUBLEY HERR, Lancaster; University of Pennsylvania Medical School, 1897; aged 62; died Aug. 25. Dr. Herr died while sitting in the home of a friend, Dr. H. B. Davis of Lancaster. He was a member of the Lancaster General Hospital staff and during the World War served in both the British and United States armies. He was a member of his county and State societies and a Fellow of the A. M. A.

CLIFFORD L. KAUCHER, Reading; Medico-Chirurgical College of Philadelphia, 1902; aged 54; died July 2, of cirrhosis of the liver. Dr. Kaucher served during the World War and was on the staff of St. Joseph's Hospital for many years.

MRS. EMMA CLAPP MARSH, aged 87, wife of Dr. William G. Marsh, of Watsonstown, died Sept. 1, following a long illness.

GEORGE J. MCKEE, Pittsburgh; Harvard University Medical School, Boston, Mass., 1906; aged 55; died Aug. 14, at Point Chantauqua, N. Y. Dr. McKee was a member of his county and State medical societies and a Fellow of the A. M. A.

HENRY J. OWENS, Hazleton; Jefferson Medical College, 1896; aged 63; died Aug. 29. Dr. Owens was a member of his county and State medical societies and the A. M. A.

WILLIAM HENRY PORTER, Beaver; Western Pennsylvania Medical College, Pittsburgh, 1897; aged 74; died in June, of cerebral hemorrhage.

THEODORE W. RESSLER, Valley View (Schuylkill County); Jefferson Medical College, 1884; aged 72; died July 25, at the University Hospital, Philadelphia. Dr. Ressler had practiced in Ashland and Valley View and had retired. His golden wedding anniversary was celebrated May 13, 1934. A wife and daughter survive.

MERCEDES A. ROBERTS, Philadelphia; Woman's Medical College of Pennsylvania, 1904; Aug. 31.

MR. T. J. RUMMAGE, Sweet Valley, father of Dr. Leland C. Rummage of Nanticoke, died June 11.

LEVI ABRAM SHERK, Avon; University of Pennsylvania Department of Medicine, 1873; aged 84; died May 21, of cerebral hemorrhage.

WILLIS N. SMITH, Phoenixville; University of Pittsburgh School of Medicine, 1892; aged 75; died Sept. 6. Dr. Smith was a member of his county and State medical societies and the A. M. A.

MR. ANDREW STAPINSKI, Glen Lyon (Luzerne County), father of Dr. Stanley Stapinski, died June 6.

JOSEPH A. STOCKLER, Reading; University of Pennsylvania School of Medicine, 1909; aged 51; died Sept. 10, in the St. Joseph's Hospital, of a heart affection. Dr. Stockler was a member of his county and State medical societies and the A. M. A. He is survived by his widow and 4 children.

JAMES P. ZEIGLER, Elizabethtown; University of Pennsylvania School of Medicine, 1880; aged 86; died Aug. 14. Dr. Zeigler was a member of his county and State medical societies and the A. M. A.

Miscellaneous

DR. HARRY NEGLEY is now associated with Dr. J. Roy St. Clair at Alexandria. Dr. St. Clair is able to be out after a long illness.

DR. HOWARD A. STRAUB, of Selinsgrove, has been appointed county medical director for Snyder County, replacing Dr. Russell W. Johnston.

DR. JAMES J. O'CONNOR, of Barnesboro, was appointed Medical Director of Cambria County, Aug. 1, replacing Dr. William E. Matthews, who held the office for 46 years.

THE ASSOCIATION OF MILITARY SURGEONS of the United States held its forty-third annual convention at the Waldorf Astoria Hotel, New York City, Oct. 3, 4, and 5.

DR. PAUL E. KUBASKO, of Throop, has been appointed by Governor Earle to the board of trustees of Scranton State Hospital to succeed Rev. B. L. C. Baer.

DR. FRANK P. STROME, of Ashley, Luzerne County, has been named chief of the Bureau of Vital Statistics of the State Department of Health to succeed Dr. Emlyn Jones of Johnstown.

DR. SAMUEL J. DICKEY, who has been doing chiefly epidemiologic work in the State Department of Health for the past 10 years, has been appointed Medical Health Director of Chester County.

UNDER THE WILL OF GEORGE LEIB HARRISON, Philadelphia, about \$2,000,000 will be made available as "The George L. and Emily McMichael Harrison Memorial Fund for General Surgical Research" in connection with any one, or more, or all of the hospitals and laboratories of the University of Pennsylvania. The fund will be controlled by a committee of 3 named by surgeons holding a professorship in the undergraduate or the Graduate School of Medicine.

THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY at the June meeting in Atlantic City certified for membership the following applicants from Pennsylvania: Drs. Joseph A. Hepp, Pittsburgh; George M. Laws and Ford A. Miller, Philadelphia; and Edward F. Williams, Altoona.

The next written examination and review of case histories of Group B applicants for certification by this board will be held in various cities in the United States and Canada on Saturday, Dec. 7, 1935. Application blanks and booklet of information may be obtained from Dr. Paul Titus, secretary, 1015 Highland Building, Pittsburgh, Pa. Applications for this examination must be filed in this office not later than Nov. 1, 1935.

THOMAS SIOU, a Canadian Indian, living at Lewisburg, who is a manufacturer of herb compounds, was acquitted September 20 on a charge of practicing medicine without a license. The prosecution charge was that he illegally treated patients with herbs and medicinal teas.

CANNED FOODS IN INFANT NUTRITION

I. Evaporated Milk

No phase of human nutrition has been more intensively studied than has that of infant nutrition. As a result of numerous investigations, much valuable information concerning the nutritive requirements of infancy has been accumulated. In addition, the quantitative nutritive demands of early life have been established within reasonable limits.

Along with advances in our knowledge of the science of nutrition have come changes in the older ideas concerning infant feeding. It is now an accepted fact that properly modified cow's milk can successfully supplement breast milk—in fact, where necessity or expediency demands, cow's milk properly modified and properly supplemented, can meet

fully all nutritive requirements of infancy. As far as proper nutrition is concerned, the "bottled baby" of today starts on life's road with brighter prospects than did his fellow-being of a generation ago.

Evaporated milk is particularly well adapted to preparation of milk formulas for infant feeding. Numerous studies, laboratory and clinical, have demonstrated its nutritive values—ample practical medical experience has proven its worth in infant nutrition. From the wealth of available literature, we have selected the following concise summary which describes this canned food and outlines those characteristics by virtue of which it is held in such high esteem as an infant food (1).

(1) J. Amer. Med. Assn. 97, 1890 (1931)

1. Evaporated milk is pure fresh cow's milk with approximately 60 per cent of the water removed by evaporation under reduced pressure.

2. Evaporated milk is equal to pasteurized milk in all important food values; it supplies those vitamins which milk can be depended on to supply and in practically equal quantity.

3. Evaporated milk is sterile and therefore is the safest milk obtainable; it cannot introduce pathogenic micro-organisms to induce diarrhea in infants.

4. Evaporated milk casein curd in the stomach has a finer granular and softer texture or structure than that produced from raw or pasteurized milk; it resembles in physical structure the curd of human milk.

5. The fat of evaporated milk because of the homogenization processing is more finely dispersed than the fat of ordinary milk and therefore it is more readily acted on by digestive enzymes.

6. Evaporated milk is more speedily digested than raw or pasteurized milk or milk boiled only a very short time.

7. Evaporated milk is usually less allergic than raw or pasteurized milk.

8. Evaporated milk is one of the most convenient and economical forms of milk for preparing infant feeding formulas.

9. Evaporated milk enables introduction of more milk in the diet because it is concentrated.

10. Evaporated milk is considered by many pediatricians to be the best form of cow's milk for preparing the baby's formula.

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Book Review

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

ON HEALTH'S HIGHWAY. Progress in Relation to Cancer Control. Published by The New York City Cancer Committee, 150 E. 83d St., New York, N. Y. Price 50c per copy.

This work is an extensively illustrated pamphlet showing graphically the progress of medicine since 460 B. C. The illustrations are taken from many sources, some of them being quite ancient. They serve to remind the physician himself of the progress that has been made, and the various steps that have been taken to bring the practice of medicine into the high position which it now holds.

The booklet is particularly written however for the laity, and is intended to show the advantages of experimental research in connection with animals, both for the good of humanity and also for the protection and preservation of animal life. There is no contribution that is likely to do so much to counteract the propaganda against animal experimentation as this pamphlet.

It would seem, after the physician and the family have read this pamphlet, that it would accomplish most by being placed in the physician's waiting room. The large number of illustrations will attract the attention of patients and friends, and there are associated comments or opinions as to the value of animal experimentation from many of our leading physicians. It should also find a place in every medical library.

LAY DOLLARS AND MEDICAL SCIENCE

In 1897 throughout the heated month of July a layman with the aid of a medical dictionary toiled through the almost one thousand pages of Sir William Osler's new "Principles and Practice of Medicine." As a result he became convinced of the need for enlisting outside aid in solving the many mysteries of disease which he found depicted therein. From this stimulus there came into existence a great foundation dedicated to the prevention of disease and the discovery of its cause.

Thus were the outposts of medicine extended to the very horizons of the world. Thus because of epochal discoveries by workers under these auspices have countless lives been spared and the death dealing attacks of tropical disease particularly have been prevented or rendered less devastating. There have followed other great privately conducted campaigns against disease. Medical schools have been endowed by generous lay philanthropists; hospitals have been built and costly research has been inaugurated and successfully consummated. No such educational or curative activity can exist even for a day on earned income. The wisest and most astute of scientists cannot contribute a whit to the welfare of humanity unless financial aid from a nonmedical public is forthcoming.

Medicine owes much to those who have made its onward march in the science of both disease prevention and cure a possibility. When and if the cause of the dread cancer is learned, it is safe to predict that the expense of maintaining the necessary costly study efforts will have been borne not by one trained in the laboratories of a great medical school but by one whose substance has been won in the hard college of business strife.—Editorial, *The Modern Hospital*, Mar., 1935.

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RECENT ADVANCES IN NUTRITION*

ELMER V. MCCOLLUM, PH.D., SC.D., BALTIMORE, MD.

The most important objective of investigators in nutritional research during the past 25 years has been the determination of the number and nature of the simplest chemical substances which, when combined in suitable proportions, will support a young animal during growth, maintain normal health and reproductive capacity in adult life, and promote the maximum longevity. About 1870, analytical chemistry had developed to a degree which enabled chemists to demonstrate that ordinary foodstuffs were composed almost entirely of carbohydrates, proteins, fats, and certain ash constituents. Proteins were known to constitute the principal structural material of muscles, organs, and other bodily structures. Carbohydrates and fats were rightly regarded as sources of energy. The rôle of the mineral elements in physiology was but little understood. Modern research in nutrition has been in great measure directed to further study of the nature of the proteins, to the rôle of each of the indispensable inorganic elements in physiologic processes, and to the significance and chemical nature of a group of nutrients which were not suspected to exist until after 1881, when Lunin first showed that animals could not be kept alive on a mixture of purified protein, carbohydrate, fats, and salts.

Almost all of the proteins yield on digestion at least 22 simple substances known collectively as amino-acids. One field of research deals with the determination of the relative importance of these cleavage products, all of which are simple enough in structure to enable chemists to determine their molecular structure and to synthesize them in the laboratory. W. C. Rose, of the University of Illinois, is the outstanding authority in this field. He asserts that the experimental evidence available shows that 9 of these

22 amino-acids are indispensable, 9 are not essential in the diet, and the remaining 4 have not been studied sufficiently to make possible any statement as to their nutritive importance. When this field has been adequately explored, it is evident that the indispensable protein digestion products will be found to be between 9 and 13. It will be appreciated that this kind of research is directed toward resolving the adequate diet into what Mendel has aptly termed "little things."

The adequate diet must furnish the sugar glucose. This may be derived from any of the starches, from cane sugar, milk sugar, malt sugar, or from glucose of the food.

Considerable attention has been directed to the determination of the number and kinds of inorganic or mineral elements which play physiologic rôles. It is now generally accepted that an adequate diet must contain, in suitable proportions, sodium, potassium, calcium, magnesium, chlorine, iodine, phosphorus, sulphur, copper, manganese, and zinc. This list of 12 inorganic elements is not necessarily complete. It is known that boron is essential for plant nutrition, but it is not known whether it plays a rôle in animal physiology. Several other elements should be studied in this respect.

The demonstration in 1897 by Eijkman that beriberi is due to deficiency in the food of a hitherto unsuspected nutrient stimulated an extraordinarily great amount of research on what are now known as the vitamins. Further impetus for the search for new vitamins was given by the discovery in 1913 of the second unsuspected factor, the first so-called fat-soluble vitamin, now known as vitamin A. We now have a considerable body of knowledge of vitamins A, B, C, D, E, F, and G, and of the indispensable flavine or flavines, variously called lactoflavine, ovoidflavine, hepatoflavine, renafla-

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

vine, *etc.* That there exist still other unidentified nutrients seems certain. Progress in this field of inquiry is steady year by year.

It is fully established that vitamin A is a substance which has its origin in carotene, the yellow pigment of carrots, and many other yellow and green vegetable foods. There are 3 carotenes. Beta carotene is cleaved in the liver into 2 molecules of vitamin A. The other 2 each yield but one molecule of the vitamin. Vitamin A has been prepared by vacuum distillation of halibut liver oil and other fish liver oil concentrates in nearly pure form. It has not yet been synthesized, but a substance called perhydro vitamin A has been made in the laboratory, and has been found to be identical with a substance produced by hydrogenation of natural vitamin A. The structure of the molecule of the vitamin is therefore known.

It has been fully demonstrated that deficiency of vitamin A, if severe, causes profound injury to epithelial membranes. Xerosis, cornification, and keratomalacia are seen in the eye, and cornification is general in epithelial membranes of the alimentary tract, the bile tract, and the genito-urinary tract. Recently L. J. Loewenthal, his associates, C. N. Frazier and C. K. Hu, and others have apparently established an etiologic relationship between vitamin A deficiency and a certain disorder of the epidermis.

We must distinguish between chronic hypovitaminosis as distinct from avitaminosis A. In the former condition Loewenthal has observed in Uganda, in inmates of jails, that the first visible changes appear to be dryness of the skin with a papular eruption occurring on most parts of the body except the face. The pilosebaceous follicle appears to be the structure affected. He states that this peculiar dermatosis appears before xerophthalmia makes its appearance. The dermatosis is healed in one to 9 weeks by the administration of cod liver oil. Xerophthalmia requires longer treatment for a cure. Pillat and, more recently, Frazier and Hu have described these characteristic keratinized papules at the site of the hair follicles in Chinese people. L. Nicholls has reported the condition in Ceylon, in schools, jails, asylums, and hospitals. Godwin has reported the lesions in London. H. MacKay also believes that the earliest effects of vitamin A deficiency can be detected in the skin and concludes, from a large scale test on infants, that increase in the vitamin A intake produces an easily demonstrable increase in the resistance to minor infections of the skin in infants. She lists napkin rash, intertrigo, external otitis, septic spots, dribbling rash, boils, and whitlow as conditions which may result from hypovitamin-

osis A. The incidence of these minor infections was 52 per cent in the control group and 27 per cent in the group receiving extra doses of vitamin A. It is obvious that these lesions are not specifically a manifestation of vitamin A deficiency, as is xerophthalmia, but are, like sinus, pharyngeal, and internal ear infections in experimental animals suffering from avitaminosis A, the result of injury to the cells, which reduces their effectiveness as barriers against bacterial invasion.

In this connection the work of R. A. Peters and H. W. Kinnersley should be mentioned. Dale has postulated the view that all messages from the central nervous system to the voluntary muscles and other organs depend for their passage at particular points on the liberation of the unstable substance acetylcholine. Those of the sympathetic nervous system are known to depend on the liberation of epinephrine or some closely related substance. It has been shown experimentally that in vitamin B deficiency the brain becomes incapable of oxidizing carbohydrate completely, and lactic acid accumulates, producing dramatic symptoms. Vitamin A is likewise essential for the maintenance of the integrity of the nervous system. Unlike acetylcholine its effect is largely on the afferent side. In such diseases as combined degeneration of the cord, nervous ergotism, pellagra, and lathyrism, the lesions in the nervous system are almost identical with those produced in young animals by vitamin A deficiency. Nerve cells aid in the defense of certain tissues against infection. Thus xerophthalmia, resulting from vitamin A deficiency, appears to be the sequel of loss of neurotrophic control of the cornea, owing to degeneration of the gasserian ganglion and its fibers in the trigeminus. The skin lesions referred to may have an analogous origin.

C. C. Higgins has recently reported experimental and clinical results of great interest in clarifying the relation of vitamin A deficiency to the formation of urinary calculi. He has confirmed earlier observations showing that, in avitaminosis A or hypovitaminosis A, a large percentage of experimental animals develop urinary calculi composed largely of calcium phosphate with some carbonate. These stones are generally believed to follow keratinization and desquamation of epithelial cells. There is frequently infection and alkaluria. Higgins describes disintegration and solution of these calculi in rats on the administration of cod liver oil in 30 to 60 days. In some animals there remained some keratinization of the genito-urinary tract; in others the epithelium appeared normal. He has observed in 18 cases a decrease in size

or total disappearance of renal calculi in patients refusing surgical intervention or in whom operation was not indicated. He recommends high vitamin A feeding together with an acid ash diet as a therapeutic measure in such cases.

In discussing Higgins' paper, V. J. O'Connor called attention to the frequency of calcium carbonate calculi in patients kept long on an alkaline regimen for the management of gastric and duodenal ulcers. Administration of vitamin A as cod liver oil to patients who had had recurrent stones several times each year for several years prevented recurrence during the past 2 years, although they were obliged to continue on the alkaline regimen. Such observations as these should be widely extended for the purpose of studying the efficiency of this treatment.

P. C. Jeans and Z. Zentmire observed moderate degrees of night blindness in 45 out of 213 children examined. Recovery of visual adaptation occurred after the patients had been kept for an average of 12 days on a diet rich in vitamin A. They conclude that the visual defects were due to moderate deficiency of the vitamin. It is well known that in vitamin A deficiency the visual purple of the retina is not regenerated, resulting in poor vision in illumination of low intensity.

Recently there has been increased interest in the question as to whether people generally are securing from the diet sufficient vitamin B. The etiologic relation of this vitamin to beriberi is too well known to require comment. Vitamin B has recently been isolated in considerable quantities by Williams. In collaboration with other chemists at Columbia University, he has made marked progress in determining its chemical nature. Pure crystals of vitamin B can now be purchased.

G. R. Cowgill has appraised the vitamin B content of human dietaries of man in different parts of the world and concludes that in many cases the national dietary standard does not provide enough of it. P. Summerfeldt has shown convincingly in a well-controlled experiment that a group of children given additional vitamin B in the form of wheat germ or yeast made 3 or 4 times the expected gain in weight. P. D. Crimm also reports that the addition of extra vitamin B to the diets of tuberculous children was responsible for marked gains in weight. F. A. Brown and others tested the therapeutic action of a daily dose of 3 gm. of yeast in a group of 351 underfed women and children from families on a low economic basis, and in almost all cases benefit was observed, either in appetite, in weight gains, or in bowel function.

A. Jung calculates the daily need of an adult to be from 200 to 300 rat units.

G. F. Gothlin and his collaborators have continued to apply the capillary resistance test to determine the incidence of subscurvy in Scandinavia. The results in different districts vary considerably, showing a good correlation with the amounts of vitamin C in the diet. It seems probable that low capillary strength may in some cases be constitutional, perhaps genetic in character, and causes other than deficiency of vitamin C may produce fragility of the capillaries. C. G. King and others have reported the ascorbic acid content of human tissues in 58 hospital necropsies. These findings corresponded fairly closely with data obtained from experimental guinea-pigs. The general order of concentration was adrenal gland, brain, pancreas, liver, spleen, kidney, lung, heart, and muscle in descending values. Individual cases varied approximately from 3 times higher than the average value down to less than one-tenth the average. Approximately 20 per cent of these cases showed evidence of latent scurvy. There is increasing evidence that many people are securing considerably less ascorbic acid, or vitamin C, than the optimum for health.

In this connection the studies of J. F. Reinhart and his collaborators are of great interest. By combining a state of chronic scurvy in guinea-pigs with a superimposed infection, they produced a picture which had striking resemblances to rheumatic fever and rheumatoid arthritis. Reinhart suggests that a subacute degree of scurvy may constitute the rheumatic tendency, in which the added factor of infection causes the development of rheumatic fever and possibly the allied condition of rheumatoid arthritis. A clinical study in which an attempt was made to use ascorbic acid administration as a curative measure in these conditions, reported from the Rockefeller Institute for Medical Research, does not indicate that this treatment is successful. This does not, of course, throw any light upon the question of the importance of subacute scurvy as a factor in the etiology of rheumatic fever. A careful study of the dietary histories of many patients suffering from this disease is much to be desired.

One of the triumphs of research in nutrition is the isolation in crystalline form of vitamin C, now generally called ascorbic acid, the determination of its molecular structure, and its synthesis in the laboratory. There are 3 or 4 good methods of making this substance from common sugars, and it bids fair to become one of the fairly cheap chemicals, available in any amount in pure crystalline form.

Progress in the study of antirachitic substances has been very rapid. It has been shown by comparative assays on rats and chicks that there are at least 2 naturally occurring forms of vitamin D in fish liver oils. That of the blue-fin tuna is shown by Bills to be only about one-sixth as effective in the prevention of rickets in chicks, rat unit for rat unit, as is the vitamin D of cod liver oil. Synthetic vitamin D, or viosterol (calciferol), is of very low potency for the chick, but highly effective antirachitically for the infant and the rat. Another antirachitic agent can be produced by heat treatment of ordinary cholesterol, and this substance, when treated with sulphur trioxide in carbon tetrachloride, forms a sulphonic acid which is antirachitic. Thus we know of 5 antirachitic substances. The relative merits of these in human prophylaxis or therapy cannot now be decided.

It has now been fully established that ultraviolet light acting on a sterol in the skin forms an antirachitic substance and so acts as a prophylactic agent against rickets. This applies to animals as well as human subjects. Some antirachitic agent is now widely used for preventing skeletal defects in young farm animals, especially in chicks. It is equally well established that lack of sunlight, arising from indoor life, heavy clothing, and dust and smoke in the atmosphere which robs the sunlight of its ultraviolet rays, and the general lack of any form of vitamin D in our ordinary foods, except eggs, accounts for the high incidence of rickets among children in temperate regions before the discovery of the etiology of rickets and of vitamin D about 13 years ago. Since that time the provision of cod liver oil or some other antirachitic agent for infants and children has become almost universal. The results have been remarkable in that severe grades of rickets are now rarely seen, and most infants and children are entirely protected against this disease. The value of such prophylactic treatment is not confined to the prevention of skeletal defects, but is reflected also in a safeguarding of the child against respiratory infections in no small degree.

A considerable volume of literature deals with the effects of an abundance of vitamin D on resistance to infections. The results are contradictory and cannot be finally appraised. Several studies of carefully controlled groups seem to prove that vitamin D not only reduces the incidence of common colds but, to even a greater degree, reduces their severity. Similar claims have been made for vitamin A in this respect.

The present growing practice of vitaminizing milk and bread seems to be based on sound prin-

ciples. Milk is now vitaminized by irradiation, by the addition of cod liver oil concentrate to the milk, and by feeding irradiated yeast to cows. The latter method is frequently referred to as fortifying milk with "metabolized vitamin D." It appears that since irradiation of yeast produces the same antirachitic substance (calciferol) as is formed when isolated ergosterol from yeast is converted by irradiation into viosterol, the milk vitamin of yeast-fed cows is the same as that in commercial viosterol. All the evidence points to the conclusion that milk vitaminized by any of these methods is equally satisfactory in prophylaxis. Unit for unit by the rat assay they seem to be equally effective. It is not possible at present to state with finality just how many units milk should carry per quart. It will require several years of experience with vitaminized milks to bring to light sufficient clinical experience to warrant discussion of this subject.

There is all but conclusive evidence that the provision of vitamin D exerts a significant effect in reducing susceptibility to dental caries. This view is supported by studies at the University of Iowa, Columbia University, and the University of Toronto, and in England by the studies of M. Mellanby, to whom this discovery is credited. There is still some conflict of views among investigators as to the cause of dental caries, but the evidence is now overwhelming that in some manner the diet exerts a determining influence on the susceptibility of the individual to this condition. On this last proposition all are agreed. The differences of view arise in the manner in which the data are to be interpreted. This subject should become clarified within a few years.

Considerable progress has been made recently in clarifying the problem of the composite nature of vitamin G or, according to British nomenclature B₂. These terms were used for years to designate the more heat-stable, water-soluble dietary factor which is essential for growth and health, and the prevention of characteristic skin lesions in rats, and considered by Goldberger and his associates to be concerned with the prevention of human pellagra. It has now been established that more than one substance of nutritional significance is always present in effective water-soluble preparations used in experimental work. One of these is a flavine. The flavines are yellowish, water-soluble pigments which are widely distributed in plant and animal tissues. The flavine which has been most studied is lactoflavine, the greenish-yellow pigment of the whey of milk. It requires about 12,000 pounds of whey to yield one gram of lactoflavine

in pure crystalline form. Lactoflavine has been synthesized in the laboratory, and its chemical nature is fairly familiar to those interested in nutrition. Lactoflavine is not the antidermatitis factor demonstrable in so-called rat pellagra. It seems established that flavine is an indispensable nutrient, but apparently it should not be designated as vitamin G or B₂, which designation should be reserved for the antidermatitis factor. The symptomatology of uncomplicated flavine deficiency is not yet known.

Flavines have been isolated from liver, kidney, yeast, and egg white, but it is not yet certain whether these are identical with the so-called lactoflavine from whey, and their position in respect to the replacement of one by another in the diet cannot be stated on the basis of present evidence.

Among researches on the inorganic elements, only those relating to magnesium will be mentioned. Orent, Kruse, and I have made a rather extended study of the physiologic effects of uncomplicated magnesium deficiency in animals on a diet otherwise satisfactory. Young rats pass successively through stages of vasodilatation, hyperirritability of the nervous system, cardiac arrhythmia, and fatal tonoclonic convulsions. The deprivation of this element is responsible for the syndrome of anorexia and inanition.

The only blood changes demonstrated were low magnesium values and high values for cholesterol esters.

It appears that magnesium deficiency occurs in cows in the Netherlands as the result of their being fed during the winter on magnesium-deficient feeds. Soon after delivery of their calves in the spring and the consequent establishment of heavy milk flow (in which the output of minerals is very great), the cows become so depleted in this element that the blood magnesium falls to a point which brings on what we have termed magnesium tetany.

The only clue to the possible significance of magnesium deficiency in human disease and therapy that has yet appeared is in the study of A. D. Hirschfelder, who discusses the clinical syndrome of high plasma magnesium accompanied by somnolence or coma. His observation is that there is a clinical syndrome of low plasma magnesium accompanied by muscular twitching or by convulsions. He has observed this in patients suffering from glomerulonephritis, parathyroid deficiency, and epilepsy. It will be very interesting to see the collection of further analytical data on the magnesium content of plasma in these conditions.

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THE APPLICATION OF MENTAL HYGIENE METHODS IN PEDIATRIC PRACTICE*

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Pediatricians are confronted to-day with a situation which has been growing steadily in importance over a period of years. This situation has to do with the status of the pediatrician in the field of behavior studies. In the past, pediatricians have so concentrated their attention, both in teaching and in clinical practice, upon the child's physical development—upon nutrition, biochemistry, kidneys, lungs, heart, gastrointestinal tract—that they have neglected almost altogether the emotional and personality problems presented by the child. The failure on the part of pediatricians to recognize or to deal with these problems, coupled with the fact that other individuals were engaged in the study and treatment of them, has often led parents who regularly consulted the pediatrician regarding the physical care of their children to go elsewhere

for assistance with problems involving the emotional life of the child.

How best to meet this situation is a question that every thoughtful pediatrician must ask himself. Two possible courses of action immediately come to mind: He may attempt to cover up his own ignorance of the child's emotional problems and his inability to deal with them by ridiculing and making light of the work of those engaged in the study and treatment of such problems, or he may face the issue squarely and set out to acquire an understanding of the fundamental principles of child psychiatry that will enable him to manage adequately problems relating to behavior and to deal with, in their incipency, a vast number of problems which would otherwise develop into full-blown emotional and personality disorders.

The pediatrician who elects to follow this latter course is faced with a bewildering array of

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

literature dealing with the subject, which he is seldom in a position to evaluate. He may easily become confused and discouraged by the many and varied doctrines and systems for which extravagant claims are often made by their respective proponents. There is, however, one outstanding and generally accepted approach to the problems of behavior which avoids one-sidedness and bias and makes use of proven factual contributions from workers in all fields that in any way relate to behavior. This approach is that of the mental hygiene or, as it is frequently called, the psychobiologic point of view. This point of view offers a practical solution to the problem of the physician who wishes to enter the field of behavior study.

The mental hygiene approach is objective and takes into consideration all of the factors, present and remote, that are contributing to the problem at hand. It considers the individual as a whole, as a socio-biologic unit, as a person who differs from every other person. It takes into account not only his physical make-up, but his heredity, his intellectual capacity, his special abilities and disabilities, his life experiences to date, and his emotional development as well.

This whole individual is thought of as living in and reacting to an environment. It is frequently spoken of as the total environment to indicate a broader concept which, in addition to the physical elements such as house, neighborhood, income, and clothing, includes the personalities of the other people with whom the individual comes in contact. The personalities of parents, brothers and sisters, relatives, playmates, and teachers exert a much more important influence on the life of a child than do the purely physical aspects of his environment.

The individual reacts to his environment by exhibiting various sorts of behavior. What forms this behavior will take depend, of course, upon the make-up of the individual and the nature of the environment. The important thing is to recognize the fact that behavior is merely a symptom. We must always focus our attention upon the individual, keeping in mind that it is the individual who has the problem and not the problem that has the individual. To treat behavior as though it were a clinical entity in itself would be as poor practice as the treatment of fever by antipyretics without attempting to discover the disease or condition which is giving rise to it.

It is obvious that the understanding of childhood behavior involves a careful study of the child and his environment. For convenience this study may be divided into 4 parts: The so-

cial history, and the psychologic, the physical, and the psychiatric examinations.

The social history consists of material and information which are obtained from persons other than the child. It includes, first of all, a statement of the problem as seen by the adult, usually the parent, who brings the child for study. If possible, it is well to get several adults who are in contact with the child to give their opinions regarding the child's difficulties. This material is of value as a check on the original complaint and also as a clue to the attitudes of these various individuals toward the child. Following the statement of the problem comes a description of the earliest manifestations of the difficulty, the conditions under which it first arose, and its development up to date. Next comes a complete personal history of the child, of which the developmental and medical histories are but parts. The personal history should give, in addition, a picture of the child's personality make-up, his interests, recreational activities, social adjustment, school adjustment, relationships with other members of the family, and his characteristic reactions to such common life situations as defeat, success, praise, frustration, criticism, and punishment. A family history, a school history, and a description of the child's general environment complete this part of the study.

The direct examination of the child consists of, first, the complete physical and neurologic examination; second, a psychologic examination; and, third, a psychiatric examination. A great deal of valuable information may often be obtained in the course of the routine physical examination by learning from the child what his attitudes are toward his height, weight, body build, appearance, physical defects, *etc.* It is often found that a thing of little or no medical importance, such as a mole, a receding chin, or short stature, plays a very important rôle in the emotional life of the child.

If there is any doubt about the child's intellectual capacity, he should, if possible, be given complete psychologic tests by a competent clinical psychologist. A great many behavior difficulties may be traced to such factors as improper placement at school, specific reading disabilities, and inability to measure up to standards set by parents or teachers.

In the so-called psychiatric examination emphasis is placed upon the emotional life of the child. An attempt is made to obtain from the child his attitudes toward himself, toward his problem as he sees it, toward his family, the school, his recreational activities, his companions. His ambitions, fears, and interests are also investigated.

With this material at his disposal the physician is able, in the average case, to reconstruct the factors which originally gave rise to the child's problem and to trace its development. The mental hygiene approach parallels the procedure that we ordinarily employ in attacking any problem in the scientific world. First we consider the conditions under which the problem appears, then we attempt to discover the etiologic factors involved and the part played by each in the development of the problem, and finally we devise measures to counteract the results to which they have given rise. In many cases it is possible to go further than this and to anticipate what will be the future course of development of the problem.

The insight thus gained into the dynamics of the child's behavior makes possible the planning of a treatment program which aims at a correction or modification of the contributing factors in the situation. This involves an effort to correct the unhealthy aspects of the environment and in many instances direct therapy with the child himself.

In dealing with the environmental factors, the physician will find that he must obtain the cooperation of other individuals such as parents, teachers, the social worker, and the recreational supervisor in carrying out treatment plans. It is essential in this work that the physician acquaint himself with the various social assets of the community in order that the greatest pos-

sible use may be made of them in the treatment program.

Direct therapy with the child includes general medical treatment and psychotherapy. Ebaugh¹ has defined psychotherapy as "an effort to influence in the right direction the attitude of the patient toward himself, toward his mental and physical processes, toward his environment. It is an effort to teach him to understand himself, his illness, and the cause or causes of his illness, whether this cause or these causes lie in the body, in his environment, or in the superficial or deeper layers of his mental life."

Obviously, the therapeutic armamentarium of any physician that does not include psychotherapy is inadequate. The emphasis that the mental hygiene approach lays upon the person rather than on the disease alone makes a knowledge of psychotherapy fundamental for those who accept their full responsibility in dealing with the child. The pediatrician, by virtue of his specialty, is in a unique position to deal with the earliest manifestations of children's emotional problems, and it is only logical to expect him to assume his share of the responsibility for them.

It is sincerely hoped that this phase of preventive medicine will soon assume the same degree of importance in pediatric practice that is now accorded the physical care of the child.

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1. FRANKLIN G. EBAUGH: "Psychiatry in the Care of Children," *Mental Hygiene*, Vol. XIX, No. 2, April, 1935.

A STUDY OF AIR CONTAMINANTS IN THE INTEREST OF PUBLIC HEALTH*†

An Improved Method of Pollen Survey

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A critical analysis of methods usually employed in the determination of the pollen density of the atmosphere indicates that the accuracy of these determinations is extremely doubtful. The factors of error which are responsible for these inaccuracies are an integral part of the gravity method of pollen survey.

PRESENT METHODS EMPLOYED IN POLLEN SURVEYS

The usual method is to expose a glycerine coated slide in a convenient place, as on a window ledge, beneath the eaves of a roof, or under a cover suitably placed above the slide, the last

innovations being evidently designed to serve as a means of protection to the coated surface of the slide during inclement weather. The number of pollen grains which are found adhering to a square centimeter of the slide at the end of 24 hours are counted, and a formula is applied to calculate the number of pollen per cubic yard of atmosphere. Variations of the existing methods and refinements in technic improvised by individual investigators have so far failed to eliminate entirely the sources of error since they make impossible a representative collection of pollen from a given body of atmosphere.

The factors of error involved in these methods are numerous and arise both in consequence of the inadequacy of the collecting slide and because of the meteorologic changes that may intervene during its exposure.

* From the Laboratory of Immunology, The Philadelphia College of Pharmacy and Science.

† This investigation is being conducted under the supervision of Dean Charles H. LaWall.

With regard to the first of these conditions, the slide and its coating, it is assumed that all pollen impinging upon the coated surface will adhere until the expiration of the allotted 24 hours of exposure. It is apparent that this requires the coating substance to retain its adhesive powers during changes in temperature and humidity, and that these powers remain sufficient to resist both the forces of reaction, which might cause reflection, and the force of sudden gusts of wind, which might liberate the more loosely attached pollen. Moreover, excessive humidity or rain may result in the deposit of a film of moisture upon the coated surface, or an extremely dry wind may harden or distort it. Whether the substances usually employed for this purpose (cottonseed oil, glycerine, vaseline) are inherently capable of resisting the possible changes in their adhesive consistency under these conditions is problematical and may be seriously doubted.

From these brief comments on the doubtful efficacy of the collecting slide used in pollen surveys we may now turn to the question of weather changes and their importance to the problem under consideration. While it is generally assumed that the number of pollen falling on the plate is independent of the wind velocity, other things remaining the same, it is nevertheless obvious that ascending or descending air currents which prevail at certain times of day, or which may occur at any time for various reasons, would diminish or accelerate the rate of fall of the individual pollen and so cause the number falling on the plate per second to vary considerably. Adverse changes in the prevailing wind, either in velocity or direction, in relation to the slide will materially affect the numerical deposit of pollen grains. Obviously, winds of fairly high velocity will offer greater support to spiculated pollen, that is, increase their buoyancy and so decrease their downward fall.

Moreover, laboratory experiments in the environment simulating various natural phenomena described above are sufficiently convincing to indicate that the number of pollen grains gathered by this method under such climatic conditions will vary to an extent that precludes even a fair approximation of the actual pollen density of the atmosphere.

Furthermore, when the formula by means of which the pollen density of the air is calculated is subjected to a critical analysis it is found quite inadequate.¹

A review of the problem as a whole, then, with due weight given to each of the several objections which have been discussed, makes clearly evident that the pollen grains collected by

such methods, even under favorable conditions, can convey no more than the mere knowledge that anemophilous pollen are freely disseminated through the atmosphere during the pollinating seasons of the grasses and weeds.

METHOD OF AERIAL INVESTIGATION

In the light of this cursory discussion of present methods for the determination of the pollen density of the atmosphere, it is apparent that the situation at present is not promising. Looseness in formulation of problems,² inadequacy of data due to unsystematic methods of investigation, and lack of apparatus specifically designed to determine the actual pollen content of a given body of atmosphere are all factors contributing to the present state of affairs.

Therefore, this paper presents a method of procedure which has been undertaken and which will be carried to a conclusion during the seasons of 1935-36-37-38-39-40, and indicates the principles and structure of the apparatus which will be employed.

Among the number of airplane flights which have been made by various investigators may be mentioned those of Scheppegrell. These aerial excursions were made over Tallulah and New Orleans in 1924-25, with the apparent purpose of ascertaining the pollen distribution throughout the atmosphere at varying altitudes by collecting pollen on a coated slide suspended from the side of the airplane. In this aim Scheppe-

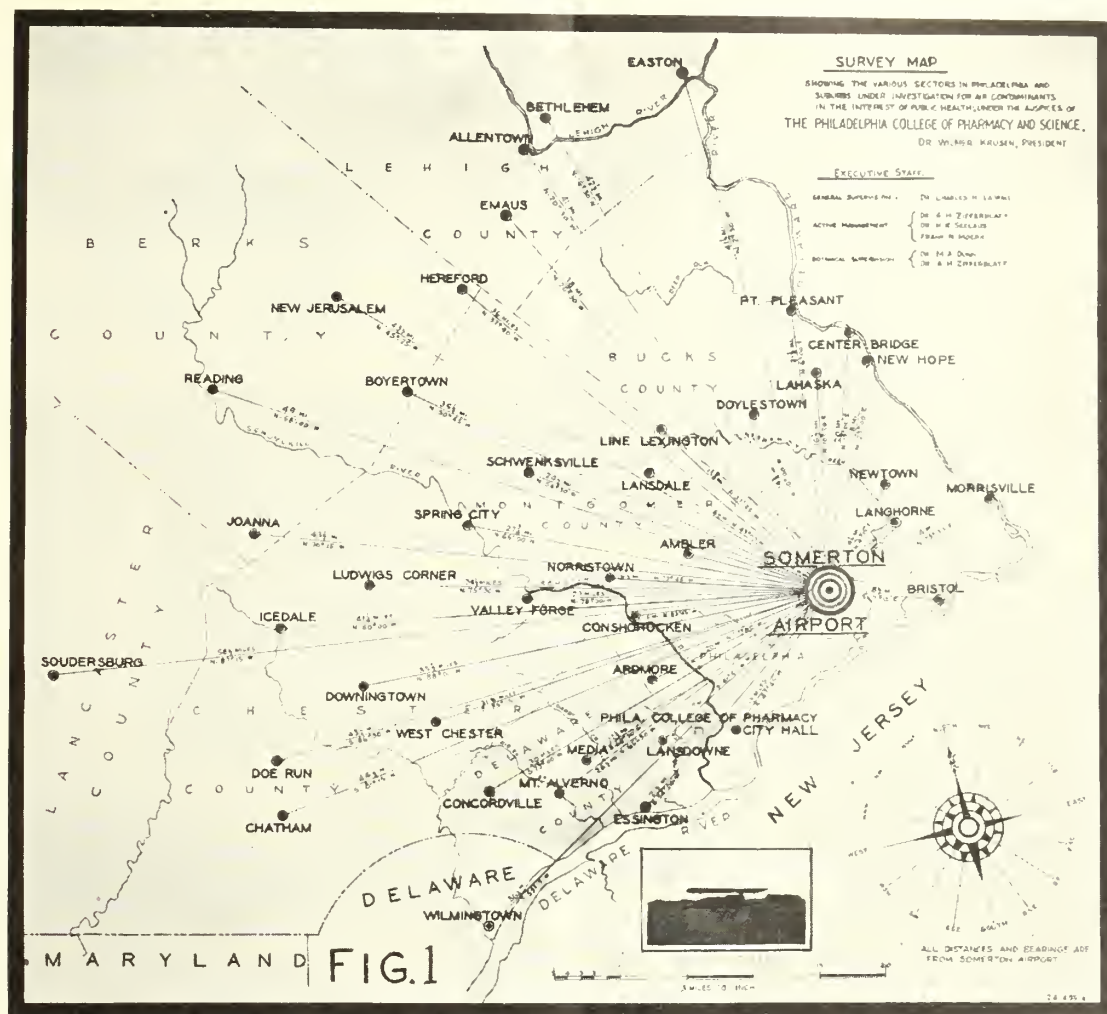
1. Problem: The determination of the number of pollen per cubic yard of air when the number of pollen deposited on a square centimeter of the plate surface during 24 hours has been found. The formula under discussion is given by Scheppegrell (Scheppegrell, W: *Hay Fever and Asthma*, Philadelphia, Lea and Febiger, 1922) and assumes that "the number of pollen dropping on a given surface depends only on the number of pollen per unit volume of air and the velocity of fall of the pollen grains" (op. cit., p. 137). Given ideal conditions, the wind fairly steady and not too strong, the formula which he gives might be acceptable if the velocity of fall of the pollen could be determined with any degree of accuracy. This velocity is calculated by means of a law of physics, known as Stokes's Law, which is established by theory and experiment to hold for perfectly smooth spheres of a diameter not less than 0.001 mm. For cases where the density of the substance of the sphere does not differ appreciably from that of air, this law states that $v = \frac{2gr}{9k}$ where v is the velocity in centimeters per

second; g , the coefficient of gravity, is 980; k , the coefficient of viscosity for air, equals 0.00018; and r is the radius of the sphere. No pollen are perfectly smooth spheres. Scheppegrell indicates indirectly (cf. op. cit., pp. 142-143) that from 10 to 50 per cent should be subtracted from the calculated velocities according to the degree of spiculation of the pollen in question. No reason is given for the quantity of this correction. This uncertainty makes the determination of the number of pollen in the air equally uncertain.

Besides these difficulties there are others which result from the heterogeneous content of the air. Falling pollen may encounter various sorts of mechanical interference, due to collision with other pollen moving at a different rate or with other matter, such as dust particles and bacteria, all of which would cause a change in their velocity of fall.

It should be pointed out that the use of this formula in Scheppegrell's book involves an error, due to a confusion of radius with diameter, so that the tables given on pages 137 and 143 are inaccurate and misleading. The velocities which are calculated for pollen of various sizes and then used in constructing the tables are all 4 times too large. The statement of the author that "... we have found this table of practical value as corroborated by our pollenometric records" must then throw considerable doubt upon the accuracy of the records.

2. This problem will be dealt with in a subsequent paper.



grell was partially successful, inasmuch as he demonstrated the presence of pollen in the upper air strata and thus verified to some extent conceptions previously held. It might be suggested, however, that in some respects these flights resembled unscientific ramblings through the air in so far as no effort was made to confirm the pollen findings of previous flights or to establish the actual climatic conditions under which the flights were made. This is quite evident from the published reports, in which the only data given are the speed of the airplane and the altitude. It is conceivable that the meteorologic conditions prevailing in any sector under investigation are of paramount importance, inasmuch as the pollen density varies with the time of day, season of the year, humidity, temperature, windage, barometric pressure, and altitude. The fact that this report fails to mention these data and also the geographical location of the sector investigated renders Scheppegrell's investigation extremely unscientific, since it pre-

cludes a repetition of the work under conditions similar to those of the original experiment; in this respect the work may be compared to a laboratory experiment in which the result is described without the essential data by which it was obtained.

It is apparent, therefore, that more refined methods must be employed to obtain accurate scientific data; hence, the faults of previous investigations have been avoided in the following plan, which has been devised after careful consideration and then charted on a geographical map giving the distance and compass bearing from the airport at Somerton, Pa., to each sector investigated (Fig. 1). This map will facilitate a return to each sector³ for repeat flights, in order to control the findings in these areas under the same and different climatic conditions. In each of the various sectors some prominent landmark will be located and made a part of the map

3. The term sector is not used in its geometric sense but merely to designate a circle about a central point or landmark.

in future publications to denote the approximate center of that sector.

Forty sectors have been selected within the metropolitan area of Philadelphia and environs, at distances within 50 miles from the city limits. Each sector has a circumference of 20 miles and has 5 strata at different elevations, the circumference of each of which is flown separately. The first stratum of the sector is flown at 1000 feet above sea level, the second at 2000 feet, and so on up to 5000 feet. Thus, collection of pollen in each sector will be made 6 times, if the ground collection is included, and the result will furnish a basis for the comparison of pollen densities of various strata of a given sector and of different sectors under the same and different climatic conditions.

APPARATUS

The pollen density of the atmosphere, the determination of which is the object of this investigation, is clearly the number of pollen grains per unit volume of air. It seems clear that an analysis of the conception of pollen density confirms the conclusion that any method employed in pollen surveys must be concerned, primarily, with the accurate determination of the amount of air used and, secondarily, with the determination of the volume of air to be adopted as a representative unit in the contemplated survey.

The first point, as may be readily seen, is of considerable importance since it is evident that the collection of air in bulk is not practical, so that other means must be resorted to in order to attain the desired aim in a practical manner. This purpose we have achieved by the development of a device (to be fully described later), the passage of air through which is recorded by a series of manometers, these having been previously calibrated in inches of water against the passage of a known volume of air.

The second phase of the problem is one of equal or even greater moment, since on the pollen content of the standard unit of air will be based the pollen density of the surrounding atmosphere in the particular stratum of the sector from which the air was obtained. For this reason the question of the volume of air to be used as the standard unit for the study of pollen density has occasioned considerable discussion, which has culminated after numerous aerial experiments in the adoption of a unit of 200 cubic feet of air to be collected in each stratum of a sector. The pollen content of this amount of air appears entirely adequate to furnish a very dependable estimate of the pollen density in the immediate vicinity of its collection.

The entire apparatus, with the exception of the air-collecting funnel and tube, is partially enclosed in a case supporting compactly all the required instruments (Fig. 2—B) for collection. The apparatus consists of a jar (Fig. 2—J) containing a scrubbing tower (Fig. 2—M), the base of which is submerged in 100 c.c. of fluid composed of equal parts of water, glycerine, and alcohol. Preliminary experiments indicated that pollen grains resisted wetting for an appreciable interval of time due either to surface tension or to the waxy envelop in which they are encased; hence, some difficulty was experienced in precipitating the pollen from the air passing through the scrubbing tower. This impediment to the extraction of the pollen contained in the air passing through the apparatus was obviated by the use of the solution indicated above. The marble tower which surmounts the fluid is designed to scrub the air in its passage through the jar and also to prevent the splashing of the fluid, thus partially precluding its dissipation. The jar is held firmly in its position by the 2 semicircular supports (Fig. 2—S), which prevent lateral movement, and by the clamp (Fig. 2—C), which prevents forward displacement. The jar is capped by a cover (Fig. 2—W) of wood, laminated to obviate warping, and is notched at 3 intervals, equidistant from each other, for the reception of 3 wing bolts (Fig. 2—W B). These bolts are hinged to a brass collar (Fig. 2—B C), which is firmly fastened around the jar immediately beneath its expanded lip (Fig. 2—L):

The rubber gasket which is interposed between the cover and the ground edge of the jar is not illustrated. It is obvious that when the wing bolts are drawn up tightly the gasket is compressed between the cover and the ground edge of the jar, hermetically sealing the latter. The cover *W* is perforated for the insertion of 2 glass tubes. These openings are covered on the inner aspects by soft circular rubber cushions (Fig. 2—R C), which reduce the diameter of the perforations to an extent sufficient to prevent the escape of air peripherally when the glass tubes are inserted, and also preclude damage to the latter owing to the jarring occasioned by the landing of the plane. The long arm of the inlet tube (Fig. 2—I T) extends downward into the jar *J* to within several millimeters from the bottom and conveys the incoming air into the fluid and beneath the scrubbing tower *M*. When the apparatus is used in laboratory experiments the short external arm of the tube *I T* communicates with the motor driven blower (Fig. 2—B''), and in actual flights, with the collection tube (Fig. 3—T) secured substantially

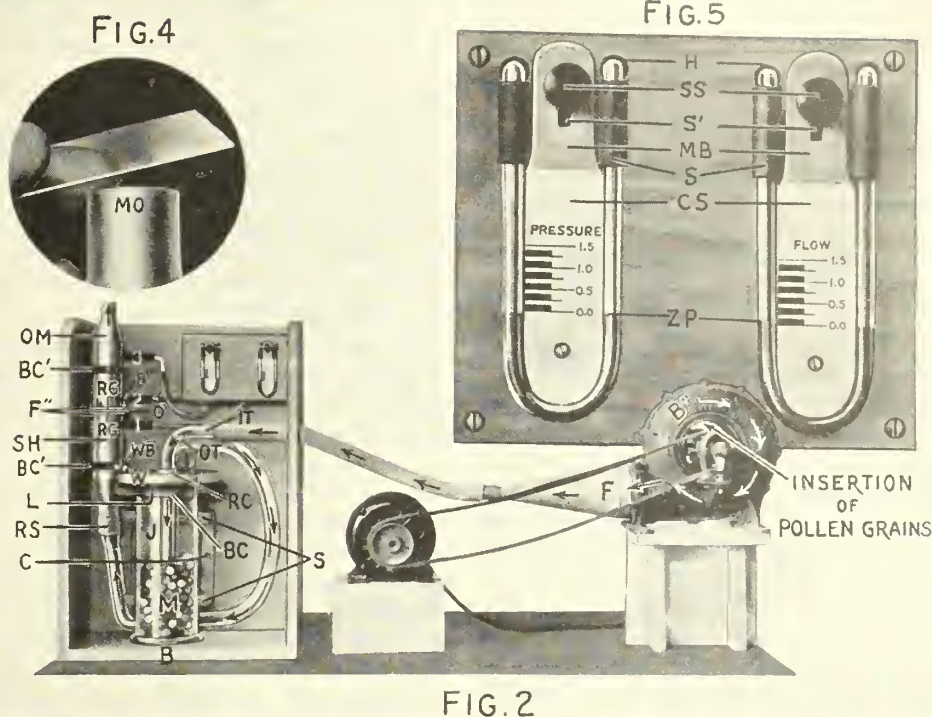


FIG. 2

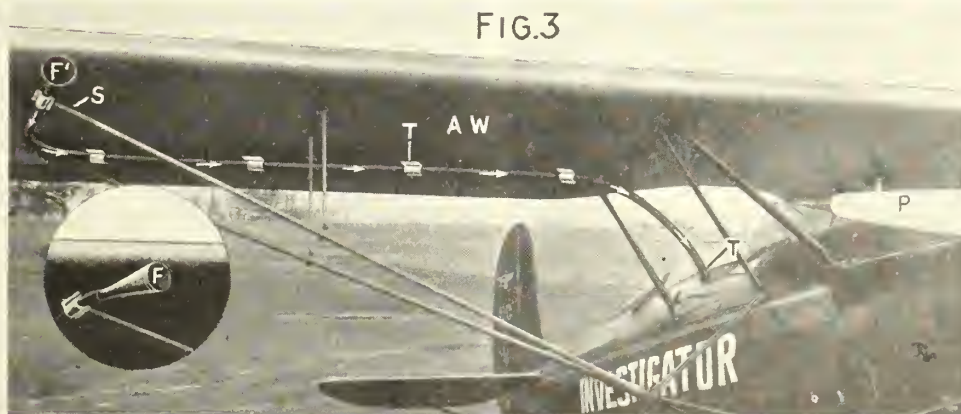


FIG. 3

to the under surface of the airplane wing (Fig. 3—A W). This tube (Fig. 3—T) has its origin in back of the funnel F' securely fastened to the strut S . The inlet of the funnel extends forward from the edge of the wing for a distance of 100 mm. as illustrated in the insert (Fig. 3). In the same figure is also clearly shown the relation of the tip of the propeller P to the funnel F' . The distance separating the

two obviates any disturbance of the air prior to its entrance into the funnel. The inner orifice of the outlet tube (Fig. 2—O T) is adjusted flush with the undersurface of the cover (Fig. 2—W) and is surrounded by a rubber cushion similar to that of tube $I T$ as is clearly illustrated in Fig. 2 directly above $R C$. The continuation of the tube $O T$ extends downward in a semi-circular direction and crosses the casing back

of the jar to meet the lower opening of the orifice meter (Fig. 2—O M), to which it is connected by a rubber sleeve *R S*, somewhat smaller in diameter than either of the parts which it unites. In consequence of this arrangement the union is sufficiently tight to obviate the escape of air and yet is flexible to an extent which does not preclude ease or rapidity of adjustment when the expediency arises, i. e., when the jar must be replaced between collections.

The orifice meter is formed of 2 symmetrical halves (Fig. 2—S H) measuring 50 mm. at its greatest diameter and each half is outwardly flanged (Fig. 2—F''). A brass disk with a sharp-edged orifice 25 mm. in diameter is interposed between the flanges of the meter (Fig. 2—O) and is separated from contact with the latter by 2 circular rubber gaskets (Fig. 2—R G), which prevent any possible loss of air when the 2 halves of the meter are united by bolts (Fig. 2—B'''). The meter is mounted against 2 semicircular cradles in the corner of the casing *H'* and is securely retained in its operating position by the 2 brass collars (Fig. 2—B C'). Three tubular arms extend laterally from the body of the meter (Fig. 2—1-2-3) and communicate with the manometers by flexible rubber tubes, shown in Fig. 2, extending beneath the laminated panel board to which the manometers are firmly secured by the straps (Fig. 5—S). The panel board is separated from the back of the casing *B* by an appreciable space to allow the backward and downward extension of the manometer arms through the holes in the panel board (Fig. 5—H) for their connection with the meter. The calibrated scales (Fig. 5—C S) are mounted on a movable base (Fig. 5—M B), which permits the adjustment of the zero point (Fig. 5—Z P). This is infrequently necessitated by the evaporation of fluid (water) in the manometer. The manometer scales are horizontally movable within the limit imposed on them by the slots formed in their bases (Fig. 5—S') and are firmly supported in their position by the set screw (Fig. 5—S S).

POLLEN COLLECTION

It may be in order to indicate briefly the route followed by air-borne pollen after their entrance into the funnel (Fig. 3—F'), which is fastened to the lower surface of the airplane wing or attached to the tubular outlet of the motor-driven blower (Fig. 2—F) employed in testing experimentally the apparatus just described. In the experimental unit arranged as shown in Fig. 2, the pollen is inserted gradually at a point in the blower indicated by the arrow. From this

point the pollen is carried around the circular air chamber of the blower, in the direction of the arrows, to the funnel *F* and thence to the tube *I T*. This experimental method of collecting the air-borne pollen mechanically introduced into the apparatus by the blower varies but slightly from that employed in actual collection by airplane. The difference consists in the lengths of the tubes connecting the funnels (Fig. 2—F; Fig. 3—F') to the inlet tube *I T* of the apparatus. From this point the conditions of precipitating the pollen and measurement of air velocity and pressure are identical irrespective of the source of the air supply.

As the pollen-laden air enters the tube *I T* it is forced downward into the jar beneath the marble tower, where the greater percentage of pollen is precipitated in the fluid. The remaining pollen is carried by the current of air, which is no longer confined to the internal arm of the tube *I T*, but spreads and flows upward as a consequence of the pressure exerted by incoming air, and passes through the interstices in the marble tower. In the latter process the air is scrubbed free of all remaining pollen not precipitated by the fluid. The pollen-free air finds its way to the outlet tube *O T* and follows the route indicated by the arrows to its entrance to the meter (O M). In its passage through the lower end of the meter the air reaches the orifice and sets up a differential pressure which is communicated to the flow manometer by means of the arms 1 and 2. This instrument records a pressure in inches of water, which represents the velocity of the air passing through the orifice. The current of air which advances beyond the meter orifice is communicated to the pressure manometer, and it indicates the pressure of the air in inches of water under which the velocity or flow of air is measured.

While a collection is being made the manometer readings are taken at definite intervals (1 minute) and averaged for the collection period. The average readings are compared to the calibration chart of the meter whereby the flow in cubic feet per minute is ascertained. The volume of air passing through the unit is determined by multiplying the average flow by the duration of the collecting period. The air volume is then corrected for pressure and is expressed in terms of cubic feet of free air.

In laboratory practice a slide, suitably coated with vaseline, can be held over the outlet of the meter (Fig. 4—M O) for an appreciable interval during the operation of the unit. The experimental objective in this procedure is the detection of pollen escaping from the apparatus.

This practice was employed extensively during the early developmental stages in the construction of the unit to ascertain its efficiency in retaining the pollen introduced. As has been previously indicated, a loss of pollen was noted in the early experiments until the composition of the pollen precipitating solution was perfected, and the marble tower was raised to its present height. These factors now preclude any loss, although in the laboratory the amount of pollen introduced into the unit far exceeds the number of pollen found per cubic foot of atmosphere.

On completion of the period of collection the jar, with its accompanying cover, and tubes is removed from its position by releasing the clamp *C* and disconnecting the airway tubes at *IT* and *RS*. The openings in the inlet and outlet tubes, formed by their detachment from the rest of the apparatus, are immediately closed by rubber stoppers. At the laboratory the jar is opened; the marbles comprising the tower are carefully washed with alcohol prior to their removal from the jar. The alcohol is then evaporated and the remaining solution is raised to a standard of 500 c.c. by the addition of water. Twenty counts are made from representative portions of each collection to determine quantitatively and differentially the number of pollen per cubic foot of air.

SUMMARY

Each phase of the investigation reviewed in this communication has been studied and close adherence to fact and theory has been carefully observed.

The collecting unit has more than fulfilled the expectation of the writers in the series of flights made during the latter part of the past season and has clearly demonstrated the fallacy of the present methods of pollen survey. The significance of the quantitative and differential study of pollen densities in measured quantities of air under various climatic, seasonal, and other conditions is self-evident.

In the approaching season a comparative study of both methods of pollen collection will be made under exact experimental conditions in flight and in ground collections.

The writers take pleasure in acknowledging their indebtedness to Mr. Frank N. Moerk for his participation in the development of the pollen-collecting unit, and to Dr. Marin A. Dunn for his careful supervision of the pollen determinations made from the specimens collected.

The authors also take this opportunity to thank Dr. Paul S. Pittenger of Sharp & Dohme for the use of his collected articles on pollenosis and pollen surveys.

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ACIDOPHILUS THERAPY

Studies in Implantation From Whey Cultures

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The value of acidophilus therapy has gained a wide recognition by the medical profession. Cultures of acidophilus have been prescribed extensively in conditions such as constipation, diarrhea, mucous colitis, gaseous distention, and the toxemias due to absorption of toxic products from the intestinal tract.

The wide use of acidophilus cultures has made it possible for commercial houses and the large dairies to place on the market acidophilus preparations of various types, in the form of tablets, agar blocks covered with chocolate, petroleum jelly flavored with chocolate, broth, fermented milk, sweet milk, digested milk, milk whey, and fruit juices.

Some of the preparations offered for sale are of little or no value therapeutically, as shown by Bass in the early stages of experiments with *L. acidophilus* and at a later date by Kopeloff. An

examination of several of these acidophilus preparations now on the market revealed that they no doubt would be lacking in therapeutic value for 2 reasons: (1) Because the living organisms of *L. acidophilus* originally placed in them were dead, or only a few living forms remained and as such are useless; (2) because of the nature of some products it is impossible to control them bacteriologically, and as a result they are only mixed contaminations containing some *L. acidophilus*.

The true value in the use of acidophilus cultures lies in the fact that when *L. acidophilus* is implanted in the intestinal tract it reduces putrefaction by producing lactic acid through its own metabolism and eventually becomes the predominant organism of the intestinal flora changing it from the proteolytic to the aciduric. It is not clear how this change is brought about,

whether it is chemical, biochemical, bacterial, or physical.

In order to obtain the desired results in cases in which acidophilus is indicated, it is important that the culture be bacteriologically pure (free from other bacteria), active, and in sufficient quantity to lend itself to quick implantation. For a preparation to have these requisites it is necessary to use a medium that will support the growth of *L. acidophilus* readily. After a maximum growth has been obtained the medium must also sustain the viability of the organisms for a reasonable period of time, that is, until the patient has received and used it.

Milk whey offers a medium which fulfills the above requirements admirably; its sterility can be made certain, and the purity of the culture can be controlled without difficulty. The proteins are reduced to a minimum.

It is our custom to grow the culture daily and to send it direct to the patient upon the receipt of a prescription from a physician. We are certain that the best results are obtained only from fresh, active cultures and, therefore, do not advise stocking whey cultures either for use or for sale.

The x-type strain of acidophilus was used. However, after a prolonged cultivation on artificial medium both x- and y-type colonies were observed in the same strain. Similar observations have been made by others.

The following studies were made on fecal specimens of individuals taking acidophilus whey cultures under directions from their physician. Most of the cases studied were in Philadelphia and its suburbs. No records were obtained as to the type of patients, nor the nature of their ailments. We are reasonably certain that most of them were the average healthy individual suffering from faulty elimination and the accompanying symptoms.

It is our practice to examine the stool of every patient taking acidophilus culture to determine if implantation has taken place. The first stool specimen was obtained after 3 6-ounce bottles of culture were consumed, 3 tablespoonfuls being taken each day of culture containing from 400,000,000 to 600,000,000 viable *L. acidophilus* per c. c. If the first examination showed good implantation (25 per cent to 90 per cent of acidophilus), no further examinations were made unless requested by the physician. On the other hand, if the first examination showed no implantation or only a few colonies of *L. acidophilus*, a second specimen of stool was obtained 3 weeks after the first one, and 1 every 3 weeks thereafter until implantation occurred or treat-

ment was discontinued. A tablespoonful of lactose with each dose of culture was advised in each case in which the second examination did not show a good implantation.

The stool specimens were sent to the laboratory by mail in sterile wide-mouth 2-ounce blue glass bottles with a screw cap. As part of the equipment a small hard-paper spoon was inserted into the bottle with instructions not to fill the bottle, as only a spoonful was necessary.

The method used was as follows. The stools were cultured as soon as received at the laboratory by mixing the specimen, if soft, in the bottle with a sterile glass rod. If the specimen were hard, enough sterile salt solution was added to soften it in order to allow thorough mixing. A small amount of specimen was placed on a whey agar* plate with a sterile loop and smeared over the surface by means of a sterile glass spreader. Plates were incubated at 37°C. for 24 to 48 hours. In examining plates a hand lens was used and the colonies carefully studied and counted to estimate the percentage of *L. acidophilus*, streptococci, and the aerobic bacilli of the colon group. Stained smears were made of all colonies that were not recognized or did not fall in the above 3 groups. The arduous task of classifying the colon bacilli or the streptococci found in the cultures was not undertaken.

The character of the specimens sent in for examination varied considerably. In consistency they ranged from liquid, soft, semisolid to solid, and likewise in color, from light yellow to dark brown.

During the hot weather feces were often received in a badly fermented state, and as a rule specimens of this nature showed no acidophilus present. In some instances specimens were sent from points as distant as Florida; such specimens were not always satisfactory, as the prolonged transportation in warm weather allowed them to ferment or to become moldy.

No effort was made to modify the diet of the patients taking acidophilus culture, so that the results compiled here are from varied dietary conditions and in some instances possibly detrimental to acidophilus implantation. Diet high in meat protein and low in carbohydrate effects a simplification of flora in the direction of *B. coli* and a suppression of *L. acidophilus*, as shown by Sanborn.

It was observed that children responded more readily to implantation of acidophilus than adults. This was also noted by Griffith and Matt.

* Whey agar was made by adding 2 per cent shredded agar to the finished whey medium, and the reaction was adjusted so that after sterilization of the medium it was pH 7.6.

TABLE I

PER CENT OF CASES SHOWING ACIDOPHILUS AND INCIDENCE OF OTHER ORGANISMS						
Feces examination	Total cases examined	Acidophilus implantation	No implantation	Incidence of streptococci	Incidence of B. coli	Other organisms
1st	1630	66.3	33.7	80.0	90.8	4.6
2nd	717	64.0	36.0	83.2	96.9	3.6
3rd	328	62.5	37.5	89.6	98.4	3.9
4th	164	64.0	36.0	84.7	96.9	3.6
5th	94	52.1	47.8	81.9	93.6	4.2
6th	58	44.8	55.1	84.4	100.0	3.4
7th	34	55.8	44.2	82.3	100.0	2.9
8th	25	48.0	52.0	84.0	96.0	4.0
9th	12	75.0	25.0	75.0	100.0	0.0
10th	9	44.5	55.5	100.0	100.0	0.0

It is evident as recorded in Table I that a good implantation of acidophilus was accomplished through the feeding of whey cultures in a short period of time in a fairly high percentage of patients. In repeated examinations 44.8 per cent to 75.0 per cent of cases studied showed implantation.

Streptococci did not always decrease with the increase of acidophilus. The incidence of streptococci was high but somewhat lower than that of B. coli. The number of patients showing streptococci ranged from 75 per cent to 100 per cent. B. coli was found in 90.8 per cent to 100 per cent of cases in repeated examinations (Table II).

The increase or decrease in acidophilus as shown in Table III is a comparison with the first examination. All examinations showing a higher number of acidophilus colonies than the first test, as well as cases in which the first examination did not show presence of acidophilus but subsequent tests did show such presence,

TABLE II

ALL CASES SHOWING STREPTOCOCCI WITH PER CENT OF CASES IN EACH GROUP					
Feces examination	Cases with streptococci	Occasional to 5% streptococci	10% to 25% streptococci	30% to 55% streptococci	60% to 100% streptococci
1st	1305	30.1	24.7	32.2	13.0
2nd	603	30.9	25.2	29.9	15.0
3rd	291	23.7	26.1	30.6	19.6
4th	143	24.5	30.7	28.7	16.1
5th	76	31.6	21.1	27.6	19.7
6th	50	30.0	28.0	28.0	14.0
7th	29	24.1	17.3	31.0	27.6
8th	21	38.0	24.0	14.0	24.0
9th	10	20.0	50.0	10.0	20.0
10th	9	44.0	33.0	0.0	22.0

were recorded as increases. Decrease was recorded in every examination that showed less acidophilus than in the first test.

Implantation as determined by cultural studies of feces was not a constant entity. The first culture of feces may show implantation; some of the subsequent cultures may show fewer or even absence of colonies, but later there is a return to good implantation.

A few patients whose feces never gave evidence of implantation were reported by the physician as having improved clinically very much.

Among the small number of cases showing organisms other than streptococci and B. coli, the following aerobic organisms were encountered: Staphylococcus aureus and albus, diphtheroid bacillus, B. proteus, B. mucous capsulatus, B. pyocyaneus, B. subtilis, gram-positive and gram-negative spore-forming bacilli, Sarcina, gram-positive bacillus of the lactic acid group, yeasts, and molds.

Very few patients showed organisms resem-

TABLE III

DEGREE OF IMPLANTATION WITH PER CENT OF CASES IN EACH GROUP, ALSO INCREASE AND DECREASE								
Feces examination	Cases with acidophilus implantation	Occasional to 5% acidophilus	10% to 25% acidophilus	30% to 55% acidophilus	60% to 100% acidophilus	Increase of acidophilus over first examination	Decrease of acidophilus after first examination	Percentage of cases showing no change
1st	1084	26.3	25.0	27.5	21.2	....	....	....
2nd	459	17.0	14.0	21.0	12.0	65.4	34.6	....
3rd	205	32.9	18.0	34.8	14.6	73.1	19.0	7.8
4th	105	35.2	20.9	29.5	14.2	77.1	17.1	4.7
5th	49	34.7	16.3	26.5	22.4	75.5	18.0	6.5
6th	26	30.7	42.3	23.0	3.0	69.0	26.9	4.1
7th	19	36.9	21.0	31.5	10.6	52.6	31.5	5.9
8th	12	50.0	16.6	25.0	8.3	58.3	41.6	....
9th	9	44.4	33.3	11.1	11.1	66.6	11.1	22.2
10th	4	25.0	25.0	25.0	25.0	....	....	....

bling acidophilus or the so-called native strains. Less than 1 per cent of patients examined showed gram-positive bacilli which appeared to be acidophilus from the character of the colonies.

SUMMARY

Implantation of *L. acidophilus* took place in 66.3 per cent of the group of patients studied at the time of the first examination; i. e., 12 to 15 days after treatment was commenced.

In repeated examinations of feces, considerable variation was noted as to the number of acid-

ophilus colonies present. The same was true in regard to streptococci and *B. coli*.

Implantation determined by cultural studies of feces cannot be regarded entirely as the criteria in acidophilus therapy; certain patients not showing implantation were reported by their physicians as being markedly improved physically.

Clinical improvement of the patient should be considered also as an important indication of the value of acidophilus.

1930 Chestnut Street.

RESPONSIBILITY FOR TUBERCULOSIS HOSPITAL PROVISION*

Including the Use of General Hospitals

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From the beginning of the campaign against tuberculosis the care of victims of the disease in hospitals and sanatoria has been recognized as a fundamental factor in the fight. During the years before 1900 the consideration which had most weight was the care and treatment of the patient, especially the early case. In more recent years, perhaps, more emphasis has been laid upon the isolation of the advanced case spreading contagion, and the protection of the community. Both are laudable and both encourage us to make adequate provision for persons of all stages.

Before 1875 provision was in charity hospitals and almshouses, where the indigent cases were cared for by the community. Later, through private agencies, the treatment of early cases was begun under conditions that utilized all of the known medical measures to promote the cure. These private enterprises served as demonstrations, so that by degrees public authorities assumed the responsibility for caring for patients in all stages of illness in sanatoria and hospitals especially built and maintained for that purpose.

Since private sanatoria could deal chiefly with those who could pay and therefore reached but a small proportion of the patients, the assumption by public authorities of the responsibility for the many who could not pay was logical and proper. It was and is their duty to take care of the sick poor, and it is now understood that such measures are necessary in order to protect the public from the spread of the disease.

During the past 25 years in this country alone, more than \$200,000,000 has been spent by the public authorities to provide hospital and sanatorium care for the tuberculous, and \$62,000,000 is apportioned annually for the maintenance of the institutions that have been established. To-day no one questions the necessity for the public authorities to provide adequate care for the victims of tuberculosis who cannot care for themselves, and to protect the public from the spread of the disease. No one can seriously advocate the assumption of this responsibility by private agencies even if the enormous cost of such measures could be met from private sources.

As an illustration, consider the situation in Philadelphia at the present time. In 1933 the number of deaths of Philadelphia residents in the city from this disease was 1331, and the number of citizens dying outside of the city was 115; so the corrected number of deaths was 1446, which represents a rate of 73 per 100,000 of population. From studies in various sections of the country it is estimated that there are from 8½ to 10 active living cases for each death. The problem in Philadelphia, therefore, is to discover, control, and treat active cases numbering from 12,000 to 14,000.

A great majority of these cases must for various reasons be treated at home under careful supervision and with the coöperation of the family. Improved methods of treatment, such as early collapse of the affected lung by artificial pneumothorax or other surgical procedure, make home treatment more advantageous to-day than it has been in the past. We are under obligation

* Read at the Annual Meeting of the Pennsylvania Tuberculosis Society, Pittsburgh, Feb. 19, 1935.

to provide for the advanced case that cannot be cared for by the family and for the destitute case. For this reason we are told that approximately 2 beds for each annual death should be provided. This means that in Philadelphia there should be approximately 3000 beds available. To meet this need in 1933 there were 1438 beds available, of which 1081 were for free patients provided by municipality, state, and philanthropic funds, and 357 for pay and part-pay patients. These figures include the proportional allotment for Philadelphia at state sanatoria at Mont Alto and Hamburg. As the annual maintenance today of a bed in a tuberculosis hospital or sanatorium is from \$1000 to \$1200, the maintenance cost for the free beds already at hand must amount to approximately \$1,100,000 per year.

Although it is our duty to strive for ideal conditions and to urge that the number of beds available from public funds should be at least doubled, the remainder of this discussion will be devoted to a consideration of means now at hand to solve the problem, that is, to the advisability of urging that general hospitals, especially those supported by public funds, should set aside a ward or wards for the care of victims of tuberculosis. It is recognized by all who are familiar with general hospitals that tuberculosis is now treated to some extent in general medical wards. Such patients are often not diagnosed before admission. The danger of this procedure to other patients, nurses, and doctors is evident.

Among students of tuberculosis in the United States there has been an effort extending over many years to encourage this development. In Philadelphia as early as 1895, when the Free Hospital for Poor Consumptives was founded, the care of advanced cases of tuberculosis in special wards of general hospitals was undertaken. Dr. Lawrence F. Flick was the guiding spirit in this organization, and to his devotion and enthusiasm the success of the movement must be attributed. This organization eventually built the White Haven Sanatorium. Even after the sanatorium had been established, the care of the advanced cases in city hospitals was continued until in 1903 the opening of the wards of the Henry Phipps Institute and the reorganization of the tuberculosis departments of the Philadelphia General and the Jewish hospitals made it possible for the association to concentrate its resources on the further development of the White Haven Sanatorium.

In 1908 Dr. Flick as medical director of the Henry Phipps Institute arranged for a canvass of Pennsylvania hospitals, asking that they set aside a special department for advanced cases of

tuberculosis and offering a daily subsidy for each patient from a special fund donated by Mr. Henry Phipps. Out of 97 hospitals contacted, so few were willing to consider the plan that the offer was withdrawn.

In 1913 a special committee of the National Tuberculosis Association recommended the inauguration of tuberculosis departments, consisting of wards and private rooms, in general hospitals, "thus removing discrimination against this disease in institutions in which other infectious diseases such as typhoid fever and pneumonia are being treated and in which the accurate knowledge of the diagnosis, treatment, and prevention of tuberculosis should be made an important part of the training of physicians and nurses."

A similar recommendation was made by the National Tuberculosis Association in 1916. In 1921 the American Hospital Association passed a very carefully drawn resolution which stated "that the reluctance of general hospitals to receive tuberculosis patients has deprived the patients of treatment near their homes, has deprived nurses and doctors of proper training, and has resulted in the relegation of tuberculosis largely to specialists to the great detriment of the general profession." In later years Drs. Philip King Brown, Henry D. Chadwick, George Dock, Benjamin Goldberg, Arthur T. Laird, Roy M. Mayne, J. A. Myers, Myron W. Snell, B. P. Stivelman, Max Taschman, H. F. Wahlquist, and others have presented papers recommending the same procedure.

In 1933 at a meeting of the Advisory Council of the Henry Phipps Institute, at which were present leaders in tuberculosis work from all parts of the country, the following resolution was passed:

"Resolved: That the Advisory Council of the Henry Phipps Institute approves in principle the plan for urging general hospitals throughout the country to set aside a ward or wards for the care of patients suffering from active tuberculosis, as a measure of sound economy in the expenditure of public funds, a protection to the home, and a means of training physicians and nurses in the diagnosis and management of the disease. It is the opinion of the Advisory Council that such wards, when properly managed, are not a source of infection to other patients or attendants in the hospital."

From the foregoing quotations it appears that there is abundant authority to support this plan.

In the arguments for and against such a procedure the following points have been raised:

The advantages to the patient may be stated as—

1. Advanced cases may be treated near their homes, not sent to a distance.

2. Patients waiting for admission to sanatoria may be cared for.

3. The tuberculosis wards of a general hospital may be observation stations, where definite diagnoses may be made.

4. The wards may be of service in emergency cases such as hemorrhage, spontaneous pneumothorax, *etc.*

5. Tuberculosis cases need the facilities of the general hospital, its laboratories, special clinics, surgical attention, *etc.* They would be of great value to patients already in sanatoria who could be transferred to them for special study and treatment.

From the hospital standpoint it can be stated that—

1. This plan is practicable as is shown by experience here and elsewhere. In Duluth, Minn., for example, 2 general hospitals with tuberculosis departments coöperate closely with the sanatorium situated outside the city in caring for patients and in the training of doctors and nurses.

2. There has been a large increase in the number of general hospitals throughout the country which are for tuberculosis patients as is shown by the sanatorium directories of the National Tuberculosis Association. In 1926 this directory mentioned 35 general hospitals which had tuberculosis divisions. The 1931 directory mentions 74 general hospitals providing for tuberculosis patients, 14 of which have special buildings for such patients. The latest report shows 88 general hospitals caring for tuberculosis patients in separate wards or buildings.

3. In Philadelphia an interesting state of affairs was discovered in a survey made of 19 general hospitals by Miss Dorothy E. Wiesner, of the Philadelphia Health Council. In this survey it was shown that during the year 1933 in these hospitals the total number of tuberculosis patients treated was 847, of whom 628 had pulmonary tuberculosis. Of these cases 169 were given some form of compression therapy. Of the total number of patients, 737 were treated in wards and 110 in private and semiprivate rooms. Three hundred and fifty-three of the number were pay patients. The details of this interesting survey will be published later.

4. If a tuberculosis department is established, the danger always present in the past of having tuberculosis patients in general medical wards would be largely prevented. The staff would be alert to diagnose tuberculosis and to transfer such patients to the tuberculosis department.

5. The education of physicians in the diagnosis, treatment, and prevention of tuberculosis and their interest in the work would be greatly advanced. Student nurses would be trained in the special nursing procedures necessary and in the prevention of spread of the disease. The danger to the hospital and to the nurse herself of ignorance on these points is very great. Moreover, after leaving the hospital both physicians and nurses will often come in contact with tuberculosis cases. For their own good and for the good of the community they must be familiar with the disease and the methods of prevention of its spread.

6. There is a tendency to make general hospitals health centers for the territory they serve. Unless they

recognize and care for tuberculosis they certainly cannot serve in this capacity.

The reluctance of general hospitals to take on this responsibility can be easily understood.

1. The boards of managers are afraid of additional expense. This objection can be met by the fact that patients able to pay in private rooms or wards should be required to pay. Indigent patients might well be paid for by the municipality, county, or state in accordance with a fixed rate. This procedure has been followed in New York City, Detroit, Duluth, and Minneapolis, where certain general hospitals have cared for tuberculosis.

2. There is the fear that it would injure the hospital to know that tuberculosis patients are admitted. The answer to this is that the public can be educated to the fact that the tuberculosis wards are carefully organized, and that there is less danger of infection where there is a properly organized tuberculosis department than there has been in the past when tuberculosis by accident is found in the general medical wards.

3. It has been stated that the modern treatment of fresh air and rest cannot be given in a general hospital as well as in a sanatorium. The answer to this is that experience has shown that no special air is needed for the tuberculosis patient and that he flourishes under proper discipline in the city as well as in a country region. For instance, at the Henry Phipps Institute in the early days when patients were housed in primitive wards in a slum district of the city and only cases that were apparently hopeless were admitted, about 6 per cent of those patients were discharged as improved. Well-ventilated wards and proper provision for rest can be arranged for in any hospital.

4. The objection that physicians, nurses, orderlies, *etc.*, would be exposed to infection is answered by the fact that employees in tuberculosis sanatoria have a lower record in developing tuberculosis than the same class of workers in general hospitals. The reason for this is that methods of protection are understood.

In conclusion, the practicability of the development of special tuberculosis departments in general hospitals has been fully established both by authoritative opinion and by practical experience. At the present time, when there are vacant beds and wards in general hospitals, the admission of patients with tuberculosis would help fill the vacant beds. By this means the care of patients who cannot be admitted to sanatoria would be assured, and the necessity for building additional separate tuberculosis institutions would be avoided. It is possible also that under present conditions, when governmental authorities are taking increased responsibility for the well-being of the needy, the time may be ripe for advocating this development. Whether or not this development can be brought about at once, it seems quite evident that the general hospitals should be informed of the possibilities of such a plan and should give it careful consideration.

EDITORIALS

THE 1935 SESSION

The Eighty-fifth Annual Session of The Medical Society of the State of Pennsylvania was held at Harrisburg, Sept. 30 to Oct. 3, and a most successful convention was conducted at the Farm Show Building, where there was ample floor space for all. With the State Society's beautiful new home in Harrisburg as an attraction it was unusually fitting that the State Society assembled in the Capital City for its annual meeting.

The Dauphin County Medical Society was host, and we extend to this group congratulations upon the very attractive and informative Convention Issue of their journal, *The Dauphin Medical Academician*. The greetings extended to the State Society by that journal conclude with the statement: "To make this session a memorable experience is to materialize the fondest dream of the Dauphin County Medical Society." In behalf of the State Society we desire to express grateful appreciation and to advise the host society that "its fondest dream" came true.

To Harvey F. Smith, general chairman of the convention committees, and to the personnel thereof congratulations are abundantly given. Their unceasing efforts made possible a most satisfactorily instructive and entertaining meeting.

The State Society has held its annual session in Harrisburg on 8 occasions, the dates and members registered being as follows: 1868—no record; 1877—185; 1892—344; 1896—330; 1911—647; 1919—682; 1925—1009; and 1935—1415.

The General Meeting was called to order Oct. 1, at 10:15 a. m., by President Moses Behrend, Philadelphia. The invocation was given by the Rt. Rev. Wyatt Brown, Bishop of Harrisburg, and the audience remained standing while Robert G. Barckley, Milford, chairman, submitted the report of the Committee on Necrology; there were 145 deaths during the year. Addresses of welcome were delivered by His Excellency, Governor George H. Earle, and Henry R. Douglass, president, Dauphin County Medical Society. Governor Earle said in part:

There is no class of professional men and women that has served more unselfishly during the depression of the last few years than our doctors. They have given their services unhesitatingly to our economic victims, without hope of any other reward than the satis-

faction that comes of helping a fellow human being in distress.

They have upheld the high traditions of their profession by placing public service first and personal reward second.

Without the whole-hearted coöperation of these members of the profession who gave their services free, or for the slight payments our relief authorities were able to provide—payments which were hardly more than tokens of appreciation and partial contributions toward the doctor's expenses—many of our citizens could not have survived the depression.

Stanley F. Reimann, Philadelphia, chairman, Committee on Scientific Work, presented the scientific program; George R. Moffitt, Harrisburg, chairman, Committee on Scientific Exhibit, announced that the exhibit embraced a large and varied field, and was of practical rather than erudite value. Harvey F. Smith, Harrisburg, chairman, Committee on Arrangements, announced the entertainments. George C. Yeager, Philadelphia, trustee and councilor, First Councilor District, in behalf of the Board of Trustees, presented the gavel to the retiring president, Moses Behrend.

President-elect Alexander H. Colwell, Pittsburgh, was installed as president, and delivered the "President's Address." This address appears in the October number of the JOURNAL and should be read carefully by the members. Dr. Colwell stressed the following:

Should physicians be condemned because they resist the social plan of using them to raise wage standards by coercion?

May they not with justice demand that the efforts of the social scientists should be spent to obtain better wages for the underpaid, who may then make their own arrangements with physicians of their own choice?

It is probable that adequate medical service is available in this country for every one who has the initiative and energy to obtain it, at least so far as the physicians themselves can supply it.

But for the improvident and for the waster who dissipates his income on unnecessary luxuries and installment purchases there is considerable difficulty.

The social scientist, however, would provide medical service for this group whether they deserve it or not.

The House of Delegates held 3 meetings and conducted its business most satisfactorily, expedited by the efficiency of the reference committees.

The following officers were elected Oct. 2: President-elect, Maxwell J. Lick, Erie, surgeon to St. Vincent's Hospital, urologist to Hamot Hospital; vice-presidents—*First*, Harvey F. Smith, Harrisburg; *second*, Frank A. Lorenzo,

Punxsutawney; *third*, Walter J. Stein, Ardmore; *fourth*, Francis Ashley Faught, Philadelphia; secretary, Walter F. Donaldson, Pittsburgh (reëlected for the eighteenth consecutive time); assistant secretary, Henry G. Munson, Philadelphia (reëlected); treasurer, John B. Lowman, Johnstown (reëlected); trustees and councilors, Alexander H. Stewart, Indiana, ninth councilor district, elected for a second term of 5 years; Frederick J. Bishop, third councilor district, having completed 2 terms of 5 years each, was ineligible for reëlection according to the By-laws. John J. Brennan, Scranton, was elected for a first term of 5 years to succeed Dr. Bishop. Dr. Bishop is to be congratulated upon the highly satisfactory manner in which he consummated the duties of the office he so efficiently filled; Arthur E. Crow having resigned as trustee and councilor for the eleventh councilor district, Laurrie D. Sargent, Washington, was elected to fill the unexpired term (one year); members of the House of Delegates to the American Medical Association, J. Newton Hunsberger, Norristown; William H. Mayer, Pittsburgh; Frank P. Lytle, Birdsboro; Howard C. Frontz, Huntingdon; Charles G. Strickland, Erie; J. Allen Jackson, Danville (all reëlected); Francis F. Borzell, Philadelphia, was elected a delegate to fill the unexpired term of J. Norman Henry who had resigned; alternates-designate—Charles A. E. Codman, Philadelphia; Samuel J. Waterworth, Clearfield; Herbert B. Gibby, Wilkes-Barre; Charles I. Shaffer, Ralphton; Charles Falkowsky, Jr., Scranton; J. Treichler Butz, Allentown; W. Burrill Odenatt, Philadelphia; Curtis C. Mechling, Pittsburgh; Arthur B. Fleming, Tamaqua; Cloy G. Brumlaugh, Huntingdon; Clarence R. Phillips, Harrisburg; alternates-at-large—James D. Stark, Erie; Frederick S. Baldi, Philadelphia; Lewis T. Buckman, Wilkes-Barre; Harry W. Goos, Philadelphia; Donald C. Richards, Easton; Clarence R. Farmer, Lancaster; Joseph Scattergood, Jr., West Chester; Leonard G. Redding, Scranton; Wilbur E. Turner, Montgomery; Ruth Hartley Weaver and Miriam Warner, Philadelphia.

The Board of Trustees, at the organization meeting Oct. 3, reëlected Edgar S. Buyers, Norristown, chairman; Augustus S. Kech, Altoona, clerk; and Frank C. Hammond, Philadelphia, editor.

The Farm Show Building, America's largest exposition building under one roof, situated about 2 miles from the hotel headquarters, accommodated the registration desk, the scientific exhibit, the technical exhibit, the House of Delegates, and all other meetings pertaining to

the scientific program, obviated any need for crowding, and personal comfort prevailed. The Chevrolet Motor Company placed a fleet of courtesy cars at the service of the physicians and their wives.

The 63 scientific exhibits embraced a large and varied field, were extensive and satisfactorily instructive; in addition there was a series of 15-minute discussions on 3 afternoons from 2 to 5 o'clock. The technical exhibit, one of the most extensive ever held, consisted of 65 very attractive and highly informative displays, and the exhibitors made valuable contacts; they were ever alert and most courteous and gracious in their every attention.

On Tuesday night a smoker, buffet supper, and entertainment for members of the State Society were given at Zembo Temple.

One of the outstanding features was the Public Meeting held on Wednesday evening, preceding the President's Reception, in the magnificent Forum of the State Education Building, considered to be the most beautiful auditorium in America. The address was delivered by the silver-tongued orator, Dr. William Mather Lewis, president of Lafayette College, on "Health for the Body Politic." Dr. Lewis reported these symptoms:

1. Crime—costing the average American family \$240 a year.
2. Speed mania—taking an annual toll of 35,000 lives.
3. Side-line politics—with frequently only half of the qualified electors going to the polls.
4. Spiritual stupor—which is vastly more serious than financial depression.

The cure, he asserted, is education, a new type of education.

Popular numbers were rendered by the Glee Club of Bucknell College. About 500 were in attendance.

Previous to the Public Meeting reunion dinners were given at 6 p. m. by the alumni associations of the University of Pennsylvania Medical School, Johns Hopkins University Medical School, University of Maryland Medical School, University of Pittsburgh Medical School, Temple University Medical School, and the Hahnemann Medical College of Philadelphia. These dinners are increasing in popularity.

The outstanding social event was the President's Reception and Ball, held after the Public Meeting, in the ballroom of the Penn-Harris Hotel.

The ninth annual tournament of the Golfing

Association of the State Medical Society was played on Monday at the Harrisburg Country Club. There were 140 divit(tee)s on the course. The annual banquet was held in the evening with 200 in attendance, when about 61 prizes, too numerous to detail, were awarded by Park A. Deckard, Harrisburg, chairman of the Golf Committee. The officers of the State Society were guests. Among the guests of honor were Governor Earle; Dr. J. Evans Scheehle, secretary of welfare; Warren Van Dyke, secretary of highways; Guy J. Swope, secretary of budget; and Adrian Bonnelly, deputy attorney general. In an address Governor Earle said, "I had the opportunity of seeing socialized medicine in its best form as an enlisted man, and as long as I am Governor, there will be no socialized medicine in Pennsylvania."

The following officers were elected: President, John Welsh Croskey, Philadelphia, re-elected for the ninth consecutive year (he was presented with a Gladstone bag); vice-president, Park A. Deckard, Harrisburg; secretary and treasurer, Thomas L. McCullough, Pittsburgh; and historian, Paul B. Steele, Pittsburgh.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania conducted a very satisfactory meeting and were royally entertained. Their several social functions were keenly enjoyed and well attended; among these events was a reception given to the delegates at the Executive Mansion by Mrs. George H. Earle, wife of the Governor. President-elect Mrs. W. Burrill Odenatt of Philadelphia was installed as president, and Mrs. David W. Thomas of Lock Haven was selected as president-elect. Other officers elected are: Vice-presidents: *First*, Mrs. William H. Treible, York; *second*, Mrs. Walter F. Donaldson, Pittsburgh; *third*, Mrs. Ezra A. Whitney, Elwyn; secretary, Mrs. Francis P. Dwyer, Renovo; treasurer, Mrs. E. Kirby Lawson, Harrisburg; and editor, Mrs. George C. Yeager, of Philadelphia.

The Harrisburg newspapers are to be thanked profusely for the efficient publicity given.

The total registration of physicians was 1486; members, 1415; guests, 71; dentists, 4. The registration of the Woman's Auxiliary was 446.

The annual luncheon of the Public Charities Association of Pennsylvania was held Oct. 2, at the Penn-Harris Hotel, Dr. Wilmer Krusen, of Philadelphia, presiding.

The next annual session will be held at Pittsburgh, Oct. 5 to Oct. 8, 1936.

SEARCH GOES ON

Scientists the world over have searched in vain for a cure for tuberculosis since the discovery of the tubercle bacillus in 1882 by Robert Koch. Dr. Koch thought he had found one in tuberculin, which he discovered several years later, and the news was broadcast with great rejoicing. But as a cure it proved a disappointment. Since then countless other serums and antitoxins have been offered by scientists who have been sincere in the belief that at last they had found a cure.

Doctors and scientists are not discouraged, for they believe there is a specific to cure tuberculosis awaiting discovery. The National Tuberculosis Association devotes some of the funds derived from the sale of Christmas Seals each year to a coöperative research program.

A special Committee on Research, of which Dr. William Charles White of Washington is chairman, is composed of the following outstanding tuberculosis scientists: Dr. Charles J. Hatfield, Henry Phipps Institute, Philadelphia; Dr. Florence R. Sabin, Rockefeller Institute; Dr. J. Burns Amberson, Jr., Columbia University; Dr. Esmond R. Long, Henry Phipps Institute; Dr. W. H. Morriss, Gaylord Farms Sanatorium, Wallingford, Conn.; and Dr. Fred H. Heise, Trudeau Sanatorium, Saranac Lake.

In the beginning this committee decided that rather than build an expensive laboratory in which to carry on scientific research, the various existing facilities at the big universities could be used. To-day equipment and personnel in 25 leading research laboratories are utilized in working out the projects assigned by the committee. None of the heads of the laboratories is paid for services, but where necessary, subsidies are granted for extra workers, special equipment, and other aids as required. Among the research institutions working with the committee are the Rockefeller Institute, the Henry Phipps Institute, the Saranac Laboratory, the Bureau of Animal Industry of the United States Department of Agriculture, and a number of universities.

Two large drug houses, both of Philadelphia, have contributed assistance in the amount of over \$50,000 to the study. Research into the chemistry of the tubercle bacillus itself is one of the major studies. Enormous quantities of the bacteria are grown for chemical analyses. One

B U Y
CHRISTMAS
SEALS



FIGHT
TUBERCULOSIS

of the coöperating drug houses has growing at one time 2000 bottles of tubercle bacilli. They are bred on a carefully composed chemical medium and later are used for biologic study.

Some of the interesting questions to which answers are being sought are: What is it in the chemical composition of this bacillus that makes one have fever? Why should a person once infected always respond in a different, more sensitive manner to later infections? What chemical characteristic of the germ makes the tissues of the body build scar tissue? Until a cure has been discovered, it is most important for people to understand and employ the only known treatment that has been found effective. It is not a bottled medicine; it is the combination of rest in bed, good food, fresh air, and sunshine under the direction of a good physician.

Every person has a chance to help in this important search by purchasing and using the penny Christmas Seals. The Seal this year pictures a girl in Civil War costume about to drop a letter in one of the first post boxes used in this country. The Seal pays tribute to the courage of countless couriers of the mail through the ages, particularly in the United States. With Benjamin Franklin serving as the first Postmaster General, Pennsylvania figures prominently in this tribute. It is quite fitting that the Christmas Seal, which symbolizes a united effort to control tuberculosis, should commemorate a service which has done much for the people of the United States.

THE NEWSPAPERS AND THE HARRISBURG SESSION

We extend our heartfelt appreciation to the newspapers of Harrisburg for the publicity given by them to the Eighty-fifth Annual Session of The Medical Society of the State of Pennsylvania, held in Harrisburg, Sept. 30 to Oct. 3. The editorial and reportorial staffs were most coöperative.

It is always interesting to read the editorial reactions to the annual meetings of our State Society. The following editorial appeared in *The Patriot*, Oct. 4, 1935.

MEDICS IN CONVENTION

The Medical Society of the State of Pennsylvania is about to conclude its annual meeting in this city. From all accounts it has been a highly successful convention, which is not unpleasant news for local committees, which are always so vital in a gathering of this sort.

Persons in as well as out of the profession could scarcely be criticized for their enthusiasm over the

medical exhibit in the State Farm Show Building. Even casual reading of the newspaper descriptions of that exposition was absorbing as they told of mechanical brains and other amazing instruments medical science has fashioned.

If the public did not participate as fully in the activities of the convention as they might, the responsibility was not with the doctors, who sought in many ways to make it clear that the public was welcome. Just as the patient must coöperate with his physician to get the best results, so indeed must the public keep step with the profession and vice versa if progress is to be made in the preservation and restoration of public health.

This is a very happy concept of a tremendously vital matter. It is gratifying to find how well it was carried out at this convention.

The House of Delegates passed a resolution stressing the need for legislation requiring the medical examination and certification of automobile drivers. The following editorial, which appeared in the *Evening News*, Oct. 3, 1935, refers in part to this resolution.

PHYSICAL EXAMINATIONS

Physical examination of motorists is advocated by delegates to The Medical Society of the State of Pennsylvania in annual session here this week. The doctors are convinced that as many or more accidents result from physical defects of the driver as of the machine. Such defects include dizziness, bad vision, epilepsy, and other ills which obviously are hazardous.

The idea is not to be whisked aside lightly. On the question of vision alone, there is a question whether there is not a large number of misfits behind the steering wheel. Driving an automobile these days calls for a driver as physically sound as railroads and trolley companies require for their enginemen and motormen. But this matter of physical efficiency is mainly ignored.

Putting the medical men's idea into practice would involve certain practical difficulties, no doubt. For instance, there would have to be periodic examinations. A driver who passed the tests one year might fail the next, for instance. It would involve expense, which would not make it popular with motorists generally, but in spite of all these considerations, there is enough in the suggestion to deserve consideration.

This is by no means the only interesting phase of the medical convention, which has brought to the city the leading practitioners of the state and set up for public inspection at the State Farm Show Building an elaborate and fascinating exhibit dealing with that very important but often neglected treasure—health.

It is gratifying that the medical profession more and more is taking the public into its confidence, offering and seeking coöperation in the interest of a more healthful and healthy community. Its lecture here, last night, by Dr. William Mather Lewis, president of Lafayette College, was designed for the public as much as the profession.

Such policies cannot fail to result in public good. There is no dodging the importance of health. So much depends upon it in the way of earning power, happiness, the perpetuation of the race, the stability of the family, the orderliness of a community, and an infinite number of other desirable things that nothing too much can be done to impress the public with the importance of preserving or regaining health.

Harrisburg, of course, is glad to have so many distinguished visitors during the week. The occasion to play host to such a company is not granted often enough.

It is of interest to note the reaction of the *Evening Public Ledger* (Philadelphia, Pa.) in regard to the test for new automobile drivers, as evinced in the following editorial, which appeared Oct. 3, 1935:

EXAMINING MOTORISTS

The Medical Society of the State of Pennsylvania proposes medical tests for new automobile drivers, commenting on the numerous accidents caused by erratic or defective individuals at the wheels of automobiles. There are certain physical tests, and those applying to hearing, color-blindness, and vision generally, when a motorist seeks a driver's license in Pennsylvania. But once having obtained it there is no further check-up by the commonwealth.

It must be admitted that there are numerous persons operating automobiles who, by reason of physical incapacity, nervousness, and similar causes, are not really competent under stress to drive safely.

But it may be doubted that these play such an important part in our motor-accident record. Carelessness, self-satisfaction, indifference to the rights and safety of others, and sheer foolish recklessness among persons perfectly capable, from a physical standpoint, of properly driving an automobile, are the major causes of accidents in which the human element is chiefly responsible. Medical examinations will not correct that condition.

THE QUEST FOR HAPPINESS

The most that can be said of happiness descriptively is that it is an emotional expression of a mental state, temporary and fleeting. To be constantly happy brings one into the realms of the abnormal, for a continued sense of happiness that alienates an individual from reality is a psychiatric state and calls for psychiatric investigation.

Since the beginning of that completed transitional state from a tadpole to a fish and then to a human being or, expressed in a different way, since Adam found himself in the Garden of Eden, man has chased this phantom-like thing called happiness only to find that at the end of the race there was no such thing permanently in reality. But only a glimpse of the rainbow was his reward, for lo and behold he found no pot of gold. Even memories at the close of the day are too colored with the tints of yesterday to ensure constant happiness.

Happiness is a wary sort of thing; fed by lures it comes temporarily with achievement only to vanish when the goal is attained. Only those in their dotage can find permanent happiness in some one achievement. Only the stale permit themselves to be permanently pumped

with a single victory. The building of life is erected on a different foundation. An achievement is but one stone in the building.

Happiness is easily frightened away. It takes flight at an unkind word of a loved one; it flies in the presence of pain and the first signs of malice and hatred; and it goes in deep mourning at the first sign of defeat.

Happiness for one is not happiness for the other. The happiness that comes to the philosopher in artistic thinking is boredom to the restless; the rhythm of the dance is beauty to the youthful boy and girl but painful to the old man with rheumatism; an oversolicitous mother finds happiness with the heir apparent, while dad walking the floor all night with a howling mass senses an opposite reaction; the clinking of gold that is the miser's god is but a token of the devil to the circuit rider; the penning of these lines that gives a sense of satisfaction to the writer might be a tremendous bore to the doctor who prefers to play bridge, fly his ship, or shoot his golf, all of which brings to him a greater sense of happiness.

To the religious individuals, pain and distress for the Master's cause bring, so they say, a sense of satisfaction, for 'tis the Master's will. Happiness to them is to be found in the Kingdom of Heaven. Not having been to that country from whose bourn no traveler returneth, we would not disturb their faith. However, we learn that an Irishman spoke to his wife from the spirit world to the effect that he was much happier in hell than at home.

And so we must conclude this brief dissertation by saying that to each man chasing his favorite phantom we wish all joy and happiness. Time has proven, however, that to attain it and to enjoy it to the fullest one must be mentally and physically well. An exception might be the neurotic female, who is happiest in that state. Doctors, therefore, just helping to keep people mentally and physically well add to the happiness of the world, and there's not a one of us in so doing but has brought some degree of happiness to himself.

JOHN IGNATIUS FANZ, M.D.

Dr. John Ignatius Fanz of Strafford, Pa., head of the department and professor of pathology, bacteriology, and hygiene, Temple University School of Medicine, Philadelphia, died August 26, at his summer home on the eastern shore of Maryland, from heart disease, aged 44.

Dr. Fanz was born in Philadelphia, February 1, 1891. He received his preliminary education

in the public schools of Philadelphia, graduating from the Central High School in 1906.

He was graduated from the Jefferson Medical College in 1912 and served his internship at the Jefferson Hospital from September, 1914, to June, 1916, upon the termination of which he was appointed demonstrator in biology and histology at the Daniel Baugh Institute of Anatomy and Biology of the Jefferson Medical College. He acted as curator of museums at the same institution from June, 1916, to September, 1918. In the fall of 1915 he was appointed demonstrator and later associate in the Department of Bacteriology and Hygiene at Jefferson Medical College, which position he held until the spring of 1923. During this period he also served as clinical pathologist to St. Agnes Hospital. In 1923 he received his professorial appointment at the Temple University School of Medicine, which position he held until the time of his death. In conjunction with this work in 1928 he was appointed pathologist to the Philadelphia General Hospital. To the student body he was affectionately known as one of the "Four Horsemen" of the faculty.

He was a member of the Philadelphia County Medical Society, The Medical Society of the State of Pennsylvania, a Fellow of the American Medical Association, a member of the Pathological Society of Philadelphia, a member of the International Association of Medical Museums, and of the American Association of University Professors.

Dr. Fanz was the author of numerous papers on subjects pertaining to pathology and bacteriology. His accomplishments were not limited to the subjects which he so brilliantly taught; he was a lover of music and the arts; a genial man, ever a source of inspiration to his colleagues and students.

Dr. Fanz is survived by his widow and a son.

DR. COLWELL

Under the above caption there appeared an editorial in the *Pittsburgh Press* of October 3, which we are proud to quote in its entirety.

We do not know how many of the 118 members of the Allegheny County Medical Society who registered at the Harrisburg session of the State Medical Society heard Dr. Alexander H. Colwell's presidential address, but we do know that the hundreds of members of the State Society who packed the auditorium in the Farm Show Building on Tuesday morning, at the opening general session, not only listened attentively to President Colwell, but by their applause and their subsequent comments paid higher tribute to his studiously prepared and impressively delivered statements and comments than has ever before, in the past 18 years, been expressed by a similar audience at the State Society's

annual opening general session. Never before have we known it to become necessary for the presiding officer to interrupt the applause following a presidential address to permit the program to be concluded.

To those of our readers who did not hear Dr. Colwell's address we commend highly a careful reading of it as it appeared in the October issue of the *PENNSYLVANIA MEDICAL JOURNAL*.

It will be noted that in the tribute paid by the editor of the *Press* he recognizes and acclaims in Dr. Colwell's career not only his professional qualifications but his contributions as a community leader. The editorial follows:

"Pittsburghers will greet with pardonable hometown pride the word from Harrisburg that Dr. Alexander H. Colwell of this city has been inducted president of the Pennsylvania Medical Society.

"Few physicians are better known locally than Dr. Colwell. Although only 48, he is a past president of the Allegheny County Medical Society, a director of the Public Charities Association, and a leader in other civic organizations.

"Dr. Colwell graduated from the University of Pittsburgh in 1914, served his internship here, has been a member of the staff of 2 local hospitals. Except for war service in France, all of his medical work has been done in Pittsburgh.

"His elevation to the presidency of the Pennsylvania Medical Society is a tribute both to Dr. Colwell and to the high medical standards of this city. We congratulate Dr. Colwell and wish him a successful administration, as the leader of the Keystone State's thousands of physicians."—*Pittsburgh Medical Bulletin*, Oct. 12, 1935.

SEMINARS ON LABORATORY METHODS AND THEIR CLINICAL APPLICATION

The following graduate seminars will be conducted under the auspices of the Committee on Medical Education and Scientific program of the Philadelphia County Medical Society at the County Medical Society Building, southeast corner of Twenty-first and Spruce Streets. There is no charge for admission and it is hoped that the medical profession will avail itself of the opportunity of attending any or all of the seminars.

Nov. 29, 1935

Variations in the Blood Count and Their Significance. William Belk, M.D.

The Sedimentation Rate. Jacob Cutler, M.D., Henry Phipps Institute of the University of Pennsylvania.

Blood Sugar and Blood Cholesterol: Significance of Variation. A. Cantarow, M.D., Jefferson Hospital.

Minerals in the Blood and Their Significance. William Sunderman, M.D., University of Pennsylvania School of Medicine.

Dec. 6, 1935

Interpretation of Gastric Analysis. Harry Bockus, M.D., professor of gastro-enterology, Graduate School of the University of Pennsylvania.

The Gastroscope: Its Possibilities. Louis Clerf, M.D., professor of bronchoscopy and esophagoscopy, Jefferson Medical College and Hospital.

Biliary Drainage. B. B. Vincent Lyon, M.D., assistant professor of medicine, Jefferson Medical College, and chief of clinic, Gastro-intestinal Department.

Dec. 13, 1935

Laboratory Examination of the Heart: Electrocardiographic Interpretation. Charles C. Wolferth, M.D., professor of clinical medicine, University of Pennsylvania School of Medicine.

Circulation Time and Minute Volume Studies. Isaac Starr, M.D., professor of research therapeutics, University of Pennsylvania School of Medicine.

Heart Sounds: The Stethograph. A. Margolies, M.D., University of Pennsylvania School of Medicine.

Blood Pressure and Its Variation. Charles L. Brown, M.D., professor of medicine, Temple University Medical School.

Dec. 20, 1935

The Basal Metabolic Rate: A Discussion of Its Determination. Joseph Vander Veer, M.D., assistant physician to the Pennsylvania Hospital.

Variations in the Basal Metabolic Rate and Their Practical Significance. Edward L. Bortz, M.D., chief of medical service "B," Lankenau Hospital.

Roentgen-ray and Its Clinical Application. Francis F. Borzell, M.D., roentgenologist to the Frankford Hospital.

NEW POLICY OF THE AMERICAN MEDICAL ASSOCIATION

A business meeting of the Council on Medical Education and Hospitals was held at the Brown Palace Hotel, Denver, Sept. 15, 1935.

According to the minutes the survey of American medical schools so far completed has revealed certain significant weaknesses, namely,

There is a tendency for medical schools to enlarge their enrollment without a corresponding increase in personnel or instructional facilities.

With a growing appreciation of the necessity for an intimate correlation between clinical and laboratory knowledge, it is evident that this can be obtained only by increasingly close contact between preclinical and clinical departments continuously maintained from the time the student first enters the medical school until he graduates.

The advances of the medical sciences have been and should be independent of any sectarian point of view, and medical education should not be handicapped or directed by a dogmatic attitude toward disease.

For these reasons the Council took the following action:

(a) *Resolved*, That in each medical school the number of students should not exceed the number that can be adequately taught with the laboratory, library, and clinical facilities available and for whom a sufficiently large and competent teaching staff is provided.

(b) *Resolved*, That after July 1, 1938, the Council on Medical Education and Hospitals will no longer publish a list of approved 2-year medical schools.

(c) *Resolved*, That after July 1, 1938, the Council on Medical Education and Hospitals will no longer carry on its approved list schools of sectarian medicine.—*J. A. M. A.*, Oct. 5, 1935.

COMMENTS AND EXCERPTS

The Virus of Influenza Identified by Serum Tests.—Serum tests that identify "quite definitely" the virus causing human influenza and show that the same virus is the cause of the disease in different parts of the world were reported by Drs. Thomas Francis, Jr., and T. P. Magill, of the Rockefeller Institute for Medical Research, to the American Society for Clinical Investigation.

The virus was obtained from throats of influenza patients in Puerto Rico, New York, and Philadelphia. The virus can be transmitted to both ferrets and mice, and in both species of animals causes consolidation of the lungs. Most of the mice die of the disease, but the ferrets usually recover.

The blood serum of ferrets that have recovered can check the ability of the virus to infect mice and to produce the lung consolidation. So does the blood serum of convalescent influenza patients, but the serum taken from patients during their acute illness does not protect the mice against the disease. This latter finding, Drs. Francis and Magill state, seems to "show quite definitely that the virus is the causative agent of the human disease."—*Science News Letter*, May 18, 1935.

Put Olive Oil Into Veins to Help Babies Gain Weight.—Twenty starving babies in Baltimore were recently given a new lease on life by injections of fat directly into their veins.

The babies were not starving from lack of food but because they suffered from such severe digestive disorders that they could not get any benefit from nourishment fed to them by mouth. The new feeding method was developed by Drs. L. Emmett Holt, Jr., Herbert C. Tidwell, and T. F. McNair Scott of Johns Hopkins Hospital.

Olive oil is first mixed with lecithin from egg yolk. The mixture is then homogenized at 4000 pounds' pressure. Finally it is sterilized and then injected into the babies' veins.

Each day for about a week the sick infants received a dose containing approximately the amount of fat that would be eaten in a normal diet for one day. After the second dose, the babies gained weight and began to improve.—*Science News Letter*, June 22, 1935.

MEDICAL ECONOMICS

All North Carolina on Hospital Plan.—According to the *Associated Press*, what is believed to be the first attempt in this country to put group hospitalization on a state-wide basis is being made in North Carolina.

The plan is to serve the dual purpose of making hospital care available for thousands of people of low income who otherwise could not afford it, and relieving the severe financial strain of the hospitals in the state.

Sponsored by the State Medical Society and the North Carolina Hospital Association, the Hospital Saving Association of North Carolina is a nonprofit service corporation. Twenty-five thousand dollars has been contributed by the Duke Endowment Fund toward launching the project.

The association will furnish individual subscribers hospital care in wards for a period of 21 days during one year for a weekly payment of 15 cents, or for large groups at the rate of 60 cents a month.

Subscribers may choose any hospital in the state participating in the plan, and each will be expected to select his or her attending physician. However, the plan will not include or pay for the professional services of the attending physician. Subscribers will be admitted to hospitals on the recommendation of their attending physician or dentist, and will be discharged when either of these practitioners so decides.

In many places group-payment plans for hospital care are emerging from the experimental stage. They have been in operation for several years in a number of European countries on a compulsory basis, and in England and Denmark on a voluntary basis.

In the United States various forms have been tried through industrial coöperative, nonprofit organizations and commercial profit-taking insurance companies. Notable among the coöperative plans are those in several Texas cities, the Essex County plan in New Jersey, the periodic payment plan in Cleveland, and the one recently set up in New York city.

Previously in North Carolina there have been limited local group payment plans. The newly formed Hospital Saving Association of North Carolina, however, is believed to represent a venture without precedent in this country, since this is the first time such a plan has been attempted for a whole state essentially rural.

PHYSICAL THERAPY

Newer Developments in Physical Therapy of Chronic Arthritis.—Dr. Richard Kovacs, of New York, states in this article that the object of physical therapy in chronic arthritis is twofold: (1) To serve in the constitutional treatment of disease for the stimulation of the defensive mechanism of the body and for the increase of circulation and metabolism; (2) to serve for the local treatment of pain and stiffness, the symptoms most bothersome from the patient's viewpoint.

An increasing number of methods for aseptic fever production have been developed in recent years: Hot baths, cabinets heated by infra-red radiation or filled with heated humidified air or vapor, general diathermy, radiothermy, inductothermy. It is the present consensus of opinion that the same physiologic changes and consequently the same therapeutic results can be produced by any of these methods, and the trend is to favor efficiently heated cabinets.

Arthritic patients may be helped by these factors alone or in combination. In chronic infectious (atrophic) arthritis only a small percentage of cases has been shown to receive definite benefit, and the final value of fever therapy is still under judgment. In chronic hypertrophic arthritis a still smaller percentage showed improvement. In both acute and chronic gonorrheal arthritis, on the other hand, a very large percentage (almost 90 per cent) of cases showed very striking response, and fever therapy has now become the method of choice in these cases.

Fever therapy to be effective must be carried on in institutions under the direction of a competent physician and with a nursing staff especially trained in its technic. Fever therapy is administered in a course from 6 to 10 treatments, given 2 to 3 times a week according to the comfortable tolerance of the patient. Local heat treatment has as its object the increase of local blood and lymph circulation and local tissue metabolism, promotion of resorption, and restoration of function. An even more important effect is that of the relief of pain, the symptom which is the most bother-

some and most depressing next to the stiffness and limitation of motion.

It is evident and it has been corroborated by ample clinical evidence that in the chronic stage of arthritis the more penetrating and the more efficient sources of heating, such as diathermy, are preferable over sources of external heating, such as heat lamps; the latter, nevertheless, are invaluable for supervised home treatment. Modern experimental research has proven without doubt that the temperature of the interior of joints can be increased several degrees by diathermy. In osteo-arthritis localized in 1 or 2 of the larger joints or in the spine, diathermy will do more for local relief of pain, promotion of resorption, and restoration of function than any other physical measure. In the bilateral knee involvement of the osteo-arthritic type in middle-aged women, diathermy is well nigh specific in its results.

In chronic infectious arthritis local diathermy has only a limited value; in subacute and chronic gonorrheal arthritis it should be carefully and systematically employed at first before general fever therapy is instituted. Many cases of monarticular gonorrheal arthritis can be cured by local heat therapy of the joint, preferably combined with heat treatment of suspected foci of infection—the female urethra and cervix or the prostate and seminal vesicles. Fever therapy is a more exhausting, more expensive, and complicated method and should be employed in gonorrheal arthritis only if local heat therapy has failed to give satisfactory results.

The rationale of introducing vasodilating drugs by the polarity effects of the galvanic current is based on research work pointing to a close connection between disturbed peripheral circulation and arthritic conditions.

Histamine and choline compounds are the drugs with which considerable laboratory work as well as clinical work in the treatment of rheumatoid conditions has been done in recent years. They exert powerful vasodilatory effects, histamine acting principally on the skin capillaries while choline compounds influence more powerfully the small arterioles. In the technic of application both types of drugs being alkaloids are applied from the positive pole, which repels them; a large pad electrode connected to the negative pole serves as dispersive electrode.

Histamine is applied in a 1:1000 solution; with the technic reported by Kling, the part to be treated is covered with a piece of blotting paper of the same size, moistened with the solution. A current strength of one-half milliampere per square inch of paper surface applied for 1 to 2 minutes causes a local reaction much more intense than that by mecholyl. There is immediate reddening of the skin, wheals crop up and blend into a patch of urticaria, the temperature of the skin rises from 3.6° to 5.4° F., and its normal appearance returns in from 5 to 6 hours. Kling reports best results in post-traumatic arthritis.

Under water or therapeutic pool treatment, primarily introduced for the treatment of weak muscles following poliomyelitis, has been recommended as an adjunct in the treatment of chronic arthritis. The buoyancy of the water overcomes the force of gravity and allows the exercise of weak muscles while the heat relaxes and softens hardened tendons and ligaments as well as stiff joints and permits their manipulation with little pain. Given patiently by skillful hands, a course of hydrogymnastics is of material help in treating and loosening up stiff joints in chronic arthritis.

The following summary is given:

1. Newer methods of physical therapy are an invaluable aid in the constitutional treatment and are the mainstay of local treatment for the relief of pain, swelling, and stiffness.

2. Monarticular affections in subacute and chronic gonorrheal arthritis should be treated first with local heat therapy; in acute cases and in chronic cases not responding to local treatment fever therapy is of specific value.

3. In chronic osteo-arthritis diathermy or short wave diathermy is the method of choice.

4. For the local treatment of rheumatoid arthritis iontophoresis by vasodilating drugs is recommended.—*Medical Record*, Oct. 2, 1935.

The Nonoperative Treatment of Chronic Arthritis.—In this article Dr. Samuel Kleinberg, of New York, limits his remarks to the strictly orthopedic aspect of the therapy, assuming that in every case a thorough investigation of the patient's various systems has been made with the object of discovering and eradicating every possible focus of infection, correcting faulty alimentation, controlling carbohydrate intolerance, and rectifying endocrine disturbances. It is unfortunately true of arthritis, particularly in the chronic form, that, even after the removal of all sources of joint infection and irritation and the correction of errors in metabolism, the joint pain and disability continue, indicating that the disease or its sequelae or both remain and require treatment on a purely empirical basis. An appreciation of this fact makes it imperative for the surgeon to advocate and utilize every measure and modality that have proved of value in easing joint pain or improving joint function.

Physical therapy is an indispensable feature of the system of treatment of all forms of chronic arthritis. It includes baking, massage, diathermy, heliotherapy, hydrotherapy, joint exercise, and colonic irrigations. It would carry us far afield to describe each modality, its mechanism, advantages, and application. Suffice it to say that the various measures, except the colonic irrigations, improve the circulation in and about the joints, reduce swelling, relieve pain, and increase joint mobility. They are most effective when given in moderate doses. Massage should be gentle and soothing and never violent and painful. Baking should be given 1 to 3 times a day, one-half to one hour each time, and the temperature should be warm and not hot. Many arthritic joints can be moved very freely under the influence of moderate heat. Its effect is often enhanced when the joint is surrounded by a towel soaked in albolene. A warm albolene bath, according to the experience of Dr. Hoke of Georgia, is particularly effective in relieving pain and increasing joint mobility. Diathermy provides heat to the intra- and para-articular structures, just as baking increases the heat of the skin and subcutaneous tissues. Both modalities cause a vasodilatation that persists for some time after the treatment is terminated, continuing the advantages of hyperemia beyond the time of the treatment period. In the use of hydrotherapy preference is for the warm whirlpool bath, which provides not only heat but also massage to the joint. The alleged advantage of this treatment is that by gradually increasing the heat a more thorough and more lasting hyperemia is obtained. Be that as it may, from a practical viewpoint the whirlpool bath is desirable, as there often results a decided reduction in the pain and a very marked improvement in joint function.—*Medical Record*, Oct. 2, 1935.

MEDICOLEGAL

Medical Evidence as to Duration of Disability.

—The undisputed testimony of a medical expert, in an action on an employees' group insurance policy to recover total permanent disability benefits, to the effect that the spicular bone could be removed from plaintiff's hip by a nondangerous minor surgical operation which would relieve a disability caused by its impeding the lateral movement of the leg was held sufficient to show that the disability was not permanent. *Prudential Insurance Co. vs. Davis*, Tennessee Court of Appeals, 78 S. W. (2d.) 358.—*Medical Record*, Oct. 2, 1935.

Anthracosis Under the Pennsylvania Compensation Act.—Under the Pennsylvania Workmen's Compensation Act, anthracosis is an occupational disease and not compensable if death results from it alone, but, if an employee suffering from anthracosis is injured and the injury hastens his death, the case is compensable. It is also compensable if the injury brings on the condition and contributes to the fatal result.

Where the medical evidence conflicted as to whether there was any connection between the injury and the death, the Pennsylvania Superior Court, Swingle vs. Mill Creek Coal Co., 176 Att. 828, held that the expression "I think" by an expert witness is equivalent to saying "I believe," and "I feel that way about it" is also equivalent to "I believe."—*Medical Record*, Oct. 2, 1935.

INDUSTRIAL MEDICINE

Industrial Accidents in Pennsylvania.—The Secretary of Labor and Industry, Harrisburg, reported as of Sept. 12 that industrial accidents in Pennsylvania declined in August. There were 7635 accidents, a decrease of 441 compared with July and a drop of 689 over August of last year. There were 78 fatal industrial accidents last August, 17 less than a year ago and 33 less than in July this year. The decrease in accidents and deaths is attributed to a reduction in anthracite mining accidents. There was, however, an increase in permanent disability. The loss of hand cases rose from 4 in July to 16 in August, and facial disfigurement cases increased from 14 to 34.

HOSPITAL ACTIVITIES

Ye Doctors' Minstrels Aid Hospital.—Members of the Academy of Medicine, McKeesport, Pa., wanted in some way to assist financially the McKeesport Hospital where, as in other institutions, patients' receipts had shrunk considerably. They decided on a minstrel show, all the participants being members of the medical profession.

For 2 months the doctors rehearsed diligently and then put on the show to a packed house. The proceeds of \$2000 were turned over to the hospital and will be used for repairs. The physicians had so much fun doing it that they may decide to put on a minstrel show each year.

An elaborate printed program filled with local advertisements helped to swell the proceeds.—*Modern Hospital*, Oct., 1935.

New Anesthetic Agents and Modern Methods of Anesthesia.—Dr. Myra Babcock, chief anesthetist, the Grace Hospital, Detroit, Mich., read a paper on

this subject before the convention of the Michigan Hospital Association, Jackson, on May 9, 1935.

A review of the literature on anesthesia, a consideration of the reports of other anesthetists, and an evaluation of their experiences with some of the recently introduced anesthetic agents and methods indicate that there is no ideal anesthetic nor perfect method, that there is no possibility at present of discarding either old anesthetics or old methods, and that each anesthetic and method whether old or new has its definite indications as well as its equally definite contraindications.

A list of the general anesthetic agents in use to-day reveals 5 new names, ethylene, cyclopropane, divinyl oxide, evipal, and trichlorethylene. Although not, strictly speaking, a new agent, ethylene has been in use for only about 10 years and during that time has definitely proven its value as an anesthetic as well as demonstrated its undesirable features. There is a place in all operating rooms for this gas which perhaps no other anesthetic can fill. For the patient for whose operation muscular relaxation is imperative and yet who, because of some other pathologic involvement, cannot be given ether, ethylene is the agent of choice, especially if spinal anesthesia is contraindicated. Were it not for the unpleasant odor of this gas and for the ever-present danger of explosion, ethylene would entirely supplant nitrous-oxide and probably ether. This danger can largely be eliminated by proper attention to the humidity in the operating room, by care in the handling of the apparatus and all electric fixtures, and by avoiding the use of the cautery, Bovie knife, roentgen ray, etc. However, it is not possible to eliminate the danger from static spark and it is for that reason that ethylene has not been more universally used.

Cyclopropane is a new gas anesthetic only recently introduced and at present being used by only a few anesthetists. The claims for this agent as a valuable addition to anesthesia are: Excellent relaxation, better than with any other gas anesthetic; very rapid induction with a quiet recovery period free from nausea and vomiting; lack of effect on body chemistry; does not depress either the heart or respiration and permits of a much larger admixture of oxygen (80 per cent oxygen and only 20 per cent cyclopropane). The fact that it is very explosive and expensive is at present interfering with its more widespread adoption.

Divinyl oxide is a quite new agent which has not, as yet, been used in a sufficient number of cases to allow of any conclusive decision as to its ultimate usefulness. Divinyl oxide is more volatile than ether (diethyloxi), does not possess as unpleasant an odor, is more rapid and powerful in its action, and has less effect on body chemistry. It may be either dropped on a mask or used on any gas machine. It, too, is inflammable and explosive and also quite expensive. Wesley Bourne has reported the use of divinyl oxide in 222 obstetric cases and of cyclopropane in 34 cases with most satisfactory results.

Trichlorethylene belongs to the group of chlorinated hydrocarbons of the fatty series, of which chloroform is the most well known. The suggestion that this drug might be useful to produce surgical anesthesia resulted from observation of its action when used as a relief measure in tic douloureux. Trichlorethylene may ultimately become an excellent substitute for ether or ethylene since it is neither explosive nor inflammable and possesses very little systemic effects. At this time it is being used only for inductions and short anesthetics.

Evipal (cyclural, evipan) is a recently introduced an-

esthetic of the barbituric sodium acid series and apparently has more definitely anesthetic properties than any of the other members of this group. Evipal is used intravenously to produce a complete but very brief anesthesia for any operation which does not require more than a few minutes for its performance. The induction is rapid and pleasant, followed usually by no unpleasant after-effects. This drug has been widely proclaimed as a safe means of producing anesthesia in minor operations or as an induction for other forms of anesthesia. The contraindications for its use are so definite that it will find but a limited field of usefulness. Patients suffering from hypotension, severe pulmonary infection, heart lesions (if severe), or wasting diseases should not be given evipal. No other barbiturate should be used as a synergist because of the excessive drop in blood pressure and decrease in respiratory excursions. The dose is small (2.5 to 5 c.c.) although, if desired, larger amounts may be used and a longer period of anesthesia may be obtained or the small dose may be repeated as soon as signs of recovery begin to appear.

In addition to the above agents for general anesthesia there have been within the past few years several drugs brought before the medical world which at first were considered to be possible general anesthetics but after 3 years' experience have finally been relegated to their status as the so-called "basal anesthetics." The various barbiturates are perhaps the most popular, being used orally, intra-muscularly, and in the case of nembutal, sodium amytal, evipal, and pernoston intravenously. Large doses of the barbiturates, no matter how administered, produce shallow respiration and a drop in blood pressure which can result in death, especially in the debilitated and those suffering from shock.

Tribromethanol (avertin), is given, per rectum, in varying milligram doses per kilogram of body weight according to the amount of basal anesthesia desired. Unconsciousness appears within a few moments and lasts 4 to 6 hours. Large doses will produce surgical anesthesia but this is not advised by the pharmaceutical firm producing this drug. The contraindications to its use are very definite and should never be ignored. Liver or rectal pathologic involvement, low blood pressure, severe respiratory infections and severe cachetic conditions must all be regarded as dangerous. Surgeons demanding avertin without due attention to specific contraindications are assuming a responsibility which must be theirs alone. Used simply as a basal anesthetic it has proved undoubtedly to be a useful aid in producing unconsciousness of the impending ordeal of surgery and of so synergising with the general anesthetic as to require a greatly lessened amount of the latter with, at the same time, excellent relaxation.

It is a fact that nursing care has been increased by the use of basal anesthesia. The necessity for close watching of the respiration, the use of carbon dioxide, and of taking the blood pressure requires the attention of both interns and nurses. Patients must never be left alone while under the influence of any of the basal anesthetics.

Inhalation anesthesia is still the most universally used method of giving anesthetics to-day. In thousands of surgeries semi-open mask ether is being constantly and successfully used. In others, gas or ethylene are the agents of choice and the method of their use depends upon the particular type of gas machine in use.

Intratracheal anesthesia, using both gas and ether, is becoming popular in many clinics, especially for chest

work and for operations requiring difficult position on the table.

The choice of anesthetic agents must be governed largely by the individual preference of the surgeon, but the method of administration may rest with the anesthesiologist.—*The Bulletin of the American Hospital Association*, July, 1935.

PUBLIC HEALTH

Acute Anterior Poliomyelitis.—The August-September number of the *Bulletin* of the Department of Public Health of the City of Philadelphia is devoted to acute anterior poliomyelitis. The Committee on Acute Anterior Poliomyelitis and Encephalitis of the Philadelphia Department of Public Health presents the article with the hope that it will be a helpful guide in making an early diagnosis and in the immediate care and after-treatment of acute anterior poliomyelitis should the disease become prevalent in Philadelphia.

A great proportion of those affected are in the age groups under 5 years and from 5 to 9 years. The male is attacked more frequently than the female. Poliomyelitis is more commonly found among the white race and usually begins during the summer months. Epidemics have been known to begin in the latter part of June and end promptly with the onset of the cold or fall months of the year.

The cause of acute anterior poliomyelitis is unknown. It is grouped with the diseases caused by a filtrable virus. The virus is supposed to be transmitted by individuals having mild and unrecognized types of the disease, by convalescent patients, and by healthy carriers. The latter are presumed to play a very great part in disseminating the disease.

The pathology of acute anterior poliomyelitis is found chiefly in the brain and spinal cord, although definite lesions have been described in the intervertebral ganglia and the peripheral nerves. From the clinical laboratory viewpoint only, certain examinations have been made which aid in making a diagnosis at that stage of the disease when a diagnosis is most difficult or impossible to make. The results of these examinations must be weighed very carefully. Unfortunately they are not in themselves diagnostic.

Spinal puncture should only be attempted by one who is wholly accustomed to perform the technic. Lumbar puncture should be done the day after the onset, as the fluid on the first day is usually negative. The cell count in acute anterior poliomyelitis in the majority of cases shows an increase in the mononuclear cells, averaging above 25 cells. Cases showing cellular counts of 12 or more should be looked upon with suspicion. A small number of cases may not show a cellular increase above normal. Rarely half of the cells counted may be of the polymorphonuclear type. Sugar and globulin are present—in some cases increased. The fluid is usually under pressure and clear.

Prompt reporting of suspicious cases to the Department of Public Health and a call for a diagnostician of the Department of Health will prove helpful to both contacts and patients. The preparalytic cases are most difficult to diagnose, and normal or contact or convalescent pooled serum is considered of value if administered at this early stage of infection. It is at this period only that immune serum may be of value.

Approximately 50 per cent of all cases reported in Philadelphia in 1932 were treated at the Philadelphia Hospital for Contagious Diseases. The fatality rate

in this group of patients was 7.89 per cent. We should strive, therefore, to have acute anterior poliomyelitis patients hospitalized as soon as possible.

The use of convalescent serum in the treatment of acute anterior poliomyelitis has gradually won disfavor. Many authorities have shown that it is of little value in the prevention or cure of paralysis. There are a few physicians who believe that the doses used heretofore have been inadequate and therefore advise the use of large doses—100 to 200 c.c. The route of administration is preferably intravenous. However, it may be given intramuscularly. It is not wise to give serum intraspinally. The vaccine of Park and Brodie and that of Kolmer have had too little trial to form an opinion or make a recommendation at this time.

For those who desire to give serums the following should be carefully considered. The question of the value of these serums is still undecided. To be of any value such serums should be given in the very earliest days of the infection and in doses of at least 100 c.c. in one treatment (warmed to body temperature). This dose should be divided intravenously and intramuscularly. Serums cannot be expected to be of value when the nerve cells of the cord or brain have been destroyed with resultant paralysis. When serums are not available, the use of whole blood (healthy donors) may be given directly from at least 2 donors to the patient, using a citrated syringe; 100 to 200 c.c. of whole blood should be used.

Patients suffering from respiratory paralysis should be placed in the Drinker Respirator as soon as possible.

At one time the neurologist was consulted for the correction of deformities, nerve transplantation, etc., but to-day the pediatricist and the orthopedic surgeon have attained such a high grade of knowledge and efficiency in this field that the nerve specialist is rarely consulted. The expert neurologist, he who has specialized in the functional field and is trained to psychic reactions, is, during the long convalescence, a valuable adjunct to the pediatricist and the orthopedist.

The quarantine period for this disease is 21 days except in the presence of an epidemic when the quarantine time may be extended for a longer period. Patients remaining at home are subject to the full quarantine period. When the patient is removed to the hospital the premises are placed under an observation quarantine for 14 days, the period of incubation. When the patient remains at home all adult members of the household who are food handlers or who handle clothing are required to move to another address where there are no children and remain from work for the incubation period of 14 days. When the patient is removed to a hospital, school attendants are excluded for the incubation period. Food handlers and clothing workers are also excluded. School contacts are excluded when the patient remains at home for the full period. However, if they move to another address where there are no school children or school attendants, they must remain out of school for a period of 14 days.

Where quarantine is not maintained, wage-earners may be compelled to move to another address.

Patients who are sent to the hospital may be discharged to their homes and isolated there after the temperature has been normal for one week, the balance of the quarantine period being maintained at their homes.

Quarantine on poliomyelitis is known as a modified quarantine in which certain members of the household are allowed by the medical inspector to come and go.

The house is placarded and no material may be removed from it unless permission is granted by the Department of Health.

Where death occurs the services in connection with the funeral are limited to the adult relatives of the deceased. The body cannot be taken into any public hall, church, or chapel.

All diagnosed and suspicious cases should be hospitalized because facilities are available for repeated lumbar punctures required for diagnosis and treatment.

All cases that are diagnosed as poliomyelitis are referred to the Division of Child Hygiene, which in turn refers them to the Emergency Aid Committee on Rehabilitation for follow-up observation on the after-treatment.

Morbidity in Pennsylvania in August, 1935

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	0	3	0	0
Allentown	1	1	1	0	15
Altoona	0	2	1	1	9
Ambridge	0	0	0	0	0
Arnold	1	0	0	0	0
Beaver Falls	0	0	2	0	0
Bellevue	0	0	0	0	0
Berwick	0	0	0	0	0
Bethlehem	2	0	0	0	3
Braddock	0	1	0	0	8
Bradford	0	1	1	0	3
Bristol	0	0	0	0	1
Butler	1	0	0	0	0
Canonsburg	0	0	0	0	0
Carbondale	0	0	0	0	0
Carlisle	7	0	0	0	6
Carnegie	0	0	0	0	1
Chambersburg	0	1	1	0	0
Charlertoi	0	0	0	0	2
Chester	0	1	0	0	3
Clairton	0	0	0	0	0
Coatesville	0	0	0	0	0
Columbia	0	0	0	0	0
Connellsville	0	0	1	0	1
Conshohocken	0	0	0	0	5
Coraopolis	0	1	0	0	0
Pickson City	0	0	0	0	0
Donora	0	0	0	0	0
Dormont	0	0	0	0	0
Du Bois	3	2	0	0	0
Dunmore	0	0	0	0	0
Duquesne	0	0	0	0	0
Easton	0	0	2	0	1
Ellwood City	0	0	1	0	1
Erie	0	6	2	0	9
Farrell	0	0	0	0	0
Franklin	0	0	3	0	0
Greensburg	0	0	0	0	0
Hanover	0	0	2	0	0
Harrisburg	0	0	2	2	1
Hazleton	1	0	0	0	0
Homestead	0	0	0	0	0
Jeannette	0	0	0	0	0
Johnstown	1	1	1	0	26
Kingston	0	0	1	0	7
Lancaster	1	1	1	1	1
Latrobe	0	0	0	0	7
Lebanon	0	0	0	0	0
Lewistown	0	0	0	0	0
McKees Rocks	1	0	0	0	0
McKeesport	3	0	0	0	0
Mahanoy City	0	0	0	0	0
Meadville	0	0	0	0	0
Monessen	0	0	0	0	0
Mount Carmel	0	0	0	0	0
Munhall	0	0	0	0	0
Nantioke	0	0	0	0	0
New Castle	0	1	1	0	0
New Kensington	0	1	0	2	0
Norristown	0	2	0	2	13
North Braddock	1	0	0	0	0
Oil City	0	0	1	0	7
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	7	12	39	3	125
Phoenixville	0	1	0	0	0
Pittsburgh	4	7	40	2	102
Pittston	0	0	0	0	0
Plymouth	0	0	0	0	0
Pottstown	0	1	3	0	5
Pottsville	0	0	0	0	0
Reading	0	6	5	1	3
Scranton	0	0	4	0	18
Shamokin	0	0	0	0	0
Sharon	0	0	0	0	0
Shenandoah	1	0	0	0	0
Steelton	0	0	0	0	8
Sunbury	0	1	1	0	2
Swissvale	0	0	0	0	0
Tamaqua	0	0	1	0	2
Taylor	2	0	0	0	0
Turtle Creek	0	0	1	0	0
Uniontown	0	0	0	0	0
Vandergrift	0	0	1	0	0
Warren	0	2	3	0	0
Washington	0	0	3	0	1
Waynesboro	0	2	0	0	0
West Chester	0	0	0	0	4
Wilkes-Barre	3	3	2	0	7
Wilkinsport	0	0	0	0	0
Williamsport	0	2	1	2	23
York	1	0	2	0	5
Townships					
Allegheny County:					
Harrison	0	0	1	0	0
Mt. Lebanon	0	0	0	0	0
Stowe	0	0	0	0	0
Delaware County:					
Haverford	0	1	1	0	2
Upper Darby	0	2	0	0	2
Luzerne County:					
Hanover	0	0	0	0	0
Plains	2	0	1	0	0
Montgomery County:					
Abington	0	2	0	0	9
Cheltenham	0	1	0	0	0
Lower Merion	0	0	7	0	1
Total Urban ..	43	65	143	16	449
Total Rural ..	63	61	136	39	307
Total State ..	106	126	279	55	756

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

THE general practitioner is often in doubt as to whether a given case of tuberculosis would benefit by surgery and, if so, what particular procedure to advise. Each case, of course, requires individual judgment, but it is only by studying the outcome of a large number of cases that a general appraisal of the several surgical procedures can be made. In a previous number of "Tuberculosis Abstracts" the results of pneumothorax, as evaluated by a committee which gathered data from all parts of the United States, were summarized. A somewhat similar study of thoracoplasty results was made by Carl A. Hedblom. Shortly after presenting his paper at the annual meeting of the National Tuberculosis Association in 1934 Dr. Hedblom died. His paper briefly abstracted below, which was published in the *American Review of Tuberculosis* of July, 1935, fittingly commemorates a life of generous and kindly service to many patients and invaluable contributions to medical science.

RESULTS OF SURGICAL TREATMENT

Surgical treatment of pulmonary tuberculosis includes all forms of mechanical collapse with the exception of that produced by pneumothorax therapy. It comprises extrapleural thoracoplasty, paralysis of the diaphragm, section of the scaleni muscles, pneumolysis with or without plombage, drainage of tuberculous cavities with secondary plastics, and various combinations of these methods including that with pneumothorax. Other forms of surgical treatment still in the experimental stage are not considered in this study.

In trying to evaluate results of surgical treatment for pulmonary tuberculosis a diversity of variable factors may vitiate the significance of comparative statistics; for example, none of the various surgical procedures can be said to be standardized with respect to their technical aspects, the indications for the different procedures vary greatly, and the time element is important. Nevertheless the statistics, compiled as in any other field of clinical medicine, furnish

a perspective and means of plotting the course of future trends.

The study is based on the author's experience with a series of 200 thoracoplasty cases and on 4535 from the literature. Statistical tables in the article support the author's summary, which is as follows:

Thoracoplasty

From one-quarter to nearly one-half the deaths following thoracoplasty within a period of 5 to 10 years occur within the first 8 weeks. The author's mortality in this period was 10.3 per cent; the combined mortality among 2810 cases was 10.5 per cent. The individual variations among the series were from 3 to 20 per cent. The most frequent cause of death in the author's experience was cardiac failure and pulmonary complications. In a combined group of 230 deaths, death was reported to have been due

to shock in 8 per cent, heart failure in 18 per cent, and pulmonary complications or extension of tuberculosis in 34 per cent. The mortality rate decreases progressively after the first few weeks. From one-half to two-thirds die during the first 6 months.

Among 3762 patients followed from one to 12 years after operation, 35.3 per cent were symptom- and bacillus-free and were able to work; 22.1 per cent were improved and able to do some work; 5.5 per cent were not improved or were made worse by the operation; 3.5 per cent were not traced; and 33.6 per cent were dead at the time of the report. A large proportion of the patients are rehabilitated to the extent that they are able to return to their former stations in life and to resume their former occupation or activities. Many women marry, and there is record of 22 who have borne children since their operation, usually against advice.

The variation in extent of partial thoracoplasty and the relatively limited number of any one type followed for one or more years make any estimate of enduring results from them inconclusive. Among 236 collected cases followed for 2 years or more, 87.5 per cent were living, and 12.5 per cent were dead. Of the living, 53.4 per cent were reported as clinically well; of the deaths, one-half occurred during the first 8 weeks after operation.

Pneumolysis and Plombage

Of 307 cases observed during several months to several years, 53.4 per cent were clinically well, 18.5 per cent were improved, and 44.3 per cent were dead. Of the deaths, 40 per cent occurred during the first 8 weeks after operation.

Phrenico-exaeresis as an Independent Procedure

This operation is performed for such a variety of indications and the chance of later recurrence of the disease following so limited a collapse is so considerable that prolonged observation of the patients in any one group will be necessary for a determination of late results. The results so far reported are conflicting, but a consider-

able number of enduring clinical cures are recorded.

A combination of methods has extended indications to include cases with bilateral lesions and has improved results.

Conclusions

The surgical treatment of pulmonary tuberculosis offers to properly selected patients not suitable for pneumothorax therapy the best if not the only prospect of a complete arrest of the disease and, when that cannot be achieved, a relief of symptoms and prolongation of life.

The proper selection of the patients, the methods, and the most opportune time for operation demands the closest collaboration of the phthisiotherapist and surgeon.

From one-quarter to one-half of the total deaths during the first 10 years following thoracoplasty occur during the first 8 weeks and death is due largely to shock, cardiac failure, and pulmonary complications, all in considerable measure preventable through preoperative preparation, through operation graded into stages according to the patient's condition, and watchful prolonged postoperative supervision. Such measures will extend indications for operation. Even though by so doing the total mortality is not reduced, more patients otherwise hopeless are given the chances it affords.

Deaths after the first 8 weeks are due largely to extension of the tuberculosis, in some measure preventable through primary adequate collapse, through secondary additional collapse or compression for recurrence, and through reasonable care of the health.

Adequate application of the method or combination of methods indicated, early in the disease before extensive destructive changes in the lung and before secondary visceral damage has occurred, will result in a minimal mortality, a maximal conservation of respiratory function, and the greatest possible measure of rehabilitation.

The Results of Surgical Treatment of Pulmonary Tuberculosis, Carl A. Hedblom, Am. Rev. of Tuberc., July, 1935.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

Minutes and Proceedings of the Eighty-fifth Annual Session, Harrisburg, Sept. 30 to Oct. 3, 1935

MINUTES OF THE HOUSE OF DELEGATES

Monday Afternoon, Sept. 30, 1935

The first meeting of the House of Delegates was called to order in the Farm Show Building, Harrisburg, Pa., on Monday, Sept. 30, 1935, at 3:30 p. m., by the president, Moses Behrend, Philadelphia.

DR. BEHREND: The eighty-fifth annual meeting of the House of Delegates will please come to order. Before we start proceedings, however, I wish to call upon the chairman of the Credentials Committee to ask whether a quorum is present or not.

J. NEWTON HUNSBERGER, Norristown: Yes, Mr. President, 87 accredited delegates are registered.

THE PRESIDENT: I will also request that any member who wishes to speak on any subject will rise and give his name and the county from which he comes. This is very important, for otherwise we cannot keep efficient records.

I will now ask for the presentation, correction, and adoption of the minutes of the Eighty-fourth Annual Session.

JOHN D. McLEAN, Philadelphia: I move that the minutes be adopted as printed in the November, 1934, issue of the PENNSYLVANIA MEDICAL JOURNAL.

The motion was seconded by John A. Farrell, West Chester.

SECRETARY DONALDSON: The one correction that has been called to my attention in the minutes is to the effect that the initials of Dr. McKee, who seconded the nomination of the president-elect last year, are T. C., and not T. N.

CURTIS C. MECHLING, Pittsburgh: I move that this correction be made and the minutes approved.

The motion was seconded by several and unanimously carried.

THE PRESIDENT: The next order of business will be the roll call.

SECRETARY DONALDSON: I suggest that we dispense with the roll call inasmuch as we have more than a quorum present.

JOHN A. FARRELL, West Chester: I move that we dispense with the roll call.

The motion was seconded by Frank A. Lorenzo, Punxsutawney, and unanimously carried.

THE PRESIDENT: One of my last duties as the president of the State Society is to address the House of Delegates on matters which were of vital concern to your officers as well as to the society during the past year. In retrospect the most significant fact that I wish to stress, and may I add, with pardonable pride, is the complete organization of our profession that has been manifested throughout the state during the past year. Through the assistance of the several county societies whose committees made "organization" their fetish, there is to-day a solidarity among our members which augurs well for the future. It was deemed of great importance to unite more closely the members of the allied professions—the physicians, the dentists, the pharmacists, the nursing profession, and the hospital associations of Pennsylvania, both state and local. In this effort the endeavor of Dr. C. L. Palmer and active members of other organizations was especially praiseworthy. Praiseworthy endeavors also marked the work of our Public Health Legislation Committee, under the chairmanship of Dr. Palmer, before and throughout the 1935 session of the legislature.

Any presidential year that is accompanied by a meeting of the legislature becomes an importantly active one, and the one just ended proved no exception. We are passing through a new era, and new conditions as they arise must be met with new remedies. Months before I assumed the functions of this office I interrogated in Philadelphia County outstanding men in the profession in order to ascertain their views concerning the employment of a layman to look after our interests in the legislature. The result was almost a unanimous approval of this procedure. In the several meetings of the Board of Trustees of the State Society that I attended, I impressed upon this body the necessity of such a course if our interests were to be safeguarded. The Board did not approve the proposition. However, I still think it important and necessary to have a representative to look after our interests during all future legislative sessions. It requires an astute legislator who is an attorney to originate, advocate, and oppose bills as we desire. Knowledge of legislative technic is just as important to the lawmaker as are the special technics to the surgeon, the internist, or the laboratory worker.

I need not detail before this body the various measures that were proposed, passed, and defeated by the legislature of 1935. These will be found in the PENNSYLVANIA MEDICAL JOURNAL. The most important to us were the bills for the socialization of medicine com-

prising those as introduced by Representatives L. M. Wilson and Al Tronzo. They were ably opposed by your officers and members of various committees. But let us not be over-confident, for this is not the end of this proposed form of legislation.

You are aware that President Roosevelt has signed the Federal Social Security Bill. It includes some features for child health under the Federal Department of Labor, a function which properly belongs to the U. S. Public Health Service. The health features of this bill are those concerned with maternal and infant care, assistance for crippled children, assistance for needy blind, vocational rehabilitation, and public health service. For each one of these activities the government appropriates a sum of money. In some instances the allotment is outright to the states, in others the state matches the federal contribution. The child welfare and public service appropriations need not be matched by the state, but maternal and child health appropriations must be matched 100 per cent, and that for crippled children must be matched 50 per cent of expenditures.

There was also introduced in the legislature a resolution by Mr. Tronzo, which was passed, giving the Governor the right to appoint a "committee of 9" to investigate all forms of existing sickness service. It behooves us to be alert and to interest ourselves in the personnel, and to acquaint the commission, if need be, with any measures inimical to the best health interests of the commonwealth. Nor need I remind you again of the threats of any form of sickness insurance, all of which lead to a mediocre form of medical service, destructive to research work and placing the physicians throughout the land under lay control. I am still absolutely opposed to all plans now existent for sickness insurance, health insurance, state medicine, or any other such procedure by whatever term it may be designated.

While it is impossible to review the 65 bills on health subjects or problems introduced in the 1935 House and Senate, the most important concerning the profession aside from that of socialized medicine, were the Chiropractic Bill, the Optometry Bill, and the Workmen's Compensation Bill. The first 2, embodying legislation that would have given these practitioners unusual privileges, were defeated. Had the Optometry Bill been passed, it would have given optometrists the right to treat any disease of the eye. The Chiropractic Bill was equally vicious. It would have prevented any licensed physician from examining the vertebrae, or making roentgen-ray plates of them. Many members of the House were neither cognizant of the grave underlying principles involved, nor of the injustice of such a measure to patients and physicians alike. The narrow margins by which these bills were defeated show the determination of these groups to gain their ends. That they were defeated at all was due solely to the indefatigable work of our volunteer representative, who kept me informed day and night of the proceedings.

The defeat of the Workmen's Compensation Bill was a great disappointment to me. Through political intrigue this bill was defeated during the last hours of the session; yet all does not seem lost, since most interested organizations, if one can believe them, did not oppose the medical provisions of the bill.

Closely allied to the socialized method of practicing medicine is Emergency Medical Relief, to which, as I stated in my presidential address, I am also opposed, considering it but a stepping stone to other forms of socialized medicine. I do not wish you to infer for one moment that in this statement I belittle the work of

our state and county advisory committees, nor that of the director of Emergency Medical Relief. They have been and still are performing excellent work in connection with a difficult task. Physicians' fees have been reduced because of lack of funds, but the arrangement of private physician-patient relationship has been maintained throughout, which is preferable to that of a few salaried physicians performing such work, the natural sequence of which would constitute an advanced inroad toward state medicine.

The Committee on Medical Economics, under the chairmanship of Dr. Francis F. Borzell, has done much work of an investigative nature. In addition, the members of numerous county society commissions have gathered an enormous amount of valuable data and information. Each community has its own problems. Naturally the larger counties in the state must adjust themselves to the conditions as they exist there, some being more advanced socially than others. This depends to a great extent on their relations with lay groups controlled by sociologists. Our State Society committee, however, is a fact-finding body only. It is their province, after they have collected such facts, to suggest to the State Society changes that they think advisable to improve the practice of medicine. It is essential that all such proposed changes adhere closely to the Ten Principles laid down by the American Medical Association.

In my presidential address I referred to a proposition that physicians should be paid for service to full-paid ward patients. In a survey made of the entire state it was found that 137 of the approved hospitals in the state permitted physicians to charge for services rendered to ward patients, who had paid hospital charges in full. About 20 refused this permission, most of these being in the Philadelphia area. However, since the matter has been brought to the attention of the boards of directors of the Philadelphia hospitals, several are allowing their medical staff to present a bill to this type of ward patient. We feel encouraged, therefore, and hope that every hospital in the state will soon cooperate in this just cause.

During the past year it became necessary to organize 2 new committees. I refer to the Committee on Physical Therapy and Commission on Maternal Welfare. The chairman of the Committee on Physical Therapy, Dr. Frank H. Krusen, has since been appointed to take charge of the division of physical therapy in the Mayo Clinic. During the short time that he was chairman he exhibited marked ability in the propagation of this work. The efficient chairman of the Commission on Maternal Welfare, Dr. James L. Taylor, is doing valiant work to bring home to all who practice obstetrics their tremendous responsibility in reducing the maternal death rate throughout the state.

The Commission on Cancer, under the chairmanship of Dr. George E. Pfahler, held successful scientific and largely attended public meetings at Meadville and Bethlehem, respectively. If it were possible it would be wise to hold 4 of these meetings each year in different parts of the state, so that the public and the profession may become increasingly "cancer-conscious," in the same manner that proved so highly successful during the tuberculosis crusade.

The dedication, last December, of the reconstructed home of The Medical Society of the State of Pennsylvania marked an epoch in our history. It contains offices, committee rooms, the Board of Trustees room, which will seat 100 persons, and a handsome library room, with a large vault for archives. We hope the

membership at large will take advantage of the mail package library service.

Recently a questionnaire was sent out by Dr. Donaldson as to the advisability of combining councilor district meetings. Personally I feel now that it would be a mistake to do so; the distance to be traveled will prove a hindrance to large attendance, as exemplified in the combined meeting of the eighth and ninth districts. Again, it would deprive the chairmen of certain councilor districts of a responsibility they ought to assume.

It is practically impossible to express personally my thanks to every member of the State Society, to the affiliated organizations of dentistry, pharmacy, and the nursing profession that were so helpful during my administration. I feel sure that without their loyal assistance I could not have carried on.

I must, however, take special cognizance of the untiring labors of our efficient secretary, Dr. Walter F. Donaldson. It has been a pleasure to work with him, his best efforts going constantly to the officers and to the society we all serve.

Nor can we praise too highly the magnificent work performed under the supervision of Dr. S. McC. Hamill, chairman of the Emergency Child Health Committee. It is our hope that this work will always remain under the supervision of the physicians. Although all physicians may not be in harmony with this activity, nor every county represented, anything pertaining to the betterment of child health is worthy of our leadership.

The graduate education courses, under the chairmanship of Dr. Donald Guthrie, have proven, as we anticipated, most successful ventures, and it is hoped that these classes will always prove stimulating and profitable to members who avail themselves of the instruction thus offered.

It is with regret that we note the retirement of 2 members of the Board of Trustees, Dr. Frederick J. Bishop and Dr. Arthur E. Crow, the first on account of the expiration of his term of service and the other because of pressing obligations. The board devotes much valuable time to the interim business of your State Society. I gladly pay tribute to the faithfulness and good judgment displayed in the execution of their duties. Men to be elected to fill these vacancies should be chosen with the greatest of care; they should be energetic men, versed and experienced in the activities of their county organizations, and they should be possessed of sound individual judgment.

Let me again call your attention to the fact that the medical profession must be prepared to counteract the influence of the various social foundations which are so heavily endowed with money. Within the past few months it has come to my notice that considerable pressure is being brought to bear upon the principals of the various high schools throughout the country by the Debaters Union in order that the student may discuss the problems of socialized medicine. This is an organization fostered by the Rosenwald and Pollak Foundations. A serious situation arises from the fact that it brings before the youth of this country a problem not suited to their immature judgment, a subject about which they know nothing. The American Medical Association and our own society are very much concerned and equally alert about this matter. As a matter of fact, much effort to sensitize, as well as to inform, all our county medical societies regarding all phases of this subject has been spent by our own State Society

Committee on Public Relations under the chairmanship of former president, William H. Maycr.

Were I asked as president to state the most important duty of this office I would unhesitatingly decide it to be attendance at all councilor district meetings held under the auspices of the State Society. At these meetings the president is able to discuss with members he would not otherwise meet organizational topics of the utmost importance.

I cannot urge too strongly that the younger members be encouraged to interest themselves in all such meetings in order that they may be ready to assume the duties when our present generation shall have passed. Duties there will be, make no mistake about it, for the victories won this year, I fear, are but temporary unless we continue to work for the solidarity of our society. Be watchful of the cultists who would, untrained and inexperienced, encroach on our domain of service; and, in addition, shoulder to shoulder fight those extraneous influences that are trying to undermine the ideals of our profession by means of any "political plan that will destroy the individualism of the general practitioner."

Finally, I want to say that I have enjoyed every minute of my responsibilities as your president. I did not consider them at all arduous, but rather a form of relaxation from the demands of medical practice.

THE PRESIDENT: I now wish to present something that has never before been presented in a meeting of the House of Delegates, and my mentor is our very efficient secretary.

Perhaps establishing a precedent, I respectfully suggest that we now pay tribute to the memory of those former members of our House of Delegates who have answered the last call since our 1934 session, which was held in the city of Wilkes-Barre.

Their names, with their years of service in the House of Delegates of The Medical Society of the State of Pennsylvania, are as follows:

G. Clyde Kneeder, Allegheny County, 1924 and 1925.
Ira G. Shoemaker, Berks County, 1917.
Thomas N. Millikin, Greene County, 1918.
Frank S. Boyer, Lehigh County, 1923 and 1934.
John A. Campbell, Lycoming County, 1922-1931 inclusive, 1933 and 1934.
Edgar M. Green, Northampton County, 1924.
Alexander N. Booth, Washington County, 1923, 1928, and 1930.

Our organization and our commonwealth have suffered a loss in the passing of these faithful members, and many of us have been united with wide circles of their personal friends in a deep sense of loss.

The House of Delegates arose and stood in silent tribute for one minute.

THE PRESIDENT: The President-elect, Dr. Colwell, has appointed the following reference committees to serve this year in the House of Delegates:

Committees of the 1935 House of Delegates

COMMITTEE ON CREDENTIALS

J. Newton Hunsberger, Norristown, *Chairman*.
T. Lamar Williams, Mt. Carmel.
Miriam Warner, Philadelphia.

REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND STANDING COMMITTEES

Cloy G. Brumbaugh, Huntingdon, *Chairman*.
Wilbur E. Turner, Montgomery.
C. Irvin Stiteler, Chester.

REFERENCE COMMITTEE ON SCIENTIFIC BUSINESS

George P. Müller, Philadelphia, *Chairman*.
 George W. Reese, Shamokin.
 Charles H. Henninger, Pittsburgh.

A telegram from Ward O. Wilson, Clearfield, states that he cannot serve on the latter committee because of the illness of his wife, and Dr. Colwell has appointed to serve in his place Charles H. Henninger, Pittsburgh.

REFERENCE COMMITTEE ON NEW BUSINESS

Frederick M. Jacob, Pittsburgh, *Chairman*.
 Edward Pardoe, Johnstown.
 Clarence R. Farmer, Lancaster.

COMMITTEE ON PLACE OF MEETING

Laurie D. Sargent, Washington, *Chairman*.
 Francis DeCaria, Bradford.
 James D. Lewis, Scranton.

THE PRESIDENT: I will now announce the disposition of the various published reports, and if the chairmen of any of the committees or any of the officers have anything to add to their reports as published in the September JOURNAL or in the handbook they will please make it known.

The reports of the Secretary, the Treasurer, the Chairman of the Board of Trustees, the individual councilors, the Committees on Public Health Legislation, Public Relations, Society Comity and Policy, Benevolence, Necrology, Archives, Committee to Confer with Various Private and Governmental Health Agencies, and Delegates to A. M. A. are referred to the Reference Committee on Reports of Officers and Standing Committees.

The reports of the Committees on Defense of Medical Research, Mental Hygiene, Physical Therapy, Pediatric Education, Postgraduate Education, Conservation of Vision, and Appendicitis Mortality, the reports of the Commissions on Maternal Welfare and Cancer, and the report of the delegate to the Pennsylvania Pharmaceutical Association are referred to the Reference Committee on Scientific Business.

The reports of the Committees on Telephone Directory Classifications, Workmen's Compensation Laws, and Medical Economics, the Medical Advisory Committee to the State Emergency Relief Board, and the Committee to Study and Report on Forms of Medical Practice in State-owned Schools and Colleges are referred to the Reference Committee on New Business.

Has the chairman of the Medical Economics Committee something to add at this time?

FRANCIS F. BORZELL, Philadelphia: We have found it necessary to make the following short supplemental report dealing with several subjects under consideration at our last committee meeting held in Philadelphia, Sept. 20, 1935:

SUPPLEMENTARY REPORT OF COMMITTEE ON MEDICAL ECONOMICS

To the President and House of Delegates:

Northampton County Survey: The Northampton County Medical Society referred to the Committee on Medical Economics a plan for a survey of the entire medical situation involving the indigent in that county, and a second proposal dealing with the demands for medical services arising from the first survey. The

Committee on Medical Economics approves the survey and approves in principle the plan of the second project as applied to Northampton County. The committee also, in connection with the Northampton County Survey, considered the so-called Northampton County Plan as referred to our committee by the 1934 House of Delegates. This plan was approved, and we recommend hearty commendation of Northampton County for its pioneer efforts in maintaining for the medical profession the control of things medical.

The proposed changes in Emergency Medical Relief, because of a change from SERB to WPA, brought up considerable discussion. With the WPA working under the Federal Compensation Act in a manner similar to the former handling of LWD employees in projects of the SERB and since the set-up under LWD included a medical referee, which arrangement proved to be workable and productive of the least friction and in keeping with the principles of organized medicine, it was suggested by the committee that the separate counties of the entire state be contacted with the recommendation to acquaint the local WPA administration immediately with the desire of organized medicine to continue this set-up under the guidance of a medical referee.

Respectfully submitted,

COMMITTEE ON MEDICAL ECONOMICS,
 F. F. Borzell, M.D., *Chairman*.

THE PRESIDENT: This supplemental report will be referred to the Reference Committee on New Business.

DR. BORZELL: I would like to call the attention of the House of Delegates to an innovation, and that is an exhibit on Medical Economics in booth 23. We suggest that each of you visit this booth some time during your stay, register, and give attention to the progress portrayed.

JOHN A. FARRELL, West Chester: Mr. President, I wish to make a further suggestion. The report of the Committee to Study and Report on Forms of Medical Practice in State-owned Schools and Colleges required a great deal of work and time. When I contacted our officers to find out how the work was to be financed I found nothing had been arranged for. We did not have time to get out the report, so we got the office secretary of our county society to do this work for us. We paid her \$25 and financed the work ourselves, 5 of our members donating \$5 each. I am not making a request, but if you see fit to honor it, we will be glad to take the money, and if any further work of the kind is necessary there should be some appropriate arrangement for taking care of the expense.

THE PRESIDENT: The report of the Medical Advisory Committee to SERB is referred to the Reference Committee on New Business. Has Dr. Laverty anything to add to his report?

GEORGE L. LAVERTY, Harrisburg: Yes, Mr. President, I have a supplemental comment and report to present at this time, as follows:

SUPPLEMENTARY REPORT OF MEDICAL ADVISORY COMMITTEE

To the President and House of Delegates:

Since the preparation of our published report Emergency Medical Relief has encountered developments of sufficient import to warrant further comment. Work relief under the administration of the State Emergency

Relief Board has been transferred to the Works Progress Administration. No provision has been made to provide medical care to the families employed, whose income will average about \$50 monthly.

With the closing of work relief projects the plan for treating compensable injuries under the county referee plan, with limited free choice of physician, has been discontinued. Conferences with officials of WPA have been held, but thus far no definite plan has been announced. WPA aims to employ about 60 per cent of the relief load by Nov. 1, 1935.

On Sept. 20 transient camps and shelters officially refused applications for admission. Shelters will be closed on Oct. 1 or as soon after as possible. Employables in shelters and camps will be offered work. Plans call for establishing large camps for segregation of the unemployables. Employables refusing work will become wards of the state or local communities.

Nutritional service has been discontinued except to individuals under the care of a physician during the effective period of a medical order.

All the activities of the State Emergency Relief Board are being gradually restricted. Medical relief is not excepted. The allocation of funds for September was \$150,000, about half the average amount spent during the spring and early summer months.

With Congress passing the Social Security Act our government enters further into the field of medical practice. Plans are being developed for the care of crippled children and for maternal and infant welfare to be administered by the United States Children's Bureau as well as plans which have to do with the general development of state and local public health work to be administered by the United States Public Health Service.

These latter activities shall be financed by matched state and federal funds. It is probable that our state legislature will be called into special session within the next few months for the purpose of appropriating its share of funds for this purpose.

The activities of your Medical Advisory Committee are being forced into fields beyond its original intent by these developments. An intimate liaison has been maintained with your Board of Trustees, with the Committees on Economics and Public Relations, and with your secretary. Resulting therefrom has been a plan for a comprehensive survey to investigate and determine the present facilities for medical care of all types in the densely populated counties of Pennsylvania, to analyze the availability, costs, and sources of such care, to determine the present needs and requirements for medical care in these areas, to analyze the results as a basis for constructive action by the state and county medical societies, and to analyze case histories of mental disease, occupational disease, and tuberculous patients in order to determine the cause, methods of prevention, availability, and costs of treatment.

This project has been officially sponsored by Dr. Edith MacBride-Dexter, Secretary of Health, and Dr. J. Evans Scheehle, Secretary of Welfare. Approximately \$300,000 of WPA funds has been requested for this survey which will require about one year. Attached hereto is the plan in detail. Its value, if completed, will depend largely on the qualifications of the directors and the coöperation of the individual physicians contacted. (The very extensive plan referred to may be found in the minutes of the Sept. 30 meeting of the Board of Trustees. A copy has also been mailed to

the officers and proper committee chairmen of all component county societies.)

Respectfully submitted,
G. L. LAVERTY, *Chairman*,
WILLIAM B. ODENATT,
HARRY T. PRICE,
CHARLES H. SMITH,
WILLIAM E. ROBERTSON,
WALTER F. DONALDSON, *Secretary*.

Sept. 30, 1935.

THE PRESIDENT: The next order of business is new business. Are there any resolutions to be presented at this time?

SETH A. BRUMM, Philadelphia: I ask this House of Delegates for acceptance of 3 resolutions for reference to the Committee on New Business:

RESOLUTION

Philadelphia, Pa.,
Sept. 28, 1935.

WHEREAS, The high mortality of acute appendicitis can be prevented by a prophylactic campaign directed against the administration of laxatives in the presence of abdominal pain and delay in hospitalization; and

WHEREAS, The Committee on Appendicitis Mortality appointed by the State Medical Society has laid the foundation for and is endeavoring to carry on this campaign; and

WHEREAS, A commission because of its permanency and prestige could better conduct such a campaign; therefore be it
Resolved, That a Commission on Appendicitis Mortality, composed of a representative from each councilor district in the state, be appointed to serve for a term of 3 years.

Respectfully submitted,
JOHN O. BOWER, *Chairman*,
COMMITTEE ON APPENDICITIS MORTALITY.

THE PRESIDENT: This resolution will be referred to the Reference Committee on Scientific Business.

RESOLUTION

Philadelphia, Pa.,
Sept. 13, 1935.

Resolved, That the Philadelphia County Medical Society call upon The Medical Society of the State of Pennsylvania to present through proper channels to the Pennsylvania State Legislature a request for the passage of the following law:

An act to provide for liens for medical and surgical treatment and hospital care, treatment and maintenance of persons injured in accidents in favor of persons licensed to practice medicine and surgery in the State of Pennsylvania and hospitals and other charitable institutions upon the rights of action, claims, or demands of such injured persons against other persons or corporations for damages on account of negligence causing injuries, and upon the proceeds of the settlement of any such claims or demands.

JAMES B. MASON, *Chairman*,
COMMITTEE ON HOSPITAL ECONOMICS, PHILADELPHIA
COUNTY MEDICAL SOCIETY.

P. S. The law should be modeled after the lien act of the State of New Jersey, of 1935, as this law contains no fee schedules, and has, I believe, been held constitutional by the courts. Dr. Palmer has a copy certified by the Secretary of State of New Jersey, which I obtained last spring. J. B. M.

THE PRESIDENT: This resolution will be referred to the Committee on Public Health Legislation.

RESOLUTION

Philadelphia, Pa.,
Sept. 13, 1935.

Resolved, The Committee on Hospital Economics is cognizant of a number of factors which work to the detriment of the medical profession and charitable institutions, whether these latter obtain their funds from taxes or private charity. There are cases on record where patients either willfully or unwittingly enter the charitable wards of our hospitals, and die leaving estates of varying size. A law should be drawn up and passed which would allow both the hospital and the doctor to render reasonable bills for professional services against these estates.

Further, apropos of the attached cases, I feel that the judge, who allowed the hospital expenses to be paid from the 2 estates—even though contract for paying the hospital bill had not been made between hospital and patient—and refused the physician the right to charge because an existing contract for services had not been made prior to operation, should be condemned by the medical profession through the State Medical Society. I further believe that there should be a legal definition of a ward charity patient as contrasted to a full-pay ward patient, and that to accept charity unlawfully should be a misdemeanor punishable by fine and the right of both the hospital and the physician to collect against the individual, also that the Pennsylvania State Medical Society should through

proper channels ask the Pennsylvania Hospital Association to support the medical profession in obtaining passage of this law.

JAMES B. MASON, *Chairman*,
COMMITTEE ON HOSPITAL ECONOMICS, PHILADELPHIA
COUNTY MEDICAL SOCIETY.

THE PRESIDENT: This resolution will be referred to the Committee on Medical Economics.

I may suggest that if the chairman of the Committee on Medical Economics will confer with the chairman of the Committee on Public Health Legislation it will be a great step forward in eliminating any questions as to where this resolution belongs. Are there any further resolutions?

J. FRED WAGNER, Bristol: I have a resolution from the Bucks County Society which I would like to present.

RESOLUTION

WHEREAS, Diphtheria is still a very prevalent disease in many districts of our commonwealth where toxoid immunization is not practiced; and

WHEREAS, The science of medicine has fully demonstrated the efficacy of the procedure of toxoid immunization in the prevention of this dreaded disease where used, the Bucks County Medical Society begs leave to present the following resolution:

Resolved, That the House of Delegates of The Medical Society of the State of Pennsylvania in regular session approve a plan favoring the compulsory immunization of all children of school age within this commonwealth against diphtheria similar to that now extant on our statute books against smallpox; and be it further

Resolved, That this society instruct its Committee on Public Health Legislation to present a bill at the next regular session of the legislature, in which is set forth the many advantages of this procedure to the populace, both as to the saving of the lives of many of our children and the relief from suffering of many more; as well as the prevention of economic loss and privation sustained by our citizens while in quarantine; and be it further

Resolved, That, for the reasons herein set forth, our Committee on Public Health Legislation urges its enactment into a law.

THE PRESIDENT: This resolution will be referred to the Committee on New Business.

FRANCIS F. BORZELL, Philadelphia, presented the following resolution, which was referred to the Committee on New Business:

RESOLUTION

WHEREAS, Voluntary health insurance is recognized in 2 distinct groups, namely, individual and group; and

WHEREAS, Certain factors involved in the rendering of services under group insurance plans tend to influence and modify the type and character of services rendered so that certain basic principles, such as patient-physician relationship and free choice of physician, are disturbed; and

WHEREAS, Tendencies toward unethical contract practices are potential in certain types of group insurance plans; and

WHEREAS, The American Medical Association has carefully studied some 200 plans upon which study were issued pronouncements embodied in the amended Special Report of the Bureau on Medical Economics, adopted unanimously by the House of Delegates of the American Medical Association at Atlantic City, June, 1935; and

WHEREAS, This comprehensive study showed that no plan yet in force or projected could be adopted as a universal plan nor was it possible to adopt a skeleton plan suitable for all communities; and

WHEREAS, The Medical Society of the State of Pennsylvania recognizes the necessity for organization solidarity and the maintenance of basic ethical principles throughout our profession; and

WHEREAS, Hasty adoption by local groups or counties of ill-advised plans, based on too limited studies and under the stress of emergency, may result in a serious violation of these basic principles with its attendant effects upon not only those immediately involved but also upon adjacent or associated communities or groups and the organized profession at large; and

WHEREAS, Organizational solidarity and the preservation of medical ethics is dependent upon the closest cooperative relationship between the component counties and the State Society; therefore be it

Resolved, That The Medical Society of the State of Pennsylvania, by action of the House of Delegates in convention assembled, approve the action of the House of Delegates of the American Medical Association at Atlantic City, June, 1935, in adopting the report of the Bureau of Medical Economics; and be it further

Resolved, That the component county societies of this State Society consider carefully the 10 cautionary points enumerated on page 25 of the above-mentioned report before any serious

consideration of plans for voluntary group insurance is attempted; and be it further

Resolved, That all proposed plans for local or county group health insurance be submitted to the State Society Committee on Medical Economics for study; and be it further

Resolved, That no such plans be adopted without the approval of the House of Delegates of this society.

T. LAMAR WILLIAMS, Mt. Carmel: The Schuylkill County Society has instructed their delegates to bring this matter to your attention. It may lose something of its intent through the meeting with Dr. Borzell's committee this afternoon, but we think the resolution still obtains.

RESOLUTION

The Schuylkill County Medical Society at its monthly meeting held in Schuylkill Haven, Sept. 10 last, unanimously passed the following resolutions:

Resolved, That our delegates to the 1935 House of Delegates of The Medical Society of the State of Pennsylvania present to that body the resolution unanimously adopted at the meeting held in Shenandoah, June 18 last, and forwarded to Dr. George L. Lavery, chairman, State Medical Advisory Committee, Harrisburg, Pa.

The Schuylkill County Medical Society respectfully urges that the House of Delegates of The Medical Society of the State of Pennsylvania adopt this resolution and that it become the official recommendation of your body to the State Emergency Relief Board.

The Schuylkill County Medical Society resolution as embodied in the letter to Dr. Lavery follows:

"The Schuylkill County Medical Society in session assembled this date in June:

"1. Hereby urges and petitions you, as chairman of the State Medical Advisory Committee, to set aside at least 3 per cent of federal relief funds for Emergency Medical Relief in this state, and

"2. Earnestly petitions and urges you for a ruling to the effect that, when the county chairman and his associates in each constituent county on emergency relief have passed on a given bill from any physician in that county, this bill shall be paid as and for the same amount as passed by the county chairman and his associates unless some extenuating circumstances have developed of which the county committee is ignorant."

Respectfully submitted,

ARTHUR B. FLEMING, *Secretary*.

THE PRESIDENT: This resolution will be referred to the Reference Committee on New Business.

FRED M. JACOB, Pittsburgh, presented the following resolution, which was referred to the Reference Committee on New Business:

RESOLUTION

WHEREAS, The Federal Social Security Act, passed by the Congress of the United States and signed by the President, Aug. 14, 1935, places the additional burden of administering or supervising the activities pertaining to maternal and child health service, public health extension service, and possibly the medical, surgical, and nursing care of crippled children on our State Department of Health; and

WHEREAS, The report of surveys made by reliable disinterested organizations in Allegheny County, Montgomery County, and Delaware County proves the inadequacy of our present system of public health activities; therefore be it

Resolved, By the House of Delegates of The Medical Society of the State of Pennsylvania in regular session in Harrisburg, Pa., this thirtieth day of September, 1935, that the Board of Trustees of this organization together with the Committee on Public Health Legislation formulate some legislative procedure to be introduced at the next regular session of the Pennsylvania State Legislature placing the trained professional employees of the Department of Health throughout this commonwealth in some form of civil service which will guarantee the stability of this department and to the people of this state the highest type of public health service it is possible to develop and maintain.

WILLIAM H. MAYER, Pittsburgh, presented the following resolution, which was referred to the Reference Committee on New Business:

RESOLUTION

WHEREAS, The Judicial Council of the American Medical Association has recommended to the House of Delegates of the A. M. A., at its 1935 session, that organizational machinery be established to permit of state and national disciplinary control in rare instances of individual members in county societies where such action is locally impracticable; therefore be it

Resolved, That this House of Delegates request of the Board of Trustees that they provide for a thorough study of the action of the 1936 House of Delegates of the A. M. A., and present at the next annual session of this House of Delegates such necessary changes in our by-laws as will carry out such policies as shall be recommended and outlined.

JOHN A. FARRELL, West Chester: There has been presented from our county society a resolution which

is printed on page 120 of the Handbook, which I should like to read.

RESOLUTION

WHEREAS, Many insurance companies operating throughout the state of Pennsylvania have selected certain physicians in each community to care for the medical treatment of compensation cases with which said companies may be concerned, and furthermore have instructed employers to send any injured employees to said specified physicians, and

WHEREAS, Certain physicians who are members of The Medical Society of the State of Pennsylvania are paid salaries in return for medical services rendered to injured employees by companies liable for said injuries, and

WHEREAS, The Medical Society of the State of Pennsylvania has been committed to the principle that any one sick or injured has the right to select his own physician, he it

Resolved, That the House of Delegates of The Medical Society of the State of Pennsylvania, now assembled, definitely and specifically define "contract practice" within the limits of "reasonable competition," and definitely state whether physicians employed by insurance companies in the capacity as outlined above are **guilty of violation of the Code of Ethics of The Medical Society of the State of Pennsylvania and the American Medical Association.**

I know that this is not debatable at this time, but I think Dr. Scattergood might like to make a few explanatory remarks.

JOSEPH SCATTERGOOD, JR., West Chester: I am not speaking in debate of this resolution, but feel that any committee that considers it should know what is in the minds of the members of the Chester County Committee.

THE PRESIDENT: I shall have to call you out of order, Dr. Scattergood, for this is not debatable at this time. I think it would be better for you to go before the committee to which the resolution was referred and state your contentions there.

Are there any further resolutions or reports?

FREDERICK S. BALDI, Philadelphia, presented the following report:

REPORT OF COMMITTEE ON USES OF HYPNOTIC DRUGS

The Dangerous Drug Act became an administration measure as a result of the resolution that was offered in this House of Delegates last year.

Credit for assistance in the passage of the act goes to the State Medical Society, through the tireless efforts of Chairman Palmer of the Committee on Public Health Legislation, and Mr. J. B. Pilchard of the Pennsylvania Pharmaceutical Association.

The splendid coöperation of the Secretary of Health, Dr. Edith MacBride-Dexter, must not be overlooked, for without her help the bill would have failed.

This committee recommends that all future medical legislation or proposed public health measures be first acted upon by the State Medical Society, whenever or wherever possible, for endorsement of such measures.

The successful enactment of the Dangerous Drug Act was, in our opinion, brought about by the endorsement of the State Medical Society.

It might be of interest to the members of this society to learn that the Honorable George H. Earle, Governor of Pennsylvania, presented the pen with which he signed the bill to Dr. John H. Remig, who sponsored the original resolution which became the Dangerous Drug Act, House Bill 2742.

And now, the least this society can do is to send a letter of appreciation to the Governor, Honorable George H. Earle, and to Dr. John H. Remig, who has labored for years for the passage of this act.

ROSS V. PATTERSON,
THOMAS G. SIMONTON,
FREDERICK S. BALDI, *Chairman.*

GEORGE C. YEAGER, Philadelphia, moved that this report be received and the recommendations complied with.

The motion was seconded by Curtis C. Mechling, Pittsburgh, and carried.

RICHARD J. BEHAN, Pittsburgh, presented the following resolution, which was referred to the Reference Committee on New Business:

RESOLUTION

WHEREAS, In the last few years the excessive speed of automobiles has resulted in a large number of fatal and maiming accidents, and according to the report of the Better Traffic Commission of the City of Pittsburgh, there were in 1934, in the United States, 36,000 deaths, 105,000 permanent disabilities, and 1,150,000 temporary disabilities, resulting from automobile accidents, and

WHEREAS, The estimates of the Better Traffic Commission of the City of Pittsburgh show that only a small percentage of these accidents were due to automobile mechanical defects, a large percentage being directly due to mental and physical defects of the operators of the wrecked cars; and

WHEREAS, After a study of the traffic problem and in conjunction with Mr. Frank Duggan, chairman of the Better Traffic Commission of the City of Pittsburgh, it was our conclusion that those physically incompetent should be restricted in their motorized activities, particularly if their mental and physical disability interferes with their ability to operate safely the car which they are driving; and

WHEREAS, Undoubtedly the cause of many of the accidents which are regarded as due to carelessness are in reality the result of some pathologic, mental, or physical imbalance; therefore be it

Resolved, That a committee be appointed by the president of The Medical Society of the State of Pennsylvania, which committee shall study the means whereby medical examination and certification of drivers of all motor cars shall be instituted, this committee to contact the Better Traffic Commission and other civic organizations in Pennsylvania whose duty it is to study traffic conditions and to institute measures for public safety; and that, in conjunction with such organizations, this committee shall formulate and introduce legislation in which is standardized the minimum mental and physical qualifications of those who are licensed to drive automotive vehicles.

GEORGE C. YEAGER, Philadelphia: In behalf of the Philadelphia County Medical Society I wish to state that we have extended an invitation to the American Medical Association to meet in Philadelphia in 1937. We are asking you to combine with us in expressing a desire that the A. M. A. meet in Philadelphia in 1937, so that they will feel welcome to meet there as guests of The Medical Society of the State of Pennsylvania and the Philadelphia County Medical Society.

WILLIAM E. PARKE, Philadelphia: I move that the House of Delegates of the 1935 session of The Medical Society of the State of Pennsylvania invite the A. M. A. to hold their annual meeting in Philadelphia in 1937.

The motion was seconded by William H. Mayer, Pittsburgh, and unanimously carried.

THE PRESIDENT: We will now proceed to the consideration of the proposed amendments on page 119 of the handbook.

EDGAR S. BUYERS, Norristown: You will note on page 119 that the first proposed amendment to the by-laws was offered by the Board of Trustees. This amendment was proposed at the May meeting of the board. At this morning's meeting the board unanimously decided to request permission of the House of Delegates to withdraw this proposed amendment:

Amend Section 6 of Chapter VIII to read as follows (proposed amendment in italics): Any physician living near a county line may hold his membership in the county most convenient for him to attend, on permission of the councilor of his district and the component society of the county in which he lives, but no physician shall at the same time hold membership in more than one component county medical society.

ELWOOD T. QUINN, Jenkintown: I move that this proposed amendment be withdrawn. The motion was seconded by J. Newton Hunsberger, Norristown, and carried.

THE PRESIDENT: On page 119 you will find the second proposed amendment to the by-laws referring to the new order of arrangement of the councilor dis-

tricts, and on the inside cover of the handbook you will find the present make-up of the councilor districts.

GEORGE C. YEAGER, Philadelphia: It might be well to explain to the delegates who are not acquainted with the reasons that these proposed changes are all due to geographical conditions. There is no dissatisfaction with the groups to which they belong.

JOHN D. McLEAN, Philadelphia: In the different counties where the changes are proposed, are the local societies in accord with the changes? If they are I suggest that the entire change be approved.

SECRETARY DONALDSON: I should recommend, Mr. President, that they be taken up district by district.

The proposed change in the second councilor district was put to a vote and approved.

THOMAS R. GAGION, Pittston: We of Luzerne County have a proposal to make which would create a new councilor district. Are we in order to present it at this time?

THE PRESIDENT: No, Dr. Gagon. That would involve widespread amendments and could not be considered at this time.

SETH A. BRUMM, Philadelphia: I rise to a point of order on this question.

THE PRESIDENT: If this is brought in as a resolution, I will accept it and refer it to a committee, but if it is presented as an amendment it cannot be considered at this time, for amendments must be presented 90 days in advance of our meeting.

JOHN A. FARRELL, West Chester: If he wishes to amend an amendment that has been properly published it would be in order at this time.

SECRETARY DONALDSON: Since this proposal contemplates the creation of an additional councilor district it will also bring about a change in the Constitution and the number of officers in the State Society, and it would seem that the president is right in his contention that the House of Delegates should have advance notice of such proposal.

SETH A. BRUMM, Philadelphia: I rise to a point of order. This gentleman is asking for an amendment to an amendment contingent to a certain set-up. If that brings about a hundred new officers it has nothing to do with the presentation of an amendment to an amendment.

THE PRESIDENT: All the various counties that would be affected by the published changes were contacted and there was no dissatisfaction expressed.

SETH A. BRUMM, Philadelphia: This is an amendment to an amendment that has been published 90 days in advance of our meeting. If this takes additional machinery it is up to the House of Delegates to decide, but the Constitution does not say that he is not in order in presenting his amendment to an amendment.

THE PRESIDENT: I will accept this as a resolution only, and it will be referred to the proper committee.

THOMAS R. GAGION, Pittston, then presented the following resolution:

RESOLUTION

The Luzerne County Medical Society offers the following resolution concerning the proposed amendment (changes in italics):

Chapter III, Section 1. The State of Pennsylvania shall be divided into 12 councilor districts, and each district shall be entitled to one councilor. The councilor districts shall be composed of the following counties:

First Councilor District: Philadelphia County.

Second Councilor District: Berks, Bucks, Chester, Delaware, Montgomery, and Schuylkill Counties. *Detach Schuylkill; add Lehigh.*

Third Councilor District: Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, and Wayne Counties. *Detach Carbon, Lehigh, and Luzerne; add Bradford and Susquehanna.*

Fourth Councilor District: Bradford, Columbia, Montour, Northumberland, Susquehanna, Snyder, Sullivan, and Wyoming Counties. *Detach Bradford, Sullivan, Susquehanna, and Wyoming; add Schuylkill.*

Fifth Councilor District: Adams, Cumberland, Dauphin, Franklin, Fulton, Lancaster, Lebanon, and York Counties. *Add Perry.*

Sixth Councilor District: Blair, Center, Clearfield, Huntingdon, Juniata, Mifflin, and Perry Counties. *Detach Perry; add Bedford.*

Seventh Councilor District: Cameron, Clinton, Elk, Potter, Tioga, Lycoming, and Union Counties.

Eighth Councilor District: Crawford, Erie, Forest, Mercer, McKean, and Warren Counties.

Ninth Councilor District: Armstrong, Butler, Clarion, Indiana, Jefferson, and Venango Counties.

Tenth Councilor District: Allegheny, Beaver, Lawrence, and Westmoreland Counties.

Eleventh Councilor District: Bedford, Cambria, Fayette, Greene, Somerset, and Washington Counties. *Detach Bedford.*

Twelfth Councilor District: Carbon, Luzerne, Sullivan, and Wyoming Counties.

THE PRESIDENT: This resolution will take the regular course and be referred to the Reference Committee on New Business.

WILLIAM H. MAYER, Pittsburgh: I move that this entire matter be referred to the Committee on New Business.

The motion was seconded by Seth A. Brumm.

JOHN A. FARRELL, West Chester: Do we have a committee on by-laws? An amendment to our by-laws has been duly presented, and an amendment to that amendment is now being presented and that takes precedence over everything. This is the legislative body of The Medical Society of the State of Pennsylvania. This resolution cannot take precedence over a committee on by-laws if there is one, but this is an amendment to an amendment that has already been presented and published.

Dr. Mayer's motion was put to a vote and unanimously carried.

THE PRESIDENT: The next order of business is fixing the time of the next meeting of the House of Delegates.

JOHN A. FARRELL, West Chester: I move that we adjourn to meet at a time to be designated by the chair at this time.

The motion was seconded and carried.

THE PRESIDENT: It seems advisable to have a special meeting of the House of Delegates, so the next meeting will be held at 4:15, Tuesday afternoon, in Room C in this building.

SECRETARY DONALDSON: I wish to urge all present to attend the opening General Meeting in this room tomorrow morning. The Governor of the State, among others, has been invited to address us, and all should make a special effort to be present.

Several of our standing committees have arranged special exhibits and we hope you will all make it a point to visit these and all other exhibits.

If a sufficient number of members prove to be interested in driving out to the U. S. Army School at Carlisle to witness a dress parade on Wednesday afternoon at 4:30, General DeLaney will be pleased to arrange it.

This question was put to a vote, and it was decided that such a trip would interfere too much with regular society business.

THE PRESIDENT: I will delegate our secretary to write a letter to General DeLaney on behalf of the society, thanking him for his kind invitation and expressing our regret at our inability to make the trip.

The House of Delegates adjourned at 5 p. m.

MOSES BEHREND, *President*,

WALTER F. DONALDSON, *Secretary*,

HENRY G. MUNSON, *Assistant Secretary*.

Tuesday Afternoon, Oct. 1, 1935

The special meeting of the House of Delegates was called to order in Room C, Farm Show Building, Harrisburg, on Tuesday, Oct. 1, 1935, at 4:20 p. m., by the president, Alexander H. Colwell, Pittsburgh.

THE PRESIDENT: If you will please come to order, we shall begin this special meeting of the House of Delegates. I shall first call on Dr. Hunsberger to make his report as chairman of the Committee on Credentials.

J. NEWTON HUNSBERGER, Norristown: Mr. President, there are approximately 120 delegates registered at this time. I move that John M. Quigley, Clearfield, who is not a delegate, be made an accredited delegate by your vote, as there is no representative here from Clearfield County.

The motion was seconded by Frank A. Lorenzo, Punxsutawney, and carried.

THE PRESIDENT: We shall consider the reports of our reference committees. First will be the report of the Reference Committee on Reports of Officers and Standing Committees, Dr. Brumbaugh, chairman.

CLOY G. BRUMBAUGH, Huntingdon, presented the following report, which was adopted section by section:

REPORT OF REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND STANDING COMMITTEES

Report of Secretary

This report shows a net gain of 213 in the membership during the past year after a loss of 185 by death, resignation, or removal from the state. It urges a concerted effort to bring every eligible practitioner in the state into membership in the county society within whose jurisdiction he lives. It further points out benefits which nonmembers are now receiving at the expense of the active members. These benefits are:

1. The development of improved public relations.
2. The defense of private forms of medical practice.
3. A hitherto thoughtlessly accepted protection against legislative attempts at limitation of our therapeutic practice.

The secretary points out a revival of teamwork between the A. M. A., the State Society, and the county societies. In furtherance of this teamwork he urges that free use be made of material published in the county society bulletins as well as in our own JOURNAL and that of the A. M. A. In still greater furtherance of this unity, enforcement of the Code of Ethics becomes more and more important. While this lies primarily with the county society unit, mechanisms are under discussion for additional enforcement by the state and national organizations in cases in which local forces are inadequate.

Report of Treasurer

This report merits careful reading by every member of the State Society, and indicates that in spite of ever-increasing demands our financial condition is yet sound. That the investments of the society are wisely made is

evidenced by the few securities held that are now in default of interest payment.

Report of Chairman of Board of Trustees

This report gives a detailed account of the action of the Board of Trustees at its several meetings. We note the proposed amendment of the by-laws relative to revising the present make-up of councilor districts, and we commend the invitation extended to the Secretary of Health and to the Secretary of Welfare to attend meetings of the Board of Trustees.

Reports of Individual Councilors

The reports of the several councilors indicate a commendable activity of all component societies. They also indicate that the councilors are alert to their duties and are functioning fully. As they present no questions requiring deliberative action, your Reference Committee adds its approval and moves their adoption as published.

Report of Committee on Public Health Legislation

The excellent work done by this committee with Dr. C. L. Palmer as chairman is well known to every member of this House. He has kept each member well informed, both through the mail and the JOURNAL, on the problems confronting the committee. They were at times handicapped by the well-meaning but ill-advised efforts of individuals or groups. Because of this fact they recommend for their successors that "after the committee appointments have been approved by the Board of Trustees, the members throughout the state should consult said committee or be guided by the committee's transmitted information, advice, requests, and decisions as to activity—or the wisdom of inactivity—before and during the legislative session."

Report of Committee on Public Relations

This committee, under the able guidance of Dr. William H. Mayer, worked at all times in coöperation with the Committee on Medical Economics and the Committee on Public Health Legislation. Its procedure was based on the 8 points of policy adopted by this House at the Wilkes-Barre session last year.

It has come to the attention of this committee that high schools have approved, as instituted by lay agencies, debates on health insurance and social insurance, and that teachers are generally in favor of socialization. The committee recommends that "it should be instructed to make every effort for the educational department of our state, and locally, to have the medical profession made articulate in the instruction of the younger people along sociologic lines."

This committee has advised continually a most temperate point of view relative to Emergency Medical Relief and has counseled against open public discussion on a financial basis. Its members believe that we should militantly protect approved forms of medical service to people of all classes, whether under emergency conditions or not. They recommend a continued policy of tolerant understanding and continuous fight for preservation of the physician-patient relationship with reasonable economic reward to the physician.

The committee recommends that this House of Delegates approve of active participation in Pennsylvania Health Day observance by component societies, and that such localized groups be encouraged so to do.

They recommend "that careful consideration be given to cause disciplinary control with prompt and definite action on the part of the county society." In support

of this recommendation they cite the mechanism suggested by the Judicial Council of the A. M. A., whereby the national and state societies would be empowered to exercise such control in county societies where the local society is unable or unwilling to proceed in individual cases.

Report of Committee to Confer with Private and Governmental Health Agencies

During the year this committee contacted the Pennsylvania State Nurses Association, the American Red Cross, the State Department of Health, the State Dental Association, and the component county medical societies. As a result of these contacts and prompted by the spirit of coöperation shown by the organizations contacted, they *recommend* that each county society "should keep in close contact with health boards and with them develop a personnel for routine sickness-prevention methods, or emergency sanitary or other therapeutic measures." They further recommend that each county society include in its roster of committees one to be known as the Committee to Confer with Private and Governmental Health Agencies, this committee to be comparable to the state committee and to function within county limits. Such a committee may be of invaluable service to the allied healing arts profession in the event of certain now proposed federal social legislation becoming a reality.

This committee reiterates a resolution of this House of Delegates of several years past which advised "each component county medical society to adopt a set of resolutions outlining the scope of free medical and surgical service its members may contribute to the various private and governmental health agencies, and requiring all such agencies expecting to furnish free medical and surgical service to submit their program, both as to method of providing such service and the personnel of the medical staff, to the respective county medical society for approval."

Report of Committee on Society Comity and Policy

This committee calls our attention to the action of the 1935 House of Delegates of the A. M. A. in amending the by-laws, in effect restricting membership in that organization to individuals who are members of component county societies of constituent state associations from which they hold membership. This is in conformity with action already taken by our own State Society.

Report of Committee on Medical Benevolence

This committee reports a total disbursement during the year of \$9,038.70 among 33 beneficiaries, an average of less than \$275 to each beneficiary, also that 10 new beneficiaries were added during the past year. Of this amount \$3005 represented contributions of the different woman's auxiliaries during the year, the immediate disbursement of these contributions being necessitated by the inadequacy of the income from the invested fund for this purpose. It is to be hoped that the disbursements from fund earnings and from the ever generous auxiliaries may be more generous during the coming year.

Report of Committee on Archives

Your Reference Committee seconds the plea of this committee that each county society which has not already done so should prepare and file with the librarian of our State Society a medical history of its own county.

Report of Committee on Necrology

This committee refers to those who have gone from among us and pays a collective tribute to which we all subscribe.

Report of Delegates to American Medical Association

Pennsylvania was represented by its full quota of 11 delegates, of whom 3 served on reference committees. This latter fact emphasizes the wisdom of our present policy of returning from year to year experienced men as delegates to the A. M. A.

Report of Editor

The editor expresses the hope that our members generally will become more JOURNAL-conscious and points out 21 different departments, each of which may be valuable to the reader. He emphasizes the importance of mentioning the JOURNAL in answering advertisements in order to insure due credit and the continued demand for advertising space, which is so essential in financing the official organ of our society.

The editor reminds us that since its inception the JOURNAL has accepted only advertising of ethical products, and that it is illegal for county society bulletins to do otherwise. The Board of Trustees has recommended that the several bulletins maintain the same standard for advertisements as the JOURNAL.

CLOY G. BRUMBAUGH, *Chairman*,
WILBUR E. TURNER,
C. IRVIN STITELER.

Dr. Brumbaugh moved the adoption of the report as a whole.

The motion was seconded by Wm. H. Mayer, Pittsburgh, and carried.

THE PRESIDENT: Secretary Donaldson has just called my attention to the fact that the reading of minutes was not called for. Do you desire to have the minutes of the meeting of the House of Delegates yesterday read at this time?

FRANK A. LORENZO, Punxsutawney, moved that the reading of the minutes be dispensed with. The motion was seconded by Thomas R. Currie, Philadelphia, and carried.

THE PRESIDENT: The next order of business is the reading of the report of the Reference Committee on Scientific Business, Dr. Müller, chairman.

GEORGE P. MÜLLER, Philadelphia, presented the following report, which was adopted section by section:

REPORT OF REFERENCE COMMITTEE ON SCIENTIFIC BUSINESS

This reference committee approves in toto the reports of the various committees and commissions which have been assigned to it, namely, those on

Cancer,
Mental Hygiene,
Defense of Medical Research,
Conservation of Vision,
Appendicitis Mortality,
Pediatric Education,
Maternal Welfare,
Physical Therapy,
Postgraduate Education,
Report of Delegate to Pharmaceutical Association.

The Cancer Commission is commended for its activity and this Reference Committee suggests that more than 2 regional meetings be held during the year. This

would help to relieve the situation which is developing, whereby the county medical societies are loaded with a fixed program each year. Besides the matter of diagnosis, emphasis should be laid on the fact that cancer can be cured.

This Reference Committee recommends that each county society become aware of the importance of cancer, mental hygiene, maternal welfare, appendicitis mortality, physical therapy, *etc.*, but does not believe they should be required to have yearly programs on these subjects.

In the matter of education of the lay public in maternal welfare the commission should consult with the county society. We especially commend the attention given the obstetric situation in hospitals.

This Reference Committee recommends that the Committee on Physical Therapy increase its activity and amplify the scope of its work. The control of this branch of therapeutics now is largely in the control of the cults and nonmedical persons.

This Reference Committee recommends the adoption of the resolution introduced by Dr. John O. Bower recommending the formation of a commission on appendicitis mortality composed of a representative from each councilor district to serve for a term of 3 years. This commission should be appointed by the president of the State Society and should be instructed to complete its campaign of education in the term of 3 years.

GEO. P. MÜLLER, *Chairman*,
CHARLES H. HENNINGER,
GEORGE W. REESE.

Dr. Müller moved the adoption of the report as a whole.

The motion was seconded by Leonard G. Redding, Scranton, and carried.

THE PRESIDENT: Inasmuch as the Reference Committee on Place of Meeting has not yet completed its work, we will now listen to the report of the Reference Committee on New Business, Dr. Jacob, chairman.

FREDERICK M. JACOB, Pittsburgh, presented the following report:

REPORT OF REFERENCE COMMITTEE ON NEW BUSINESS

Resolution Presented by the Schuylkill County Medical Society

Your Reference Committee recommends the adoption of this resolution and its reference to the proper authorities for recommendation of action.

The motion was seconded by Leonard G. Redding, Scranton, and unanimously carried.

Resolution Presented by the Allegheny County Medical Society

Concerning the resolution presented by the delegation from Allegheny County regarding civil service for Department of Health employees, your Reference Committee recommends the adoption of this resolution.

The motion was seconded by Walter S. Brenholtz, Williamsport, and carried.

Compulsory Diphtheria Immunization

Concerning the resolution presented by the Bucks County Medical Society regarding compulsory diphtheria immunization: In view of the earlier great antipathy to compulsory smallpox vaccination and in view of the fact that many of the county medical societies and departments of health have made such wonderful progress through educational campaigns in regard to im-

munization against diphtheria, your Reference Committee believes that action such as is recommended in this resolution would be a grave error at the present time. The tendency thus engendered to bring about dangerous delay in the immunization of many children of preschool age is also recognized. Hence, we do not recommend its adoption.

I move that this resolution be rejected.

The motion was seconded by J. Newton Hunsberger, Norristown, and carried.

Voluntary Health Insurance

Concerning the resolution presented by Dr. Borzell regarding voluntary health insurance, your Reference Committee believes this action to be for the good of the society and recommends its adoption, and I move that we accept this recommendation.

The motion was seconded by Seth A. Brumm, Philadelphia, and carried.

Report of Committee on Workmen's Compensation Laws

The report of the Committee on Workmen's Compensation Laws shows that we have, through careful and well-planned work, made some progress toward the badly needed goal of revision of Pennsylvania's Compensation Law. With all interested insurance companies save one in agreement with us in our position, with the administration heartily back of the revisions we recommended, it seems to your Reference Committee that we are in a better position than ever before to improve medical service to the injured workman and to provide adequate funds. Constructive suggestions from any of our members will always be welcomed by the committee. We move the adoption of this report.

The motion was seconded by John J. Brennan, Scranton, and carried.

Report of the Committee on Medical Economics

Concerning the report of the Committee on Medical Economics: Your Reference Committee on New Business, realizing the magnitude and importance of the work of this committee and the thoroughness with which they have thus far progressed, is loathe to make any criticism of this report. We should like to call attention, however, to a statement in paragraph 4 of the preamble of the resolution which has been forwarded to Federal Director of Relief, Mr. Harry M. Hopkins, wherein it is stated that the past course of medical relief "has resulted in the delivery of sickness service of reasonably high quality, fair to patient and physician and taxpayer alike." We believe many members of our State Society would not concur in the statement that physicians have always been treated fairly.

We move the adoption of this report as printed and of the supplementary report presented by Dr. Borzell.

The motion was seconded by Curtis C. Mechling, Pittsburgh, and carried.

FRANCIS F. BORZELL, Philadelphia: The resolution on voluntary health insurance just mentioned by Chairman Jacob was presented as an independent resolution and not as part of the report of the Committee on Medical Economics.

FREDERICK M. JACOB, Pittsburgh: Concerning the Economics Committee's supplementary report regarding Northampton County, your Reference Committee approves and I recommend its adoption.

The motion was seconded by Seth A. Brumm, Philadelphia, and carried.

Medical Examination for Automobile Drivers

Concerning the resolution regarding medical examination for automobile drivers presented by Dr. Richard J. Behan, your Reference Committee recommends that this resolution be referred to the Committee on Public Health Legislation with the approval of the House of Delegates.

HAMBLE C. EATON, Warren, moved that this recommendation be accepted. The motion was seconded by Leonard G. Redding, Scranton, and carried.

Report of Medical Advisory Committee to the State Emergency Relief Board

A careful review of the report of the Medical Advisory Committee to the State Emergency Relief Board reveals that the medical profession has proven its ability to extend reasonably adequate medical service to the victims of this emergency and has maintained the physician-patient relationship consistent with the ideals of medical practice. We feel that the reference to perfunctory medical service in rare instances is made because the intense scrutiny carried on requires of the physician extra caution in dealing with emergency relief cases. We look forward to necessary guidance from the Medical Advisory Committee in adjusting medical service in the case of projected enterprises under the recently announced WPA.

The remarks of His Excellency, the Governor of the State of Pennsylvania, at the opening General Meeting of this session, in which he said in effect that compensation to doctors for their tremendous contribution during this emergency had been a mere pittance, seems to epitomize the explanation for much of the misunderstanding which has existed. The economic limits have necessitated drastic reductions in medical invoices. The Governor of the State has given the real explanation. He has in the name of the people of the State of Pennsylvania thanked the medical profession for its tremendous contribution in what he says to be the worst emergency we have ever known. Your Reference Committee believes that the state and local advisory committees should be continued and that the thanks of The Medical Society of the State of Pennsylvania be extended to them for maintaining our professional position and doing the best that was economically possible under conditions.

Your Reference Committee suggests that the Medical Advisory Committee continue to be alert in these matters and that they urge the various county advisory committees to consult with them in all cases.

We move the adoption of this report and also the supplementary report.

The motion was seconded by William H. Mayer, Pittsburgh, and carried.

Proposed Amendments to By-laws

Concerning the proposed change in by-laws, chapter III, section 1, wherein it is proposed to rearrange several of the councilor districts your Reference Committee has received 2 protests: One from the Bedford County Medical Society, which, by resolution at a meeting held on Sept. 19, 1935, protested their removal from the Eleventh to the Sixth Councilor District; the other from the Luzerne County Medical Society, which stated that they were not aware of the plan to redistrict the state until the proposed amendments appeared in the June, 1935, issue of the JOURNAL. Therefore, their society was unable to discuss this matter until the September meeting. These delegates

protested the passage of the amendment in so far as it affects them. Your Reference Committee believes that the wishes of all component county societies should be given due consideration before the passage of such an important amendment. Hence, it recommends that the request of the Bedford County Medical Society be honored and the resolution of the Luzerne County Medical Society be referred to the Board of Trustees for consideration and appropriate action at a later date.

I move that this recommendation be concurred in. The motion was seconded by Thomas R. Currie, Philadelphia.

CLARENCE R. PHILLIPS, Harrisburg: Do I understand that the other proposed changes will be approved? Will the Perry County Medical Society be permitted to change?

THOMAS R. GAGION, Pittston: Our resolution thus referred to the Board of Trustees creating an additional councilor district will necessitate changes in the whole state practically, especially in the northeast corner, but it will not affect Bedford County or other sections.

FREDERICK M. JACOB, Pittsburgh: Bedford County is not very populous, and by acceding to their wishes we do not change the councilor districts particularly whereas the northeast sectional changes proposed are extensive.

WALTER S. BRENHOLTZ, Williamsport: Is it not a fact that the House of Delegates yesterday adopted the Second Councilor District changes? If this matter is to stand as it is for the next year you will have to rescind your action of yesterday concerning the Second Councilor District.

THE PRESIDENT: Dr. Jacob's motion refers the whole matter back to the Board of Trustees.

JOHN M. KEICHLINE, JR., Huntingdon: Is there a delegate from Perry County and from Bedford County present to explain why they do or do not approve the proposed changes?

NORMAN A. TIMMINS, Bedford: At our last meeting on Sept. 19, the Bedford County Medical Society passed a resolution objecting to being changed to the Sixth Councilor District for the reason that we feel it is more convenient for us as it is at present.

CLARENCE R. PHILLIPS, Harrisburg: The Perry County Medical Society takes the view that it is easier for them to attend councilor district meetings in the Fifth Councilor District than to go to the Sixth Councilor District meetings. In a special meeting at noon to-day representatives of this county society asked both Dr. Kech of their present councilor district and myself of the proposed new district to present this matter.

Secretary Donaldson read an extract from the minutes of the meeting held on Monday afternoon which referred to this question, emphasizing that one of the points raised by Dr. Brenholtz was supported by the minutes, in that the House voted to adopt the changes in the Second Councilor District.

JOHN A. FARRELL, West Chester: Let Dr. Jacob withdraw his motion that it be adopted, and then let Dr. Brenholtz make a motion to rescind our action of yesterday.

With the consent of the seconder Dr. Jacob withdrew his motion to adopt.

WALTER S. BRENHOLTZ, Williamsport: I move that the action taken relative to the changes in the Second Councilor District be rescinded.

The motion was seconded by Seth A. Brumm, Philadelphia, and unanimously carried.

FREDERICK M. JACOB, Pittsburgh, moved that the entire matter be referred back to the Board of Trustees. The motion was seconded by William H. Mayer, Pittsburgh, and carried.

Physicians Employed by Insurance Companies

In reference to the resolution of the Chester County Medical Society regarding physicians employed by insurance companies, we note from the report of the proceedings of the House of Delegates of the American Medical Association, Eighty-fifth Annual Session, Cleveland, 1934, page 46, under report of the Committee on Amendments to the Constitution and By-laws approved by the House of Delegates, that "contract practice *per se* is not unethical." They amplify this statement by saying, "Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary, or local results." The resolution states that The Medical Society of the State of Pennsylvania has been committed to the principle that any one sick or injured has a right to select his own physician.

It is the guiding principle of The Medical Society of the State of Pennsylvania that the sick and injured should have the right to select their own physician, but it is the law of the State of Pennsylvania that workmen injured in the course of their employment, in order to receive the full benefits of the Compensation Law, shall accept medical and surgical care offered them by their employer.

This provision in the Compensation Law in Pennsylvania is probably a wise one inasmuch as it usually affords the injured workman the best medical care available. We believe this resolution is too sweeping in its implications and hence do not recommend its adoption. I move that the recommendation of your committee be concurred in.

The motion was seconded by Frank A. Lorenzo, Punxsutawney.

JOHN A. FARRELL, West Chester: This thing of having contract practice defined for us and then trying to modify or change it is all wrong. I have in my hand a decision which is concrete and definite and very much to the point. It quotes very plainly from the Judicial Council of the A. M. A. (page 212 of the handbook) that "by the term 'contract practice' as applied to medicine is meant the carrying out of an agreement between a physician or group of physicians as principals or agents and a corporation, organization, or individual to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita." It is absolutely not within the province of our organization to change this principle of the Judicial Council of the A. M. A., which is the highest organization we have. Pennsylvania's Workmen's Compensation Law was introduced by the industrialists and the insurance companies. Now it is time for us to go on record supporting what the Judicial Council defines as contract practice.

I venture to say that the average age of the delegates here is at least 45 or more, but Chester County has a young delegate whom I should like to have take the floor to tell you why we from Chester County are supporting this resolution to-day.

JOSEPH SCATTERGOOD, JR., West Chester: I will state briefly what instigated this resolution. I think no one

will deny that there are certain insurance companies, and I could name them, that will come into a town seeking physicians to take care of their compensation work. There are different plans offered to the doctor. I do not know what the law is in Pennsylvania as to a code of ethics, but I do know what the code of ethics of our society is, and I do not see how we can practice under such conditions. We are now told that there is a possibility that the WPA will take care of compensation work. I do not know whether that will happen, but this is very important in handling any compensation work. All I am asking as a representative of my society is that this House of Delegates either change the code of ethics and say that it is all right for me to solicit compensation work regardless of the family doctor, or else we have to put such men in this society in a different relationship. The telephone company will come in and lift a patient and refer him to Philadelphia when the condition may be but a simple fracture that can be well treated where he is and that does not require the care of a specialist. This happens all the time. I want to know why one physician can take a patient away from me and refer him to another member of this society. I want to know whether I can enter into such contracts and practice that way. If it is ethical to do this, let us change our code of ethics.

JOHN A. FARRELL, West Chester: I move as a substitute motion that we adopt the resolution as offered in the House of Delegates.

This motion was not seconded.

WILLIAM H. MAYER, Pittsburgh: I am not arguing on the things spoken of by Drs. Scattergood and Farrell. The lifting of patients is pernicious and has always been very obnoxious to me. Nevertheless, the passing of such a resolution, hide-bound as it is, projects itself into many other things that are for the good of our patients. I have sat in the House of Delegates of the A. M. A. for some 17 years, and I have heard that body year after year attempt to define reasonable competition. If you attempt this you will run into the same things as they do. Dr. Farrell's quotation was lifted from its context. I advise you against an emotional response to this appeal. The many ramifications of the proposal projecting themselves as they will into other forms of benign contract practice will be something, if approved, which this House of Delegates may well live to regret. I do not think we should disapprove the Reference Committee's report. Action on such cases remains the basic responsibility of the local county society. It is supreme in such matters, and it does not otherwise become the business of this House of Delegates.

FREDERICK M. JACOB, Pittsburgh: In answer to Dr. Scattergood's remarks, the section he quoted from the report of the A. M. A. was only a small portion of the report and fails to express the conception as a whole. Even if this condition exists in Chester County, perhaps in other parts of the state the members are perfectly satisfied with existing conditions.

JOHN A. FARRELL, West Chester: If any one here has conditions that are satisfactory to him, he will vote against my resolution.

SECRETARY DONALDSON: I should like to say a few words, if I may, as a member of the Judicial Council of the A. M. A. The paragraph quoted by Dr. Farrell has been lifted from the report of the Council, but it appears in connection with several other paragraphs modifying somewhat the intent of the paragraph read.

I think many of you will agree with Dr. Mayer that this is a question loaded with possibilities deeply affecting many members of many of our component societies. May I make the suggestion that the whole question be referred to the Committee on Medical Economics?

LUTHER J. KING, Meadville: What has the Chester County Society done to correct its complaint?

JOHN A. FARRELL, West Chester: We have found that many members who benefit by present plans will not support us. We have tried everything we possibly could. We have written to those who lift our patients. Mr. President, I withdraw my substitute motion and move that the matter be referred back to the Committee on Medical Economics for their consideration.

The motion was seconded by William H. Mayer, Pittsburgh, and carried.

Report of Committee to Study and Report on Forms of Medical Practice in State-owned Schools and Colleges

The current report of the Committee to Study and Report on Forms of Medical Practice in State-owned Schools and Colleges has been carefully scrutinized. We wish to commend the committee for the detailed information which it presents, gathered, we realize, with the expenditure of much time and effort.

In the initial paragraph of this report we find that this committee has included state-aided schools and colleges, which we believe was not a part of the resolution creating this committee. We have reviewed a report made by a committee created for a similar purpose in 1933, which was properly chosen to report to the Board of Trustees, which body is, under the constitution of this society, empowered to sit as a judicial council in matters pertaining to ethical practice.

We believe that this report, which was rejected by the 1934 House of Delegates, was basically and in effect a finding of the Judicial Council of The Medical Society of the State of Pennsylvania, which, under the intent, purpose, and operation of the constitution and by-laws of the constituent societies of the American Medical Association, constitutes a lawful report as to ethical findings which may be appealed from only to the Judicial Council of the American Medical Association.

We note that the special committee created at the 1934 Session at Wilkes-Barre has referred to its effort to obtain from the Judicial Council of the American Medical Association a concrete, absolute definition of "contract practice" within the meaning of the term "reasonable competition," and it quotes verbatim that by the term contract practice as applied to medicine is meant "the carrying out of an agreement between a physician or group of physicians as principals or agents of a corporation, organization, or individual to furnish partial or full-time medical services for a group of individuals for a definite sum or a fixed rate per capita."

We note that the Judicial Council of the American Medical Association, as may well be expected, cannot determine in a national or a state-wide sense what constitutes competition.

We believe after examination of all the facts and factors included therein that they should be considered on the broader basis of what constitutes the most practical approach to efficient health service in the student life of our younger generations within the state-owned schools of this commonwealth.

We feel that a physician so employed who does not

regard the students as individual patients and who does not direct for each the best that modern scientific medicine may offer within practical and reasonable limitations is practicing contrary to the principles and purposes and policies of the organized medical profession.

We further feel that the question of ethical behavior on the part of physicians so practicing, who receive compensation from such institutions, should be determined on the basis of local conditions. We have thoroughly examined the by-laws of the federacy of constituent organizations which comprise the American Medical Association and cannot believe that either the state or national organization through properly constituted representatives sitting as judicial councils can make any ruling with regard to ethical medical practice in the institutions under consideration without first having the decision and action by the local county society as a basis of appeal.

It is the opinion of your Reference Committee, if it may advise the local county society, that any such form of practice meets the prime requisite only when it provides adequate health service. Second, the ethical behavior of the physician involved is subject to the consideration and discipline of his own county medical society.

We do not believe that this society should attempt to project itself into disputes with laymen in authority on the subjects of competition in medical practice. With these groups and where the physician is not under the jurisdiction of the local county society there can be but one consideration and that is of adequate modern health service.

On the other hand, we see no reason why a physician salaried by the state to direct the medical service to a student body should be required or even permitted to look after the health needs of salaried employees of this commonwealth in competition with independent physicians. Certainly such practice is unjust and unethical. Moreover, it is a menacing procedure as it tends to disseminate broadly the idea that the profession should be state-employed. It is, indeed, a dangerous example of state medicine to exhibit before the students who will soon be in a position to mold public opinion. It should be stopped.

Your Reference Committee, therefore, respectfully recommends that the members of this special committee be highly commended for their very exhaustive and painstaking survey and that its report be filed with the Committee on Medical Economics of our State Society.

It further recommends, under present conditions wherein there is no possibility under our organizational set-up for our State Society to effect any official disciplinary action in component county society affairs except in an advisory capacity, that the ethical points involved be referred to a committee to consider certain changes in our organizational mechanism to permit of national and state control of county society discipline in unusual instances, as recommended in the 1935 report of the Judicial Council of the American Medical Association, which will be acted upon by the 1936 House of Delegates of the A. M. A.

I move that this recommendation be concurred in.

The motion was seconded by Thomas R. Currie, Philadelphia.

JOHN A. FARRELL, West Chester: Since I have been a member of this House of Delegates I have come here year after year and used what little influence I had to try to do what I could for the rank and file of the profession in the state. I made a report from my com-

mittee, and I want to raise the point here—why does the Reference Committee on New Business have this particular report? Gentlemen, the milk in the cocoanut is this: Are the members of our societies going to practice medicine according to the ethical standards laid down by this organization, or are we by subterfuge going to do something else?

When Dr. I. D. Metzger, who is chairman of the State Board of Medical Education and Licensure, was consulted by Superintendent James N. Rule of the State Department of Public Instruction, the presidents of state teachers' colleges were called together. Then Dr. Metzger outlined the plan for the health service to which our report refers. We have presented here a thorough, absolutely positive examination of the facts regarding the service given, and I am here in your interests, not my own. Since this report was prepared I have been appointed on the board of directors of one of the state teachers' colleges. I hope we can get health service in that school as was outlined by Dr. Metzger in 1932.

After considerable discussion by Seth A. Brumm and Francis A. Faight, Philadelphia; Frederick M. Jacob and Wm. H. Mayer, Pittsburgh; James H. Corwin, Washington; and Wm. W. Richardson, Mercer, John A. Farrell offered as a substitute motion for that made by the chairman of the Reference Committee the following—that this House approve as its policy in relation to such service the plan for medical care as recommended by Dr. I. D. Metzger to the State Department of Public Instruction and referred to freely in the report of the committee. The motion was seconded by several and carried.

MEDICAL CARE IN STATE TEACHERS' COLLEGES

- A. Dangers under present conditions, whether without any medical supervision or under a nurse's care:
 1. *Epidemics*—a disease, being unrecognized in its early manifestations, may rapidly infect the entire school. (Examples: Diphtheria, scarlet fever, influenza, skin diseases, rhinitis (head colds), respiratory diseases, etc.)
 2. *Hygiene*—a scientific "watch-dog" should routinely check up on the sanitary conditions about the institution. (Examples: Plumbing, garbage, diet, disease-bearing employees, heating, and ventilation.)
 3. *Diseases*—Insidious onset of serious diseases may cause dangerous development before being recognized in students and other personnel. (Examples: Appendicitis, endocarditis, tuberculosis, typhoid fever, etc.)
 4. *Complications*—Minor injuries or simple ills may lead to serious consequences under imperfect treatment. (Examples: Wounds improperly dressed, nasal and other respiratory affections, menstrual disorders.)
 5. *Athletics*—Endeavors to match his or her associates in athletic achievement may seriously, if not fatally, affect the life of an ambitious student. (Examples: Organic heart disease, hernia, weakened but quiescent lungs, rachitic bones.)
- B. Duties of a physician employed for part-time or full-time service in a State Teachers' College:
 1. To be present each morning for an hour or more to hear the complaints of students or others, as elicited by teachers or by the nurse, and to advise care under the direction of the nurse.
 2. To supervise redressings or treatment by the nurse, day by day, of cases that refuse to consult any other physician of their choice.
 3. To make a survey of the physical condition of each student early in the year and outline special means of development through the athletic department. Also, to interdict harmful physical activities in particular cases. (The state should encourage the educational training of only such persons for teaching as can eventually endure the strain of the professional work.)
 4. To assure the health of the group against infections which convalescents might carry back by a careful check-up of the physical condition before being admitted to classes. This pertains especially to disease carriers which follow recovery from diphtheria, typhoid, scarlet fever, and diseases of childhood such as mumps, whooping cough, and measles.
 5. To insist on the correction of physical imperfections that are correctible in any student which will hamper study and later educational activities. (Examples: Enlarged and diseased adenoids and tonsils, decayed teeth, diseased sinuses, focal infection, eye refraction and fusion.)
6. To survey regularly the premises in order to detect any unhygienic conditions, bad plumbing, fire hazards, heat supply, ventilation, etc.
7. To inspect regularly the sanitary conditions relative to food supply, its preparation and service, and especially as to food handlers.
8. In any case of illness or threatened illness, to assume professional responsibility of the case until referred to another physician, and do so without making any specific, special charge for the same.
9. To give specific health talks from the professional viewpoint which would sensitize these prospective teachers to the health needs of pupils who later will come under their care. Health surveys on themselves will induce them to urge the same on others later on.
10. To confer with the committee on curricula and with individual students relative to the amount of work and to the correlation of courses in respect to fatigue. (Maintaining mental alertness by securing variety in program and by having it adequately interspersed with physical recreation.)
11. To outline correctional exercises to be followed individually or in class by the physical department. (Examples: Spinal deformities, foot-faults, inadequate respirations, equilibrium tests.)
12. To pass upon the physical qualifications of all applicants before acceptance as students and, generally, to advise the president and other administrative officers in respect to the activities of the institution in matters which pertain to the physical welfare of all at all times.

FREDERICK M. JACOB, Pittsburgh: Mr. President, I move that with this exception the report of the Reference Committee on New Business be adopted as a whole. The motion was seconded by Wm. H. Mayer, Pittsburgh, and carried.

THE PRESIDENT: As we have completed the business of this special meeting the House of Delegates will now adjourn to meet in this room at 9 o'clock to-morrow morning.

The House of Delegates adjourned at 6:35 p.m.

ALEXANDER H. COLWELL, *President*,

WALTER F. DONALDSON, *Secretary*,

HENRY G. MUNSON, *Assistant Secretary*.

Wednesday Morning, Oct. 2, 1935

The second regular meeting of the House of Delegates was called to order in Room B, Farm Show Building, Harrisburg, on Wednesday, Oct. 2, 1935, at 9:20 a.m., by the president, Alexander H. Colwell, Pittsburgh.

THE PRESIDENT: If the delegates will come to order the first order of business will be reading of the minutes of the special meeting of yesterday afternoon.

CURTIS C. MECHLING, Pittsburgh: I move that the reading of the minutes be dispensed with.

The motion was seconded by Francis A. Faight, Philadelphia, and carried.

THE PRESIDENT: The next order of business will be the official roll call by the secretary.

Secretary Donaldson called the roll and announced that 104 delegates were present at this time.

THE PRESIDENT: We have a quorum present and may proceed with the regular order of business. The first item is nominations for president-elect.

Norbert D. Gannon, Erie, nominated Maxwell Lick, Erie.

The nomination of Dr. Lick was seconded by John M. Keichline, Jr., Huntingdon; Frederick M. Jacob, Pittsburgh; Thomas R. Currie, Philadelphia; George P. Müller, Philadelphia; Leonard G. Reddings, Scranton; Frank A. Lorenzo, Punxsutawney; Elmer L. Dickey, Oil City; and Charles C. Ross, Clarion.

Francis J. Conahan, Bethlehem, nominated Paul Correll, Easton.

The nomination of Dr. Correll was seconded by Charles I. Shaffer, Ralphton; John Walter Barr Johnstown; and T. Lamar Williams, Mt. Carmel.

William H. Mayer, Pittsburgh, moved that the nominations for president-elect be closed.

The motion was seconded by Francis DeCaria, Bradford, and unanimously carried.

William E. Parke, Philadelphia, requested the privilege of substituting 2 members in the places of 2 delegates who were not present.

Thomas R. Currie, Philadelphia, moved that this be permitted.

The motion was seconded by Francis A. Faught, Philadelphia.

The motion was put to a vote but not receiving unanimous consent was declared lost.

THE PRESIDENT: The chair will announce the appointment of the following as tellers: Walter S. Brenholtz, Williamsport, chairman; Edward W. Beach, Philadelphia; John F. McCullough, Sharpsburg.

Secretary Donaldson announced that with the additional delegates who had arrived since the roll call there were 114 present.

THE PRESIDENT: Will any one in the House object to closing the polls at this time?

J. Newton Hunsberger, Norristown, moved that the polls be closed. The motion was seconded by Francis A. Faught, Philadelphia.

At this time 2 delegates from Bedford County arrived and received recognition, following which Dr. Hunsberger's motion was put to a vote and carried.

THE PRESIDENT: Our secretary informs me that we now have an accredited registration for this meeting of 116 delegates.

The tellers having spread, collected, and counted the ballots under the supervision of the secretary and the assistant secretary, Walter S. Brenholtz, Williamsport, reported that Maxwell Lick had received 66 votes and Paul Correll 48.

John M. Quigley, Clearfield, moved that the secretary be instructed to cast a unanimous ballot for Dr. Lick.

The motion was seconded by T. Lamar Williams, Mt. Carmel, and carried.

Secretary Donaldson reported the ballot cast, and President Colwell declared Dr. Lick duly elected.

The president appointed Norbert D. Gannon, Arthur G. Davis, and Clarence H. Lefever, Erie, to find Dr. Lick and conduct him to the chair.

MAXWELL LICK, Erie: I am quite embarrassed. I remember what happened to President Wilson when on one of his trips he stopped at Hannibal, Mo., and visited a statue of Mark Twain. He asked an old settler who was standing near by if he knew Tom Sawyer. The old fellow scratched his head, "No, I guess not." The president then asked, "Do you know Huckleberry Finn?" "Well, there's a family of Finns living down the road a piece, but I don't think his name is Huckleberry." "Well," said the President, "how about Puddin' Head Wilson?" "Oh, him—I voted for him!"

Really, gentlemen, I stand before you very humbly. I do not see why you would confer this great honor upon me. I shall try to be helpful without being brilliant; I hope I may be fair without being conceited; and I beg you as representatives of the society to give me the same support and assistance you have accorded my predecessors, for without that I would be utterly and hopelessly lost. I will appreciate that very much and I shall try to deserve the honor you have given me.

PRESIDENT COLWELL: The next order of business is the nomination and election of 4 vice-presidents. Since

there is no controversy before the House the chair feels at liberty to make a few remarks. You will recall hearing the remark that a few years ago the office of president consisted of making an address and presiding over the House of Delegates. As time has advanced things have changed markedly. There are 2 general functions of the president. The first is to be a liaison officer between the county societies and the State Society; the second, to be your representative before lay groups. In the past few years the latter has become a heavy and onerous duty. During my year as president-elect that was the chief thing which confronted me. It seems to me that some of this work should devolve upon the vice-presidents, and I beseech you to think carefully before you make your nominations.

Henry R. Douglas, Harrisburg, nominated Harvey F. Smith, Harrisburg, for first vice-president.

Frederick M. Jacob, Pittsburgh, nominated Frank A. Lorenzo, Punxsutawney, for second vice-president.

J. Newton Hunsberger, Norristown, nominated Walter Jacob Stein, Ardmore, for third vice-president.

Nathan Blumberg, Philadelphia, nominated Francis A. Faught, Philadelphia, for fourth vice-president.

Leonard G. Redding, Scranton, moved that the nominations be closed and that the secretary cast the unanimous ballot for these nominees.

The motion was seconded by Curtis C. Mechling, Pittsburgh, and unanimously carried.

Secretary Donaldson reported the ballot cast for the 4 respective candidates, and President Colwell declared these gentlemen duly elected.

THE PRESIDENT: We will now proceed with nominations for secretary.

Walter S. Brenholtz, Williamsport, nominated Walter F. Donaldson to succeed himself.

The nomination was seconded by Frederick M. Jacob, Pittsburgh, and Paul J. Pontius, Philadelphia.

William H. Mayer, Pittsburgh, moved that the nominations be closed and that the president cast a unanimous ballot for Walter F. Donaldson for secretary.

President Colwell declared the unanimous ballot cast and Dr. Donaldson duly elected to succeed himself.

SECRETARY DONALDSON: Members of the House of Delegates and fellow members of The Medical Society of the State of Pennsylvania: Inasmuch as I have opportunity every month of the year to speak to you through the columns of the JOURNAL of our Society I shall not take advantage of your generosity in asking me to speak at this time, and will do no more than express my deep gratitude and my endless pleasure in the work.

THE PRESIDENT: We will now accept nominations for assistant secretary.

Thomas R. Currie, Philadelphia, nominated Henry G. Munson, Philadelphia, to succeed himself.

The motion was seconded by Francis F. Borzell, Philadelphia, who moved that the nominations be closed and the secretary instructed to cast a unanimous ballot for Dr. Munson to succeed himself as assistant secretary. The motion was seconded by J. Newton Hunsberger, Norristown, and unanimously carried.

Secretary Donaldson reported the ballot cast and President Colwell declared Dr. Munson duly elected as assistant secretary.

THE PRESIDENT: We will now receive nominations for the office of treasurer.

John M. Quigley, Clearfield, nominated John B. Lowman, Johnstown, to succeed himself as treasurer.

The nomination was seconded by Charles I. Shaffer, Ralpton, who moved that the nominations be closed and the secretary instructed to cast a unanimous ballot for Dr. Lowman to succeed himself as treasurer.

The motion was seconded by Francis A. Faught, Philadelphia, and unanimously carried.

Secretary Donaldson reported the ballot cast and the president declared Dr. Lowman duly elected to succeed himself as treasurer.

THE PRESIDENT: The next order of business is the election of delegates, alternates-designate, and alternates-at-large to the American Medical Association.

SECRETARY DONALDSON: I have here the report of the Committee on Society Comity and Policy, among whose duties is the nomination of delegates to the American Medical Association. Other nominations may be made from the floor. The committee nominates the following:

Delegates: For 1936-1937, H. C. Frontz, Huntingdon; J. Newton Hunsberger, Norristown; J. Allen Jackson, Danville; Frank P. Lytle, Birdsboro; William H. Mayer, Pittsburgh; Charles G. Strickland, Erie; for 1936 only, Francis F. Borzell, Philadelphia.

THE PRESIDENT: These names have been placed in nomination by the Committee on Society Comity and Policy. What is your pleasure, gentlemen?

Frederick M. Jacob, Pittsburgh, moved that these nominees be elected.

The motion was seconded by Francis M. Quinn, Minersville, and unanimously carried.

Paul J. Pontius, Philadelphia, moved that the nominations for delegates be closed and the secretary cast a unanimous ballot.

The motion was seconded by Frank N. Emmert, Chambersburg, and carried.

Secretary Donaldson reported the ballot cast and the president declared these gentlemen duly elected.

THE PRESIDENT: We are now ready for nominations for alternates-designate; 11 are to be elected.

John D. McLean, Philadelphia, nominated Charles A. E. Codman, Philadelphia.

John M. Quigley, Clearfield, nominated Samuel J. Waterworth, Clearfield.

Leonard G. Redding, Scranton, nominated Herbert B. Gibby, Wilkes-Barre.

Wilbur W. Westfall, Somerset, nominated Charles I. Shaffer, Ralpton.

Frank A. Lorenzo, Punxsutawney, nominated Charles Falkowsky, Jr., Scranton.

Robert L. Schaeffer, Allentown, nominated J. Treichler Butz, Allentown.

Nathan Blumberg, Philadelphia, nominated W. Burrill Odenatt, Philadelphia.

Jay B. F. Wyant, Kittanning, nominated Curtis C. Mechling, Pittsburgh.

T. Lamar Williams, Mt. Carmel, nominated Arthur B. Fleming, Tamaqua.

C. Irvin Stiteler, Chester, nominated Cloy G. Brumbaugh, Huntingdon.

Henry R. Douglas, Harrisburg, nominated Clarence R. Phillips, Harrisburg.

Jay B. F. Wyant, Kittanning, moved that the nominations be closed and the secretary instructed to cast a unanimous ballot for these 11 nominees.

The motion was seconded by Thomas R. Currie, Philadelphia, and unanimously carried.

Secretary Donaldson reported the ballot cast and the president declared these gentlemen duly elected as alternates-designate to the American Medical Association.

THE PRESIDENT: We are now ready to receive nominations for alternates-at-large.

Norbert D. Gannon, Erie, nominated James D. Stark, Erie.

Seth A. Brumm, Philadelphia, nominated Frederick S. Baldi, Philadelphia.

Albert R. Feinberg, Wilkes-Barre, nominated Lewis T. Buckman, Wilkes-Barre.

Thomas R. Currie, Philadelphia, nominated Harry W. Goos, Philadelphia.

Arno R. Zack, Easton, nominated Donald C. Richards, Easton.

Willis Hess Lefever, Lancaster, nominated Clarence R. Farmer, Lancaster.

John A. Farrell, West Chester, nominated Joseph Scattergood, Jr., West Chester.

Thomas R. Gagon, Pittston, nominated Leonard G. Redding, Scranton.

Walter S. Brenholtz, Williamsport, nominated Wilbur E. Turner, Montgomery.

John D. McLean, Philadelphia, nominated Ruth Hartley Weaver, Philadelphia.

John D. McLean, Philadelphia, nominated Miriam Warner, Philadelphia.

Thomas R. Currie, Philadelphia, moved that the nominations be closed and the secretary instructed to cast a unanimous ballot for these nominees. The motion was seconded by Jay B. F. Wyant, Kittanning, and unanimously carried.

Secretary Donaldson reported the ballot cast and the president declared these candidates duly elected as alternates-at-large to the American Medical Association.

THE PRESIDENT: The next order of business is the election of trustees and councilors, the first from the Third Councilor District.

Leonard G. Redding, Scranton, nominated John J. Brennan, Scranton.

John A. Daugherty, Harrisburg, seconded the nomination and moved that nominations be closed and the secretary cast a unanimous ballot.

The motion was seconded by Frederick S. Baldi, Philadelphia, and unanimously carried.

Secretary Donaldson reported the ballot cast and the president declared Dr. Brennan duly elected to succeed Dr. Frederick J. Bishop as trustee and councilor for the Third Councilor District.

DR. DONALDSON: If I may beg your indulgence for a moment, Mr. President and members of this House, having served for 10 years with Dr. Bishop, I would like to remind you at this time that he has been a fine and faithful servitor, with always the best interests of our organization at heart.

President Colwell requested Dr. Bishop to rise for recognition by the House. (Applause.)

THE PRESIDENT: Because of the resignation of Arthur E. Crow, Uniontown, trustee for the Eleventh Councilor District, it becomes necessary to receive nominations for a successor to Dr. Crow.

James H. Corwin, Washington, nominated Laurie D. Sargent, Washington.

The nomination was seconded by Donald R. Jacobs, Waynesburg.

Harold M. Griffith, Johnstown, nominated Edward Pardoe, Johnstown.

The nomination was seconded by Charles I. Shaffer, Ralphton, and Norman A. Timmins, Bedford.

T. Lamar Williams, Mt. Carmel, moved that the nominations be closed.

The motion was seconded by J. Newton Hunsberger, Norristown, and carried.

When the ballots were counted Walter S. Brenholtz, Williamsport, announced that Laurrie D. Sargent had received 71 votes and Edward Pardoe 40.

John W. Barr, Johnstown, moved that the election be made unanimous.

The motion was seconded by Charles I. Shaffer, Ralphton, and carried.

President Colwell declared Laurrie D. Sargent duly elected as councilor for the Eleventh Councilor District for one year to succeed Arthur E. Crow.

THE PRESIDENT: We are now ready for nominations for councilor for the ninth district.

Frank A. Lorenzo, Punxsutawney, nominated Alexander H. Stewart, Indiana, to succeed himself as councilor for the Ninth Councilor District.

The nomination was seconded by Ralph M. Christie, Conoquenessing; Elmer L. Dickey, Oil City; Charles C. Ross, Clarion; and James G. Gemmell, Iselin.

Ford M. Summerville, Oil City, moved that the nominations be closed and the secretary cast a unanimous ballot for Dr. Stewart.

The motion was seconded by Thomas R. Currie, Philadelphia, and unanimously carried.

Secretary Donaldson reported the unanimous ballot cast and the president declared Dr. Stewart duly elected to succeed himself as councilor for the Ninth Councilor District.

THE PRESIDENT: The next order of business is the election of affiliate members.

SECRETARY DONALDSON: I will read the names of candidates who have been nominated for affiliate membership by various component societies. The list is as follows:

Allegheny County: Daniel Wadsworth Frye, James Donley McClure, Michael E. O'Brien, Andrew G. Sandblad, William Moore Woodward, George R. Wycoff.

Berks County: Levi F. Wagner.

Cumberland County: John W. Bowman.

Dauphin County: William John Middleton.

Lackawanna County: U. Grant Anderson, Peter C. Manley.

Lancaster County: Thaddeus S. Irwin.

Lehigh County: Nathaniel C. Peters.

Lycoming County: James S. Mosher, Abraham T. Welker.

Northampton County: Edwin D. Schnable, Walter J. Cathrall.

Philadelphia County: Mary Fisher, Charles S. Hearne, Edward Horgan, James P. Hutchinson, William McKeage, James Packard Mann, Charles M. Stiles.

Schuylkill County: Albert F. Bronson.

Yeuango County: Calvin M. Wilson.

Washington County: George B. Woods.

Westmoreland County: Kate Leatherman.

Curtis C. Mechling, Pittsburgh, moved that these candidates be elected and that the secretary cast a unanimous ballot.

The motion was seconded by John M. Quigley, Clearfield, and unanimously carried.

The secretary reported the ballot cast and the president declared these candidates duly elected.

THE PRESIDENT: The next order of business is the election of district censors as nominated by the component societies.

SECRETARY DONALDSON: Our by-laws require that each component society shall nominate one member to serve as district censor. I have in my hand a list of nominees from our 60 societies. What is your pleasure?

William H. Mayer, Pittsburgh, moved that these candidates be elected and that the secretary cast a unanimous ballot.

The motion was seconded by Francis A. Faught, Philadelphia, and unanimously carried.

The secretary reported the ballot cast and the president declared the following nominees duly elected:

DISTRICT CENSORS

FIRST COUNCILOR DISTRICT—Philadelphia County, W. Wayne Babcock, Philadelphia.

SECOND COUNCILOR DISTRICT—Berks County, Irvin H. Hartman, Reading; Bucks County, William G. Moyer, Quakertown; Chester County, U. Grant Gifford, Kennett Square; Delaware County, J. Clinton Starbuck, Media; Montgomery County, Howard W. Hassell, Bridgeport; Schuylkill County, James A. Lessig, Schuylkill Haven.

THIRD COUNCILOR DISTRICT—Carbon County, Wilson P. Long, Weatherly; Lackawanna County, J. Norman White, Scranton; Lehigh County, George F. Seiberling, Allentown; Luzerne County, Herbert B. Gibby, Wilkes-Barre; Monroe County, J. Anson Singer, E. Stroudsburg; Northampton County, W. Gilbert Tillman, Easton; Wayne-Pike County, Arno C. Voigt, Hawley.

FOURTH COUNCILOR DISTRICT—Bradford County, Howard C. Down, Towanda; Columbia County, J. Elmer Shuman, Bloomsburg; Montour County, Reid Nebinger, Danville; Northumberland County, Charles M. Thomas, Sunbury; Susquehanna County, Franklin A. Stiles, Great Bend; Wyoming County, William W. Lazarus, Tunkhannock.

FIFTH COUNCILOR DISTRICT—Adams County, Walter S. Mountain, Gettysburg; Cumberland County, Edward R. Plank, Carlisle; Dauphin County, David S. Funk, Harrisburg; Franklin County, Ambrose W. Thrush, Chambersburg; Lancaster County, Henry B. Davis, Lancaster; Lebanon County, W. Horace Means, Lebanon; York County, John H. Bennett, York.

SIXTH COUNCILOR DISTRICT—Blair County, Carey B. Bradin, Tyrone; Center County, Peter H. Dale, State College; Clearfield County, George B. Kirk, Kylertown; Huntingdon County, Cloy G. Brumbaugh, Huntingdon; Juniata County, Isaac G. Headings, McAlisterville; Mifflin County, Robert T. Barnett, Lewistown; Perry County, Lenus A. Carl, Newport.

SEVENTH COUNCILOR DISTRICT—Clinton County, Saylor J. McGhee, Lock Haven; Elk County, John C. McAllister, Ridgway; Lycoming County, Wesley F. Kunkle, Williamsport; Potter County, Elwin H. Ashcraft, Coudersport; Tioga County, Fannie U. Angelicola, Jackson Summit.

EIGHTH COUNCILOR DISTRICT—Crawford County, William H. Brennen, Meadville; Erie County, Orel N. Chaffee, Erie; McKean County, Homer A. Wilson,

Bradford; Mercer County, Patrick E. Biggins, Sharpsville; Warren County, Otis S. Brown, Warren.

NINTH COUNCILOR DISTRICT—Armstrong County, Thomas N. McKee, Kittanning; Butler County, Ralph W. Walker, Butler; Clarion County, Byron P. Walker, West Monterey; Indiana County, Medus M. Davis, Indiana; Jefferson County, William W. Carrier, Summer-ville; Venango County, Elmer L. Dickey, Oil City.

TENTH COUNCILOR DISTRICT—Allegheny County, David P. McCune, McKeesport; Beaver County, Harry B. Mead, New Brighton; Lawrence County, John Foster, New Castle; Westmoreland County, Thomas St. Clair, Latrobe.

ELEVENTH COUNCILOR DISTRICT—Bedford County, Walter F. Enfield, Bedford; Cambria County, John W. Barr, Johnstown; Fayette County, Robert H. Jeffrey, Uniontown; Greene County, Harry C. Scott, Waynesburg; Somerset County, Charles J. Hemminger, Somerset; Washington County, James H. Corwin, Washington.

THE PRESIDENT: I will now call upon the secretary to read recommendations from the Board of Trustees.

SECRETARY DONALDSON: The Board of Trustees recommends to the 1935 House of Delegates that the dues for 1936 and allotments therefrom be as follows: Annual dues, \$7.50; allotment to Medical Benevolence Fund, \$1.00; allotment to Medical Defense Fund, 10 cents.

WALTER S. BRENHOLTZ, Williamsport, moved the adoption of this recommendation.

JAY B. F. WYANT, Kittanning, seconded the motion and it was unanimously carried.

SECRETARY DONALDSON: I have the following communication from the Board of Trustees:

In order that the final expenditures in connection with the building improvements and the installation and maintenance of our library service be equitably adjusted, we ask approval of the House of Delegates of the following resolution:

RESOLUTION

WHEREAS, By action of the 1917 House of Delegates a fund was established, to be known as the Endowment Fund, for the support and development of The Medical Society of the State of Pennsylvania, and to advance the objects for which our society was organized, and

WHEREAS, One of the purposes of this society is to advance medical science and extend medical knowledge, and

WHEREAS, To this end our society has within the past year dedicated a new building with library space, in which is being established a mail package library service for the educational advantage of the members of the society, and

WHEREAS, The installation and the maintenance to date of this library cost \$2,982.93, and

WHEREAS, Its maintenance, it is estimated, will cost annually approximately \$1800; therefore be it

Resolved, That this House of Delegates authorize reimbursement of the treasury of the society from the accumulated annual earnings of the Endowment Fund to the extent of \$2,982.93, which amount has already been expended in equipment and in the administration of the library, and be it further

Resolved, That this House of Delegates also authorize the maintenance of the net operating expense of the package library service from the annual earnings of the Endowment Fund in an amount not to exceed \$1800 annually.

JOHN M. QUIGLEY, Clearfield, moved the adoption of this resolution.

The motion was seconded by Walter S. Brenholtz, Williamsport, and unanimously carried.

THE PRESIDENT: The next order of business is the report of our Reference Committee on Place of Meeting and I will ask Laurrie D. Sargent, chairman, for his report.

LAURRIE D. SARGENT, Washington: We have received an invitation to hold the next annual meeting in Pittsburgh and your committee recommends that this invitation be accepted. I so move, Mr. President.

The motion was seconded by Jay B. F. Wyant, Kittanning, and unanimously carried.

THE PRESIDENT: The next item is new and unfinished business. Has anyone anything he wishes to bring up at this time?

JOHN M. KEICHLIN, JR., Huntingdon: I would like to ask if the Tuesday night smoker might not be dispensed with at the annual meetings.

JOHN M. QUIGLEY, Clearfield, moved that in the future the host county society be relieved of the necessity of providing a smoker if it sees fit, the decision remaining optional with the host society.

The motion was seconded by Francis A. Faught, Philadelphia, put to a vote, and lost.

THE PRESIDENT: Is there any further business?

FREDERICK M. JACOB, Pittsburgh: I should like to ask that the Board of Trustees be authorized to draw up a resolution of appreciation for the sentiments expressed by the Governor in his address before our society yesterday morning. I so move, Mr. President.

The motion was seconded by Francis F. Borzell, Philadelphia, who amended the motion with the request that the resolution be properly engrossed and copies sent to the secretary of each component society. The motion was put to a vote and carried.

FREDERICK M. JACOB, Pittsburgh, moved that the communication from the Pennsylvania State Nurses' Association concerning nurses' hours of employment be referred to the Board of Trustees for action.

SECRETARY DONALDSON: I would suggest that it is proper to read the communication to the House of Delegates. It is as follows:

September 19, 1935.

DR. WALTER F. DONALDSON, Secy.,
Pittsburgh, Pa.

My Dear Dr. Donaldson:

Almost 2 years ago there was started in Pittsburgh a movement to reduce the working hours of the private duty nurse. Many factors entered into the promotion of this plan:

1. The great amount of fatigue attendant upon 12 hours of continuous duty.
2. The evident let-down at the end of the day, resulting inevitably in impairment in service to the patient.
3. The inability of private duty nurses to interest themselves in educational, social, and community activities because of lack of time.
4. The desire to spread the working hours and thus aid in decreasing unemployment.
5. To give patients the opportunity to secure less than 12 hours of service when so desired.
6. To raise the standard of nursing service to the patient without raising the cost of illness.

The initial introduction of the project was in January, 1934, and since then it has been adopted by nearly every hospital in western Pennsylvania and on towards the central part of the state.

It is now well past the experimental stage and from all reports is so satisfactory that it doubtless will be a permanent arrangement. The nurses have in many cases taken a considerable reduction in salary, but they have done it graciously and feel compensated in that they have more rest and leisure, and are thereby better prepared to resume their care of the patient.

There has been a decided decrease in unemployment among nurses, and a general tendency to make use of the extra time in a manner valuable to themselves and to the patients.

We are very anxious to have the plan spread over the state, but as yet have not been able to introduce it into certain sections. From our experience, the physician is a very important wedge in the project, and we know how generously the medical group lends its weight in all measures that tend to promote public health.

We are sure that a fair analysis of the salient features of 8-hour duty will convince every physician that the nurses, as a community-serving group, are entitled to the health protection and illness prevention which advanced medicine has developed and promoted for society as a whole, and certainly the long

hours of duty, with practically no recreation, are not in keeping with the modern trends in public health.

We are asking that your organization cooperate with us in developing in Pennsylvania a more healthy and contented group of nurses, and thereby raise the standard of nursing service to the patient. We believe that an endorsement of the 8-hour day for nurses by your group, and their interest and support of the movement in districts which they represent, will assist very materially in the work of this committee, and will encourage both hospitals and nurses to give the plan a fair trial to determine its value to all concerned.

In some places the doctors were practically the leaders in promoting the shorter day, and in all sections where it is in operation they supported it generously and loyally, for which cooperation the nurses are most grateful and appreciative.

Therefore, we repeat our request, that the Pennsylvania State Medical Association, in session at Harrisburg in September, 1935, endorse the plan of the Pennsylvania State Nurses' Association for an 8-hour day for private duty nurses in Pennsylvania.

Respectfully yours,
COMMITTEE TO STUDY THE 8-HOUR DAY,
PENNSYLVANIA STATE NURSES' ASSOCIATION.
SISTER M. LAURENTINE, R. N., *Chairman*.

SECRETARY DONALDSON: I returned this communication to the person who sent it to me with the suggestion that it might receive more recognition if some delegate from the Allegheny County Medical Society were to introduce it.

Dr. Jacob's motion that this communication be referred to the Board of Trustees for action was seconded by William W. Richardson, Mercer.

JOHN D. McLEAN, Philadelphia: Why should the Board of Trustees be requested to take this up if the House of Delegates cannot manage it?

THE PRESIDENT: The thought is that it can be studied better by a smaller group.

JOHN D. McLEAN, Philadelphia: I have this comment to make. I have had private duty nurses for a good many years and I have never had any who worked for 12 hours. If a nurse was on 12-hour duty she always took 2 hours off, or 3 hours or more. We doctors have to consider our patients, our families. Some of you may have families who can employ 2 or 3 nurses, but there is a decided percentage of my patients who cannot do this. I cannot understand why this should be put into effect. I think the nurses have plenty of time, just now at least. At the present moment in our hospital we have 12-hour duty, with 2 hours off, and I do not believe there is a hospital in the state where nurses work harder than they do with us. They do not work a full 12 hours. They are off 2 hours every afternoon and have three-quarters of an hour for dinner, so the 12-hour nurses do not work 12 hours.

THOMAS R. GAGION, Pittston: I think Dr. McLean's remarks are well put, as they always are, and I hope that if the Board of Trustees considers this matter they will consider the diversified conditions in the state. In our own hospital the nurses have gone on 12-hour service. It means only less work and more pay in the 8-hour system and I think the Board of Trustees should weigh the conditions in the state as a whole. I think the House should not reject the thing in a hurry.

FRANCIS F. FAUGHT, Philadelphia: If this goes to the Board of Trustees I feel that it would be desirable for the remarks that have been made on this floor to be transmitted to the board.

ROBERT G. BARCKLEY, Milford: I want to say that I endorse Dr. McLean's statement. I see that nurses on my cases get hours off, but not many of us have families who can afford to pay 2 or 3 nurses. We have to consider this question.

The motion of Dr. Jacob that this matter be referred to the Board of Trustees was put to a vote and unanimously carried.

THE PRESIDENT: Before I call on our secretary for announcements I wish to ask if there is any further business that may properly come before the House of Delegates.

ROSS V. PATTERSON, Philadelphia: Mr. President, I move that the greetings and felicitations of the society be sent to Dr. William M. Guilford, of Lebanon, who at the age of 103 years still maintains an active interest in local and state medical affairs.

The motion was seconded by Leonard G. Redding and unanimously carried.

ARTHUR C. MORGAN, Philadelphia: I cannot make a motion in the House, but I might suggest that it would not be amiss to extend felicitations to Dr. Patterson, who celebrates his natal day this week.

FRANK A. LORENZO, Punxsutawney, moved that this be done.

The motion was seconded by John F. McCullough, Pittsburgh, and unanimously carried.

FREDERICK M. JACOB, Pittsburgh, moved that the thanks and appreciation of the State Society be extended to the Dauphin County Society for their generous entertainment during the meeting.

The motion was seconded by J. Newton Hunsberger, Norristown, who suggested that a special mention be made of the courtesy cars that have been provided.

The motion was put to a vote and unanimously carried.

THE PRESIDENT: Secretary Donaldson has a few announcements he wishes to make.

Secretary Donaldson announced that there would be a meeting of the Board of Trustees at the Society Building, 230 State Street, at 1:30 p.m., and requested the newly elected members of the board to be present.

The secretary also urged all members to visit the headquarters building of the State Society.

THE PRESIDENT: If there is no further business, I will declare the House of Delegates adjourned, *sine die*.

The House of Delegates adjourned at 12 noon.

ALEXANDER H. COLWELL, *President*.

WALTER F. DONALDSON, *Secretary*,

HENRY G. MUNSON, *Assistant Secretary*.

MINUTES OF THE GENERAL MEETINGS

Tuesday, Oct. 1, 1935

The Eighty-Fifth Annual Session of The Medical Society of the State of Pennsylvania was held in Harrisburg, Sept. 30, Oct. 1, 2, 3, 1935. All meetings were held in the Farm Show Building.

The first General Meeting was called to order at 10:15 o'clock, Tuesday morning, October 1, by the President, Moses Behrend, Philadelphia.

INVOCATION

RT. REV. WYATT BROWN, D.D., LITT.D., LL.D., *Bishop of Harrisburg*: Almighty God, who sent Thy Son into the world to save the bodies and the souls of men, we pray Thee to bless Thy servants here in convention assembled; grant them wisdom to know what things they ought to say and do; give them strength faithfully to perform their duty, that they may go back to their homes better able to comfort the dying, to relieve the suffering, and to heal the sick. Grant that their deliberations may advance the science of medicine

and surgery in this our Commonwealth. Let Thy blessing rest upon them that they may not only do good but be good, for His sake who loved us and gave Himself for us, Jesus Christ our Lord. Amen.

THE PRESIDENT: I will ask you to rise while Dr. Barkley reads the report of the Necrology Committee, and to stand in silent tribute for a moment after he has finished reading the report.

REPORT OF COMMITTEE ON NECROLOGY

Your Committee on Necrology announces with deep sorrow that during the past year 145 members of our society have been taken by death. This represents a great loss to many families and communities. These physicians, wherever their lots were cast, and whether old or young in experience and years, had carried on with honor and repute the best tradition of our profession.

Their names have been duly recorded in the PENNSYLVANIA MEDICAL JOURNAL, month by month, and in the annual *Roster* of our society and therefore will not be repeated in this report.

To venerate their memory is our privilege and our duty, and we may say with the wise man of old: "These men were honorable in their generation and the glory of their times."

Your committee desires to thank the secretaries of the component societies who have promptly sent in the names of their deceased members to the office of the secretary of the State Society, and urge upon all of them continuance of this important duty.

Respectfully submitted,

ROBERT G. BARKLEY, *Chairman*,
WALTER F. DONALDSON,
SPENCER M. FREE,
EDWARD R. GARDNER,
CHARLES F. LONG.

THE PRESIDENT: The Governor said last night that he might be a little late. When he arrives, we shall hear his address of welcome. In the meantime we shall have an address of welcome by Henry R. Douglas, president of the Dauphin County Medical Society.

ADDRESS OF WELCOME

HENRY R. DOUGLAS, *president, Dauphin County Medical Society*: Mr. President, Friends, Members of The Medical Society of the State of Pennsylvania: The Dauphin County Medical Society is highly honored in being selected as host to this important body of physicians meeting here in the Eighty-Fifth Annual Session of The Medical Society of the State of Pennsylvania—the medical society of this state, rich in the history of medical education and progress in this country.

Since you last met here, just 10 years ago, not only have the meetings of this society grown in importance and attendance, but our facilities for entertaining you have grown likewise. By virtue of the humble and retiring nature of the sheep and cattle on a thousand hills of Pennsylvania, which prompts them to yield their place, we are able to provide for your use these ample facilities for the varied needs and growing activities of the annual meeting of this society.

This is a natural meeting place, where streams and valleys with their railways and highways break through mountain ranges and over hills and lowlands to converge at this central seat of government, where more and more the interests and activities of this society are centered.

If you find our accommodations to your liking, we would be glad to welcome you again before another 10 years, or as often as you desire and our big sister societies at the extreme poles of the state are willing to let you come.

This is your city. It is here that you have set up your headquarters in a beautiful building gracing the environs of Capitol Park. During legislative sessions and also in the interim we see much of your officers, your Board of Trustees, and members of various committees not only attending meetings and conferences having to do with health legislation, but gathering and disseminating information and transacting other business in connection with the activities of the society.

It is here that your society is to be seen in action the year round. We who are here can see and can attest to you the fact that holding responsible office in this society is not an honor to be borne lightly; it demands time and sacrifice of men of capacity willing to serve their society on its various boards and committees and in administrative offices when vision and judgment are so essential in directing its affairs. It is gratifying to observe the noble qualities that men in our profession have exhibited in their coöperation with others in seeking the best courses to pursue for the advancement of medical science and the administration of its benefits to individuals in need and to the body politic.

When we shall have passed this period of economic adjustment, organized medicine can then direct its attention more fully to the advancement of medical science through teaching in medical schools, group clinic conferences in hospitals, and extension of scientific knowledge through graduate programs in county societies. Perhaps in the future more emphasis will be given to these fundamental subjects in our medical education.

An announcement of the recent appointment of physiologist Dr. Herbert Spencer Gasser to succeed pathologist Dr. Simon Flexner as director of the Rockefeller Institute for Medical Research was accompanied by the observation that medical students learn a great deal about diseased cells, tissues, and organs, and comparatively little about how the human body actually works. The announcement continues to state that while, under the care of Dr. Welch, who died last year, and Dr. Flexner, who retires this autumn, pathology has dominated medical research, the appointment of Dr. Gasser, professor of physiology at Cornell Medical School, as director, may result in placing emphasis on physiology in research at the Rockefeller Institute, which in turn would influence all medical schools of the United States and mark a major turning point in the teaching of medicine in this country.

An indication of increasing interest in fundamental subjects is their more frequent appearance on society programs. The Section on Physiology and Pathology at the American Medical Association meeting in Atlantic City was crowded to hear a symposium on the anatomy, physiology, and pathology of the autonomic nervous system.

The possessors of a heritage of medical knowledge, based on intensive study of its basic sciences and pursued as a vocation to be held in trust for service to humanity, need have no apprehension of encroachment or restriction by those who would propose outside control and mediocre medical service in an attempt to exploit a valuable resource of the people.

We welcome you here because of the benefit you will derive from the comprehensive program provided by

the various sections, the general meetings, and the scientific exhibits.

We welcome you as our guests and hope that you will enjoy the provisions made for your entertainment. Our local committees on arrangements have been diligent in their efforts to arrange for your comfort and convenience, and will be glad to know of any way in which they can add to the pleasure of your visit.

We welcome you here because of the pleasure we will share with you in the renewal of acquaintances and old friendships. What is more to be enjoyed than the intimate association of men of like minds and common interest in a noble enterprise, gathered together for exchange of knowledge and experience in their chosen vocation? We hope your acquaintance may be increased and your friendships made richer by your meeting here.

We take great satisfaction and pride in the accomplishments of this collective body of physicians, whose presence in our community recalls to all the fact that you are the custodians of the health and well-being of the people whom you personally serve and a vital asset to the state and nation.

Your presence here and the account of your discussions and deliberations will arrest the attention of the people of our community to the quality of medical service available for their personal use, and to the valuable public service to the community and the state which you faithfully perform at all times, and more particularly now in the extension of medical aid, under provisions of this society, to those in need during times of economic stress.

At the public meeting on Wednesday night, in the beautiful and spacious Forum of the Education Building, all the people of the community will have the opportunity to hear the marvelous story of medicine's past, its vital place in the life of to-day, and the hopes and aims of its guardians for to-morrow.

THE PRESIDENT: Thank you, President Douglas. It now gives me great pleasure to greet the Honorable George H. Earle and Mrs. Earle. The presence of the lovely first lady of our Commonwealth on the platform this morning is certainly welcome and is deeply appreciated. Before I introduce the next speaker I wish to state how comforting it is to realize that in the state's highest office there is a man entirely in sympathy with the highest aims of the medical profession of this state, a man who is aware of the clamoring of the cultists and social reformers, but who has wisely refused to be stampeded by them to the support of any ill-advised health proposals. I now present His Excellency, the Governor of the State of Pennsylvania.

ADDRESS OF WELCOME

HON. GEORGE H. EARLE, *Governor of Pennsylvania*: Mr. Chairman, Ladies and Gentlemen of the Medical Profession of Pennsylvania: There is no class of professional men and women that has served more unselfishly during the depression of the last few years than our doctors. They have given their services unhesitatingly to our economic victims without hope of any other reward than the satisfaction that comes of helping a fellow human being in distress. They have upheld the high traditions of their profession by placing public service first and personal reward second.

As Governor of the Commonwealth, I think I may speak for all our people when I express my own appreciation of the noble work carried on by the medical profession through the recent economic depression, which is now practically at an end.

I realize, as every other thinking citizen does, that the personal sacrifices made by the profession have been very real. In many cases our doctors could ill afford to make those sacrifices, but they made them uncomplainingly.

Without the whole-hearted coöperation of these members of the profession who gave their services free or for the slight payments our relief authorities were able to provide—payments which were hardly more than tokens of appreciation and partial contributions toward the doctor's expenses—many of our citizens could not have survived the depression.

All of you are gathered here to meet with your associates, to compare notes as to the advances of the past year, and to chart a course for the year to come. I hope that your stay will be pleasant, that you will profit by your technical discussions and enjoy the companionship that meetings of this nature inevitably bring, and that your profession, together with other professions, will share in full measure the benefits of the economic recovery that lies just ahead.

In closing, I wish to say just a word on behalf of the people of the Commonwealth of Pennsylvania, and I think I can speak for every citizen in it, that from the bottom of my heart, I thank you for the cheerful, unselfish, patriotic, magnificent work you have done for the people of Pennsylvania all through this terrible depression, which, in my opinion, caused more human misery than the World War.

THE PRESIDENT: Years ago medical practitioners from this country went abroad to finish their education and imbibe the knowledge of foreign countries, and there was quite an exodus to England, France, Austria, and Germany. But our next speaker has just returned from the continent having been invited this summer to Germany to deliver a lecture on cancer, in the light of the advances of the present day. It appears also that physicians from foreign countries are now coming to the United States to further their education. We are greatly honored by Dr. Reimann's having received this call to go to Germany. It gives me great pleasure to present Dr. Stanley P. Reimann of Philadelphia, chairman of the 1935 Committee on Scientific Work.

PRESENTATION OF SCIENTIFIC PROGRAM

STANLEY P. REIMANN, *chairman, Committee on Scientific Work*: Mr. President, Officers of the Society, Members, Ladies, and Gentlemen: It becomes my privilege to present to you the program of the Eighty-fifth Annual Session of The Medical Society of the State of Pennsylvania.

You will note that this committee is entitled "Committee on Scientific Work," but it has not neglected, in its endeavor to prepare a varied program, the all-important art of medicine. Necessarily so, because, first, we deal perforce with individual patients, and this is an art; second, the practice of medicine has by no means proved an exact science, and there is much of the art to be learned only through long, continuous accumulation of personal experience. Much of that will be presented, and always with the idea of its practicability. The experimental side of medicine will be discussed. Experimental details will be avoided, but the ideas behind the experiments are to be revealed. Problems to be solved will be presented, goals to be reached will be discussed, and it is up to the members from throughout the state to indicate in the discussions whether these problems are alive or not, whether their solution will be of real help in the effort to relieve patients. Besides, we never know. "To-morrow

is being born to-day," as Madame Curie has said. But there also will be opportunity to place before you sound advice on the vexed question of social relationships. Essayists will discuss not only the physician's side of the issues, but also that of hospitals and of social agencies.

Of the scientific exhibits I say nothing except to express my own personal pleasure and satisfaction in already having learned much from visiting them. I leave this to the chairman of that committee, Dr. Moffitt.

When I asked the Secretary, Dr. Donaldson, what I should say in presenting the program, he thought awhile and then said, "Well, present fairly the work of the committee, which has labored so hard and faithfully," and it has. I wish to express my personal appreciation to the members for their gracious interest and whole-souled cooperation. It was only with their help that we could go ahead and bring to you a program enlivened with helpful discussion of expanding ideas. This we have tried to do, and with this I leave the decision to you.

THE PRESIDENT: The next order of business is the announcement of the chairman of the Committee on Scientific Exhibits. To those who visit it, the scientific exhibit will speak for itself and graphically display the tremendous amount of work done by the chairman and the members of this committee. It gives me great pleasure to compliment the absent Dr. George R. Moffitt, chairman of the Committee on Scientific Exhibit, and to urge all of you to visit frequently this very important and practical source of education.

When one thinks of Harrisburg, medically speaking, Dr. Harvey F. Smith and Harrisburg become synonymous. He has done a tremendous amount of work in Harrisburg, and far and wide throughout the country is known for the fine surgical work he has been doing for years. He has a wonderful personality, and I am sure you will agree with me that the entertainment arrangements so far in this city have been excellent. It gives me great pleasure to present Dr. Harvey F. Smith, chairman of the Committee on Arrangements.

ANNOUNCEMENT OF ENTERTAINMENTS

HARVEY F. SMITH, chairman of the Committee on Arrangements: Mr. President, Honored Guests, Members of the Society: Some of the entertainment will have to be mentioned in the nature of a report rather than an announcement, because the entertainment started early yesterday morning at the Harrisburg Country Club with the annual Golf Tournament. It started early in the morning and was concluded late last night. The first crowd teed off, I understand, at 7:31 a.m., and when I heard that, my impression was that they were people who believe that the early worm catches the birdie. There were probably 150 or more golfers, and they had a wonderful dinner in the evening.

To-day at 1 o'clock there will be a luncheon to the scientific exhibitors, as guests of the Committee on Scientific Exhibits, at the Farm Show building. Dr. Moffitt is chairman of that committee, and the luncheon will be held on the second floor in the cafeteria.

This evening a smoker and buffet supper and entertainment for the members of the society will be held at Zembo Temple at 7 o'clock.

There will also be an entertainment for the women physicians of the state by the women members of the

Dauphin County Medical Society at the Penn-Harris Hotel at 7 o'clock.

To-morrow at noon the annual luncheon of the Public Charities Association of Pennsylvania will be held at the Penn-Harris Hotel. Dr. Ellen C. Potter, former Secretary of Welfare of the State of Pennsylvania, will be the principal speaker. These luncheons and discussions are always worth while.

At noon, Wednesday, there will also be luncheons for ex-interns of the Harrisburg and Polyclinic hospitals, at the hospitals.

The various alumni reunions have been arranged for Wednesday evening. These are at 6 o'clock, and at 8 o'clock the Public Meeting begins in the Forum of the Education Building. Dr. John B. McAlister, chairman of this committee, has arranged to have Dr. William Mather Lewis, president of Lafayette College, speak on "Medicine and the Body Politic." In addition, the Bucknell College Glee Club will furnish music before and after this address. This meeting will adjourn in time for the President's Reception at the Penn-Harris Hotel at 9:30 p.m.

A word about transportation facilities. We have arranged for a courtesy fleet of 20 Chevrolet cars to be at the disposal of those who travel to and from the center of town.

We have arranged for cafeteria service in this building, so that you can motor out here in the morning, and after the morning program visit the exhibits, have lunch, and stay until the afternoon's work is over. There are innovations here for the convention, and we selected this place with some fear and trepidation. I think Dr. Donaldson had that feeling at the beginning, but I believe that it is all going to work out to the advantage of everybody. The number of exhibits and the registered attendance at our annual meetings have grown so large recently that the plan of scattering the scientific and technical exhibits and the section meetings around in various buildings is proving rather difficult. Everything is not only under one roof here, but we have the delightful and unusual experience of having ample room on one floor for the exhibits, which are varied and practical, selected largely on the basis of actual diagnostic and therapeutic experience. There are many, and all of them are quite worth while. You must visit the exhibits.

The information in regard to transportation you will find on page 11 of the Handbook.

THE PRESIDENT: I have 2 announcements to make. First, we want you to deposit your railroad certificates at the registration desk immediately so that they may be validated. If there are 100 or more, you will get a rebate on your return fare.

I should also like to call your attention to the reconstructed building of your own state medical society at 230 State St. We wish everyone to visit the new building, and I am sure you will be agreeably surprised to see the difference between the old and the new. In this building, as you know, there is a board room where the trustees meet; this room is large enough to seat 85 or 90 people, and certain meetings can be held there. A package mail library service has been started, with perhaps 6000 reprints, and it is the hope of the officers that all members will take advantage of this educational service. There are in addition 2 handsome committee rooms, a large vault for archives, and the offices of the PENNSYLVANIA MEDICAL JOURNAL. I am sure you will be well repaid for a visit to this handsome home of our organization.

Now it gives me great pleasure to present delegates from other organizations. We have Dr. Wayde D. Kelly of Harrisburg, representing the Pennsylvania State Dental Society and chairman of the State Dental Advisory Committee to the SERB.

WAYDE D. KELLY, *delegate from the Pennsylvania State Dental Society*: Members of the State Medical Society and Friends: The Pennsylvania State Dental Society sends greetings to The Medical Society of the State of Pennsylvania. The spirit of coöperation between these 2 professional groups has been fine, and we hope as time goes on that this spirit will grow and cement the 2 professions as one. The problems that come before us—scientific, economic, social, or legislative—are closely related. We have many of the same things to strive for or combat if we are to go forward in the future without disintegrating.

I had the pleasure last year of working as State Chairman of Dental Relief with Dr. George L. Laverty, chairman of your Advisory Committee to the State Emergency Relief Board. Many times we had problems that belonged to both professions, and we tried to use fair and unbiased judgment. One of the greatest problems confronting our professions is the socialization movement sweeping the country. If these political parasites are to be kept out of our professions, it can only be done by working together and formulating a plan that will benefit both the laity and ourselves. There are economic changes that this depression has uncovered, and we must direct the solution, shoulder to shoulder, bearing in mind that we must not break down individual initiative, which has made our service outstanding.

I hope you will have the most successful meeting that has ever been held in the 87 years of your society's history.

THE PRESIDENT: I now wish to call upon Mr. Robert R. Gaw of Pittsburgh, delegate from the Pennsylvania Pharmaceutical Association.

MR. ROBERT R. GAW, *delegate from the Pennsylvania Pharmaceutical Association*: Mr. President, Members of The Medical Society of Pennsylvania: As representative of the Pennsylvania Pharmaceutical Association it gives me great pleasure to extend to you the felicitations of our society. We have in the past enjoyed working with The Medical Society of the State of Pennsylvania; we have enjoyed the hearty coöperation you have given, and to-day we appreciate the privilege of coöperating with you on the public health program as well as the Emergency Medical Relief program throughout the state. We feel it a privilege to thus work with you to the end that the allied healing arts shall be cemented together even more closely than in the past.

I hope this session will be one of the best you have ever held. I desire also to congratulate your society and my friend for years, Dr. Alexander H. Colwell, your incoming president.

THE PRESIDENT: For the first time at the opening general meeting of our Society we have a representative from the Pennsylvania Nursing Association, Miss Esther R. Entriken. We welcome this representative and will be glad to hear from her.

MISS ESTHER R. ENTRIKEN, *delegate from the Pennsylvania State Nurses' Association*: As the president has said, this is the first time the nurses have had a delegate at an annual meeting of your society. I bring the greetings of 13,257 Pennsylvania nurses.

When I say that I graduated in 1899, you will understand why I am timid when I am allowed to talk to doctors.

There are 2 or 3 things of which we are very proud. One is that we had your full coöperation and help in the recent legislative session, when we secured a 4-year high school course as the minimum requirement for nurses entering training. We are very grateful.

We have also this year succeeded in getting the University of Pennsylvania to establish a Department of Nursing Education in its School of Education. Mrs. Turk is the department head. Mrs. Potter of our own state is associate. We have secured as lecturer for this year Miss Goodrich, one of the most famous nurses of the United States, who started the School of Nursing at Yale University.

There is one other problem in which we are extremely interested at this time, and I call it to your attention now because we need your sympathetic help. Institutional nurses have limited hours of work as do also student nurses, but there is a group that is very much overworked—the private duty group. I think Sister Lauretine, chairman of our committee, has written to Dr. Donaldson giving in detail the reasons why we are interested. We ask your sympathetic consideration of this problem during your deliberations here and as it presents itself in various communities.

I hope you will have the best convention you have ever had, and thank you sincerely for giving us the opportunity to appear before you.

THE PRESIDENT: I have another pleasant privilege, and that is to present to this audience the pioneer of Bethlehem, surgically speaking, the oldest living ex-president of our society, Dr. William L. Estes, Sr.; also, Dr. Harry W. Albertson, Scranton; Dr. Arthur C. Morgan, Philadelphia; Dr. Frederick L. Van Sickle, Harrisburg; Dr. Wm. H. Mayer, Pittsburgh; Dr. Charles Falkowsky, Jr., Scranton; Dr. John B. McAlister, Harrisburg; Dr. Howard C. Frontz, Huntingdon; and last but not least, my immediate predecessor, the other Napoleon, Dr. Donald Guthrie, Sayre.

GEORGE C. YEAGER, Philadelphia: Ladies and gentlemen: In 1926, Dr. Moses Behrend as its president put life into the Philadelphia County Medical Society at a time when it was badly needed. He became active in the movement to establish the home of the Philadelphia County Medical Society, of which we are now so very proud. His enthusiasm in that movement led him to strive also for the success of the Philadelphia system of seminars for the graduate teaching of our members.

A few years ago when the State Society, under the régime of Dr. Guthrie, developed a good graduate instruction plan and inaugurated it under the auspices of the State Society, it was only natural that the Philadelphia County Society should mention Dr. Behrend as president-elect. Knowing also that Dr. Behrend was a good teamworker, that he had initiative and foresight and many other qualities that were worth while, his friends in 1933 presented him as president-elect of our State Society. I feel that he has not disappointed you. He has had an extremely strenuous year as president. The problems that have come before our society are not comprehended by the average member. Dr. Colwell told me that in his first 6 months as president-elect he had answered 22 calls for addresses in the western part of the state alone; so you can see that some burdens devolve upon your executive officers. Dr. Behrend as president-elect and as president has ably carried the

load; he wisely surrounded himself with able committee chairmen. We feel proud of him.

Therefore, in behalf of your Board of Trustees, being trustee and councilor from his district, and in appreciation of his services and ability as executive officer, in the name of The Medical Society of the State of Pennsylvania, I present to Dr. Behrend this ebony and silver gavel inscribed as a token of remembrance of his very efficient services as president of The Medical Society of the State of Pennsylvania.

MOSES BEHREND: I thank you very much, Dr. Yeager, for your kind words. It has been a pleasure to serve The Medical Society of the State of Pennsylvania, and it was no hardship at all. If one takes it seriously he can readily accomplish much of his work as president of our society in addition to the many duties he must perform in the practice of his profession.

I wish to thank you all most heartily for the wonderful support given me in the past year. Certainly without the help of the Board of Trustees and our very efficient secretary, Dr. Donaldson, I could not have accomplished much. And I must not forget the chairmen of the various committees and the entire body politic of this great organization of over 8000 members. I appreciate your support and wish to thank you all again.

It now becomes my privilege to present to you my successor, Dr. Alexander H. Colwell. He comes from the Smoky City, but there is no smoke in his eyes. He has vision and capability and the courage to carry on to greater heights the affairs of our society. May success crown your efforts, President Colwell!

The president then read his address, which was published in the October, 1935, issue of the PENNSYLVANIA MEDICAL JOURNAL.

PRESIDENT COLWELL: Mr. Secretary, is there anything further to come before this meeting?

WALTER F. DONALDSON: Nothing except to repeat the announcement that railroad certificates should be left at the registration desk, and to remind you again that there are eating facilities in this building. We want you to stay here and visit the various exhibits. Certain of our standing committees have installed and will demonstrate exhibits. Visit their booths and express your appreciation of their year-round efforts in your behalf.

THE PRESIDENT: Those interested are reminded that a special session of the House of Delegates will be held in Room C in this building at 4:15 this afternoon. This meeting is adjourned.

Wednesday, Oct. 2, 1935

The second General Meeting was convened at 9:10 a.m., Wednesday, Oct. 2, Stanley P. Reimann, chairman of the Committee on Scientific Work, presiding.

Max Thorek, Chicago (guest), read a paper entitled "The Rationale of Electrosurgical Obliteration of the Gallbladder (An Experimental and Clinical Study of 124 cases), which was discussed by James F. Percy, Los Angeles, who was formally extended the privileges of the floor.

William C. Sandy, Harrisburg, read a paper entitled "Boarding Out of Mental Patients," which was discussed by Charles H. Henninger, Pittsburgh, and Horace V. Pike, Danville State Hospital.

Frank C. Hammond, Philadelphia, read a paper entitled "Treatment of Menstrual Disorders."

Edgar S. Everhart, Harrisburg, read a paper entitled "The Use and Abuse of Methods That Are Intended for the Cure of Gonorrhea," which was discussed by George A. Holliday, Pittsburgh, and Dr. Everhart, in closing.

Abraham I. Rubenstone, Philadelphia, read a paper entitled "Gold Therapy Hazards Encountered, With Report of Cases," which was discussed by Carroll S. Wright, Philadelphia.

George P. Müller, Philadelphia, read a paper entitled "Significance of the Noncalculous Gallbladder," which was discussed by Edwin P. Buchanan, Pittsburgh.

Allen Graham, Cleveland (guest), read a paper entitled "Cancer of the Breast—A Review of Our Experience with Roentgen-Ray Treatment as a Factor in End Results."

The Wednesday morning meeting adjourned.

Thursday, Oct. 3, 1935

The third General Meeting convened at 9:25 a.m., Thursday, Oct. 3, Stanley P. Reimann presiding, and Henry G. Munson, Philadelphia, acting as secretary.

Francis F. Borzell, Philadelphia, read a paper entitled "Recent Trends in Medical Economics."

Edward L. Bortz, Philadelphia, read a paper entitled "The Physician-Patient Relationship; the Hospital and Social Service."

Josiah R. Eisaman, Pittsburgh, read a paper entitled "The More Common Obstetric Complications," which was discussed by Clifford B. Lull, Philadelphia.

David W. Kramer, Philadelphia, read a paper entitled "A Survey of Diabetes and Pregnancy Based on a Review of 650 Cases," which was discussed by Bernard B. Wormser, Scranton; Josiah R. Eisaman, Pittsburgh; and Dr. Kramer, in closing.

Bradford Green, Philadelphia, read a paper entitled "Human Infertility: Modern Treatment," which was discussed by C. Kenneth Miller and Charles Mazer, both of Philadelphia.

Joseph C. Doane, Philadelphia, read a paper entitled "Arterial Embolism: Its Etiology, Diagnosis, and Treatment," which was discussed by Jesse L. Lenker, Harrisburg; Nathan Blumberg, Philadelphia; and Dr. Doane, in closing.

Frederick F. Tisdall, Toronto, Canada (guest), read a paper entitled "Prevention of Dental Caries and the Improvement of Health by Dietary Means."

The Thursday morning meeting adjourned.

MINUTES OF THE SECTION ON MEDICINE

Tuesday, Oct. 1, 1935

The Section on Medicine met in the Auditorium of the Farm Show Building, Harrisburg, and was called to order at 2:10 p.m., by Chairman William D. Stroud, Philadelphia.

William L. Mullins, Pittsburgh, read a paper entitled "The Incidence and Prognosis of 400 Cases of Coronary Occlusion," which was discussed by Elliott B. Edie, Uniontown; William D. Stroud, Philadelphia; Robert B. Campbell, Mt. Union; and Dr. Mullins, in closing.

A paper on "The Electrocardiogram as an Aid in the Diagnosis and Prognosis of Coronary Occlusion" was read by Joseph B. Vander Veer and L. Emmitt Brown, Jr., Philadelphia (by invitation). This paper was discussed by Laurie Dodd Sargent, Washington; Wil-

liam G. Leaman, Jr., Philadelphia; and Dr. Vander Vecr, in closing.

Andrew P. D'zmura, Pittsburgh, read a paper entitled "Comments on Latent, Nonvalvular, Congestive Heart Failure," which was discussed by Augustus S. Kech, Altoona; Chester K. Kistler, Reading; Max B. Walkow, Allentown; and Dr. D'zmura, in closing.

A paper on "Anginal Heart Failure; Its Causes and Treatment," was read by Harold M. Marvin, New Haven, Conn. (guest).

Edward Weiss, Philadelphia, read a paper on "The Management of the Patient with Essential Hypertension." This paper was discussed by Charles Falkowsky, Jr., Scranton, and S. Leon Israel, Philadelphia.

Harold F. Robertson, Philadelphia, read a paper entitled "The Importance of Venesection and Venous Pressure to the General Practitioner." This paper was discussed by William G. Leaman, Jr., and Wm. Egbert Robertson, Philadelphia.

The meeting was declared adjourned at 5 p.m.

Wednesday, Oct. 2, 1935

JOINT MEETING OF SECTION ON SURGERY AND SECTION ON MEDICINE

A joint meeting of the Section on Surgery and the Section on Medicine was held in the Auditorium of the Farm Show Building, and was called to order at 2 p.m. by Chairman Stroud of the Section on Medicine, the chairman of the Section on Surgery, Edward J. Klopp, presiding thereafter.

Carl E. Ervin, Danville, presented the report of the Executive Committee of the Section on Medicine, nominating for chairman of the section for the ensuing year Edward W. Bixby, Wilkes-Barre, and for secretary, Joseph T. Beardwood, Jr., Philadelphia. Upon motion, duly seconded and carried, these officers were declared elected.

For proceedings of this session see minutes of the Section on Surgery.

Thursday, Oct. 3, 1935

The Thursday afternoon meeting of the Section on Medicine was called to order at 1:35 p.m. by the secretary of the section, Edward W. Bixby.

Herbert T. Kelly, Philadelphia, read a paper entitled "The One-Hour, Two-Dose Dextrose Tolerance Test," which was discussed by Joseph H. Barach, Pittsburgh.

A paper on "The Histidine Treatment of Peptic Ulcer" was read by Franklin A. Weigand, Philadelphia, and discussed by Clement R. Jones, Pittsburgh.

Cornelius C. Wholey, Pittsburgh, read a paper entitled "The Role of Psychiatry in the Penitentiary: A Study of 200 Psychotic Prisoners," which was discussed by Joseph G. Wilson, Lewisburg, and Dr. Wholey, in closing.

A paper entitled "Bacterial Toxemia; Symptomatology with Simulation of Various Systemic Diseases; Diagnosis and Treatment" was read by Myer Solis-Cohen, Philadelphia, and discussed by Angelo L. Luchi, Wilkes-Barre.

Bernard J. McCloskey, Johnstown, read a paper on "The Treatment of Thoracic Empyema by Aspiration and Air Replacement," which was discussed by Grover C. Weil, Pittsburgh.

Secretary Bixby expressed the appreciation of the officers of the section to those who had participated in the program and declared the meeting adjourned at 4 p.m.

WILLIAM D. STROUD, *Chairman*,
EDWARD W. BIXBY, *Secretary*.

Members Registered in Section on Medicine

ADAMS COUNTY MEDICAL SOCIETY.—J. L. Boyer, Arendtsville; Eugene Elgin, East Berlin; Roy W. Gifford, Gettysburg; T. C. Miller, Abbottstown; Edgar A. Miller, Gettysburg.

* ALLEGHENY COUNTY MEDICAL SOCIETY.—C. S. Appar, Joseph H. Barach, Bingham Boyce, Woodville; Frank R. Braden, Coraopolis; A. J. Bruecken, George S. Bubbs, Coraopolis; Mortimer Cohen, Alexander H. Colwell, Sterrett E. Dietrich, Ingram; W. S. Dietrich, Walter F. Donaldson, John D. Donovan, Andrew P. D'zmura, John N. Frederick, Edward P. Griffiths, Clifford C. Hartman, C. H. Hcmniger, William Hutchison, McKeesport; R. T. Johnstone, Avalon; Clement R. Jones, Francis W. Joyce, Joseph H. Judd, McKeesport; Adolphus Koenig, Samuel E. Lambert, Sewickley; P. W. Lanc, Coraopolis; Charles A. Ley, E. V. McCormick, John F. McCullough, Alpheus McKibben, C. P. Macdonald, H. Wilson Morrow, Swissvale; William L. Mullins, C. J. Newcomb, Bellefonte; C. L. Palmer, W. L. Thunhurst, Wilkesburg; H. J. Treshler, C. C. Wholey, John I. Wiseman, Torrance; Katherine S. Wiseman, Torrance.

ARMSTRONG COUNTY MEDICAL SOCIETY.—J. S. McCafferty, Freeport; Frederick C. Monks, J. B. F. Wyant, Kittanning.

BEAVER COUNTY MEDICAL SOCIETY.—Thomas W. McCreary, Monaca; F. B. Wilson, Ruth W. Wilson, Beaver.

BERKS COUNTY MEDICAL SOCIETY.—Robert M. Alexander, Abner H. Bauscher, William S. Bertolet, Reading; C. J. Best, Leesport; J. H. Bisbing, Reading; John L. Bower, Birdsboro; H. P. Brunner, Hiester Bucher, H. B. Corrigan, Reading; George W. Fahrenbach, Bernville; LeRoy W. Frederick, Erwin D. Funk, Reading; Henry A. Gorman, Hamburg; Irvin H. Hartman, Reading; Herbert H. Herskovitz, Wernersville; Carl M. High, Reading; Ralph L. Hill, Wernersville; James E. Kahler, C. K. Kistler, William F. Krick, Reading; Louis J. Livingood, Womelsdorf; C. E. Lerch, Wyomissing; Frank P. Lytle, Birdsboro; J. Henry Orff, Shillington; Robert J. Phifer, Wernersville; L. R. Roethermel, Shillington; Henry W. Saul, Kutztown; Charles F. Smith, Topton; C. G. Spangler, Richard C. Travis, Martin M. Wassersweig, Reading; C. B. Zimmerman, West Lawn.

BLAIR COUNTY MEDICAL SOCIETY.—William R. Brewer, Juniata; Augustus S. Kech, Altoona; Edwin B. Murchison, Tyrone; John O. Prosser, Hollidaysburg.

BRADFORD COUNTY MEDICAL SOCIETY.—Stanley D. Conklin, Ronald L. Hamilton, Sayre; A. E. Dann, Canton.

BUCKS COUNTY MEDICAL SOCIETY.—F. G. Cope, Riegelsville; L. B. Roberts, Wycombe.

BUTLER COUNTY MEDICAL SOCIETY.—R. M. Christie, Conoquenessing.

CAMBRIA COUNTY MEDICAL SOCIETY.—H. B. Anderson, Johnstown; G. C. Berkheimer, Windber; Bernard McCloskey, Henry W. Salus, Johnstown; Charles A. White, Lilly; George F. Wright, Johnstown.

CARBON COUNTY MEDICAL SOCIETY.—Ira E. Freyman, Weatherly.

* Where no address is given, Pittsburgh is indicated.

CENTER COUNTY MEDICAL SOCIETY.—Paul M. Corman, Bellefonte; P. H. Dale, Grover C. Glenn, State College; Richard H. Hoffman, Bellefonte; J. P. Ritenour, State College.

CHESTER COUNTY MEDICAL SOCIETY.—G. E. Dietrich, Coatesville; John A. Farrell, I. P. P. Hollingsworth, Edith M. Johnson, Joseph Scattergood, Jr., West Chester; Charles J. Stein, Oxford.

CLARION COUNTY MEDICAL SOCIETY.—I. Dana Kahle, Knox; Charles C. Ross, Clarion.

CLEARFIELD COUNTY MEDICAL SOCIETY.—H. A. Blair, W. C. Browne, Curwensville; Joseph L. Chick, DuBois; J. M. Cornely, Madera; J. Paul Frantz, G. B. Yeane, Clearfield.

CLINTON COUNTY MEDICAL SOCIETY.—John B. Critchfield, Henry G. Hager, Jr., Lock Haven.

COLUMBIA COUNTY MEDICAL SOCIETY.—W. G. Berryhill, Orangeville; H. S. Buckingham, H. V. Hower, Berwick; Charles B. Yost, Bloomsburg.

CRAWFORD COUNTY MEDICAL SOCIETY.—H. H. Walker, Linesville.

CUMBERLAND COUNTY MEDICAL SOCIETY.—Selden S. Cowell, Joseph E. Green, Carlisle; Newton W. Hershner, Benjamin F. Hunt, Mechanicsburg; H. C. Lawton, Camp Hill; Calvin R. Rickenbaugh, Carlisle; S. Dana Sutliff, Shippensburg.

DAUPHIN COUNTY MEDICAL SOCIETY.—Andrew F. Akers, Harrisburg; William J. Albright, Highspire; Julius H. Anderson, Harrisburg; G. H. Barnd, Williamstown; R. E. Barto, Elizabethville; George W. Bauder, Harrisburg; Park Berkheimer, Hummelstown; James Bloom, Harrisburg; J. E. Bogar, Millersburg; Albert E. Bower, Camp Hill; Austin F. Brunner, Harrisburg; W. H. Burgin, New Cumberland; J. T. Burnite, J. Loomis Christian, Elizabeth E. Clark, Walter J. Connor, A. W. Cowley, Charles H. Crampton, Harrisburg; William P. Dailey, Steelton; J. A. Daugherty, Charles Denison, Robert Denison, M. W. Enrick, C. P. Faller, John A. Fritchey, David S. Funk, Harrisburg; Rife Gingrich, Middletown; J. F. Good, New Cumberland; Edward M. Green, Harrisburg; Benjamin Halporn, Oberlin; W. D. Hawkins, Harrisburg; R. S. Heisley, Marysville; David J. Hetrick, R. E. Holmes, Harrisburg; John W. Horn, Hummelstown; L. S. Howard, Louis C. Jacobs, Harrisburg; O. J. Kingsbury, Steelton; Harry E. Klase, M. H. Layton, Jr., Jesse L. Lenker, Max Levin, Harrisburg; Horace H. Long, Hershey; J. B. McAlister, Harrisburg; O. F. McKittrick, Linglestown; A. Leslie Marshall, Richard J. Miller, George R. Moffit, Harrisburg; Hewett C. Meyers, Steelton; M. L. Nisley, Hummelstown; James N. O'Brien, Guy E. Ohlson, George L. Oxley, R. L. Perkins, H. K. Petry, C. R. Phillips, Ralph E. Pilgram, Miriam R. Polk, J. Howard Rahter, Frank F. D. Reckord, Harrisburg; Harry H. Rhodes, Middletown; C. M. Rickert, R. F. Ridgway, Harrisburg; Joseph H. Rissinger, Enola; William C. Sandy, Harrisburg; D. W. Schaffner, Enola; Lillian E. Shaw, John A. Sherger, Harrisburg; Nathan Shuser, Lemoyne; A. Harvey Simmons, Harrisburg; C. R. Snyder, Marysville; Maurice I. Stein, Harrisburg; W. D. Stettler, Hershey; John C. Stevens, Harrisburg; Donald B. Stouffer, Hershey; Louise H. Taylor, Harrisburg; Myron A. Todd, Halifax; Charles I. Trullinger, Bernard Viener, Ralph S. Walter, Lee Weinstein, Harold B. Wood, Peter Zemo, Harrisburg.

DELAWARE COUNTY MEDICAL SOCIETY.—Joseph F. Dunn, Chester; Thomas A. Johnson, Drexel Hill; Walter E. Kepler, Upper Darby; Richard Owen, Moores; Albin R. Rozploch, Chester; J. Evans Schechle, Llanerch; C. S. Sentner, Rutledge; Edward P. Torrance, Drexel Hill; E. Arthur Whitney, Elwyn.

ELK COUNTY MEDICAL SOCIETY.—S. G. Logan, Ridgeway; R. D. Warnick, Johnsonburg.

ERIE COUNTY MEDICAL SOCIETY.—John Ackerman, Mitchell Burdick, Lewis H. Gale, C. H. Lefever, Erie; Elmer G. Shelley, North East; James D. Stark, J. Harrison Tate, Erie.

FAYETTE COUNTY MEDICAL SOCIETY.—R. S. Buvinger, Point Marion; Elliott B. Edie, Uniontown; E. Russell Ingraham, Masontown; L. Dale Johnson, Connelville; E. H. Rebok, Keisterville; Charles H. Smith, Uniontown.

FRANKLIN COUNTY MEDICAL SOCIETY.—Paul A. Clutz, Mercersburg; Frank J. Corbett, Fayetteville; J. W. Croft, Waynesboro; J. K. Gordon, Chambersburg; William J. Hutchinson, Shippensburg; J. E. Kempter, Benjamin H. Long, Chambersburg; R. H. McCutcheon, Bethlehem; Theodore Peters, Chambersburg; LeRoy H. Saxe, Shippensburg; Ambrose W. Thrush, Chambersburg.

GREENE COUNTY MEDICAL SOCIETY.—W. S. Frankenburg, Carmichaels.

HUNTINGDON COUNTY MEDICAL SOCIETY.—John M. Beck, Alexandria; M. D. Campbell, Mapleton Depot; W. J. Campbell, Mt. Union; J. A. Carney, Robertsdale; Charles R. Reinert, Huntingdon.

INDIANA COUNTY MEDICAL SOCIETY.—A. B. Danisawich, Hamburg; J. G. Gemmell, Iselin; E. Lee Reiter, Lemasters; Edward F. Shaulis, Somerset; A. H. Stewart, Indiana.

JEFFERSON COUNTY MEDICAL SOCIETY.—S. Meigs Beyer, Pottsville.

JUNIATA COUNTY MEDICAL SOCIETY.—I. G. Headings, McAlisterville; B. F. Long, Mifflin.

LACKAWANNA COUNTY MEDICAL SOCIETY.—Stanley W. Boland, Archbald; John J. Brennan, William T. Davis, William M. Donovan, Charles Falkowsky, Helen Houser, Walter P. Knight, H. M. Kramer, J. D. Lewis, Scranton; R. J. Lloyd, Olyphant; John E. Manley, Clyde L. Mattas, Scranton; William H. Newman, Jr., Clarks Summit; Paul F. Polentz, Scranton.

LANCASTER COUNTY MEDICAL SOCIETY.—James Armstrong, Columbia; Walter K. Baer, Walter Blankenship, Lancaster; John A. Boyd, Christiana; John H. Esbenschade, Lancaster; G. A. Harter, Maytown; Frank G. Hartman, S. M. Hauck, Herbert E. Heim, Lancaster; J. G. Herr, Landisville; J. S. Kendig, Salunga; H. C. Kinzer, Lancaster; Walter J. Leaman, Leaman Place; S. D. Lockey, East Petersburg; S. W. McNeal, Columbia; D. W. Martin, Lititz; John F. Mentzer, Ephrata; J. Harry Pickle, Jr., Columbia; Jacob Pomerantz, Bainbridge; M. D. Schaffner, Wilhelmina Scott, H. H. Seiple, Lancaster; P. F. Shaeffer, Christiana; John S. Simons, S. S. Simons, M. K. Spillman, Lancaster; G. P. Taylor, Columbia; Troy M. Thompson, Elizabethtown; Henry Walter, Jr., Lancaster; H. S. Ziemer, Adamstown.

LAWRENCE COUNTY MEDICAL SOCIETY.—J. L. Popp, New Castle.

LEBANON COUNTY MEDICAL SOCIETY.—John D. Boger, Lebanon; Warren I. Brubaker, Annville; Bernerd Caplan, Lebanon; William H. Diehl, Palmyra; Louis G. Fetterman, Campbelltown; Carl C. Hoffman, Palmyra; John J. Light, L. R. Light, Herbert C. McClelland, Lebanon.

LEHIGH COUNTY MEDICAL SOCIETY.—J. Treichler Butz, Allentown; J. H. Hemmuth, Emaus; W. F. Herbst, C. H. Kelchner, John D. Matz, Ralph F. Merkle, Lawrence C. Milstead, M. B. Walkow, John J. Wenner, Allentown.

LUZERNE COUNTY MEDICAL SOCIETY.—Edward W. Bixby, Wilkes-Barre; Joseph M. Bruno, Pittston; R. N. Clark, Kingston; William J. Davis, Wilkes-Barre; John K. Farrar, Audenried; Albert K. Feinberg, Charles M. Gallagher, Wilkes-Barre; Vincent D. Gallizzi, Pittston; William L. Grala, Hazleton; D. A. Hart, Wapwallopen; A. C. Hazlett, Wyoming; E. M. Hill, Pittston; Robert R. Janjigian, Forty-Fort; Seth W. Kistler, Nanticoke; Julian S. Long, A. L. Luchi, Wilkes-Barre; A. V. Lupcho, Glen Lyon; J. E. Martin, Kingston; A. F. Rioski, Wilkes-Barre; J. G. Sileski, Nanticoke; A. V. Sloan, Wilkes-Barre; George W. Taggart, Hazleton; Roy Truckenmiller, Freeland; F. C. Wagenseller, Wapwallopen; Robert S. Wochle, Wilkes-Barre.

LYCOMING COUNTY MEDICAL SOCIETY.—John W. Arbogast, Lewisburg; Paul H. Bickle, Mifflinburg; W. S. Brenholtz, G. D. Castlebury, A. M. Cook, George R. Drick, Williamsport; Edward Everett, Dushore; I. T. Gilmore, Picture Rocks; Sara A. Hall, Muncy; Randall B. Hayes, Jersey Shore; George S. Klump, Williamsport; F. C. Lechner, Montoursville; J. L. Mansuy, Ralston; G. W. Muffy, Turbotville; Henry B. Mussina, John B. Nutt, Williamsport; Lee R. Ranck, Milton; J. R. Rankin, Muncy; C. G. Renn, Hugestown; Carl H. Senn, H. L. Tonkin, Williamsport; Wilbur E. Turner, Montgomery; T. Kenneth Wood, Muncy.

McKEAN COUNTY MEDICAL SOCIETY.—Francis DeCaria, Bradford; R. D. Donaldson, Kane.

MERCER COUNTY MEDICAL SOCIETY.—G. W. Kahle, Hadley; W. W. Richardson, Mercer.

MIFFLIN COUNTY MEDICAL SOCIETY.—R. T. Barnett, J. S. Brown, J. A. C. Clarkson, Milton H. Cohen, Lewistown; John P. Getter, Belleville; Alfred E. James, Beaver Springs; A. Reid Leopold, Lewistown; Henry E. Miller, Belleville; C. J. Stambaugh, Reedsville; H. W. Sweigart, Samuel W. Swigart, Lewistown; M. E. Wagner, P. E. Whiffen, McClure.

MONROE COUNTY MEDICAL SOCIETY.—Charles A. LeCates, Tannersville; Marshall Metzgar, Paul H. Shiffer, Stroudsburg; D. C. Trach, Kresgeville.

MONTGOMERY COUNTY MEDICAL SOCIETY.—Edgar S. Buyers, Norristown; Lovett Dewees, Ardmore; John Eiman, Abington; Walter E. Fine, Ambler; Albert R. Garner, Norristown; Howard W. Hassell, Bridgeport; B. F. Hubley, J. Newton Hunsberger, Norristown; P. J. Lukens, Ambler; J. M. Markley, Schwenkville; Harry C. Podall, Norristown; Elwood T. Quinn, Jenkintown; Leon Reidenberg, Pottstown; James A. Shelly, Ambler; John C. Simpson, Norristown; Walter J. Stein, Ardmore; John G. Wilson, Norristown; W. J. Wright, Skippack.

MONTOUR COUNTY MEDICAL SOCIETY.—John A. Bolich, Milton; Joseph A. Cammarata, L. R. Chamber-

lain, F. W. Davison, C. E. Ervin, Sydney J. Hawley, Henry F. Hunt, J. Allen Jackson, Danville; C. L. Johnston, Catawissa; Peter Kwiterovich, Danville; M. J. Pescov, Lewisburg; Horace V. Pike, Cameron Shultz, Danville; J. G. Wilson, Lewisburg.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—C. E. Beck, Portland; W. M. Brenholtz, Hellertown; F. J. Conahan, Bethlehem; Arthur S. Fox, Easton; Arthur B. Hamilton, Alexander J. Maysels, Bethlehem; Victor S. Messinger, Easton; William H. Rentzheimer, Hellertown; Henry A. Rothrock, Jr., Bethlehem; C. F. Stofflet, Pen Argyl; W. Gilbert Tillman, Easton.

NORTHUMBERLAND COUNTY MEDICAL SOCIETY.—G. M. Bogar, Selingsgrove; A. B. Buczek, Mt. Carmel; C. Reed Gennaria, Shamokin; P. J. Herman, Selingsgrove; C. W. Rice, Northumberland; E. Roger Samuel, Mt. Carmel; Alexander Slavkoff, Selingsgrove; M. E. Smoczynski, Mt. Carmel.

PERRY COUNTY MEDICAL SOCIETY.—Blaine F. Bartho, J. E. Book, Newport; John E. Romig, Duncannon.

* PHILADELPHIA COUNTY MEDICAL SOCIETY.—James H. Arnett, J. Paul Austin, Theodore F. Bach, Brookline; Frederick S. Baldi, Harvey Bartle, William Bates, Joseph T. Beardwood, Jr., Nathan Blumberg, H. L. Bockus, Russell S. Boles, Edward L. Bortz, Frank W. Burge, Emilie E. M. Burke, Joseph T. Cadden, W. L. Cahall, Anthony R. Camero, Eugene A. Case, Lansdowne; James C. Chestnut, J. A. Clarke, Jr., Hunter S. Cook, E. P. Corson-White, James E. Cottrell, Baxter L. Crawford, Reuben Davis, J. C. Doane, John K. Durkin, Bryn Mawr; John T. Farrell, Jr., Francis A. Faught, Ella Williams Grim, Media; H. Brooks Harvey, Willard S. Hastings, Elkins Park; J. Norman Henry, Lewis H. Hitzrot, Arthur H. Hopkins, G. Morton Ilman, Herbert T. Kelly, David W. Kramer, Lowell L. Lane, William G. Leaman, Jr., Charles F. Long, Francis D. W. Lukens, Edward McCloskey, J. W. McConnell, John D. McLean, A. F. McNeerney, Leroy M. A. Maeder, Albert A. Martucci, Robert A. Matthews, Ralph W. Mays, Harry N. Metzger, Hugh McC. Miller, Arthur C. Morgan, John A. Murphy, W. Burrill Odenatt, Darius Gray Ornston, Ross V. Patterson, John Davis Paul, Ethel G. Peirce, Bryn Mawr; Ralph Pemberton, Thomas K. Rathmell, Rufus S. Reeves, Harold F. Robertson, William Egbert Robertson, Randle C. Rosenberger, Abraham I. Rubenstone, I. Ellis Rudman, Howard W. Schaffer, Jeanette H. Sherman, Ridley Park; E. R. Snader, Jr., Myer Solis-Cohen, B. Franklin Stahl, Haverford; Stanley P. Reimann, David Stein, James H. Sterner, Robert F. Sterner, I. P. Strittmatter, W. D. Stroud, William A. Swalm, Anne H. Thomas, Mary Bickings Thornton, Anthony S. Tornay, Joseph F. Ulman, Joseph B. Vander Veer, John A. Wagnetz, Franklin A. Weigand, E. M. Weinberger, Edward Weiss, B. P. Widmann, George Wilson, Michael G. Wohl, Joseph C. Yaskin, George C. Yeager.

SCHUYLKILL COUNTY MEDICAL SOCIETY.—William A. Breslin, Shenandoah; Gilbert F. Bretz, Pottsville; C. S. Burke, Mahanoy City; J. Spencer Callen, Shenandoah; J. Stratton Carpenter, Pottsville, D. A. Decker, Pine Grove; Henry A. Dirschedl, Pottsville; Arthur B. Flemming, Tamaqua; Christian Gruhler, R. E. Hobbs, Shenandoah; Joseph G. Kramer, Pottsville; Leo E. Pulaski, Shenandoah; F. M. Quinn, Miners-

* Where no address is given, Philadelphia is indicated.

ville; Joseph F. Ricchiuti, Mahanoy City; William H. Schlitzer, Pottsville; J. Russell Sweeney, Tamaqua.

SOMERSET COUNTY MEDICAL SOCIETY.—William W. Keim, Davidsville; Bruce Lichty, Meyersdale; C. T. Saylor, Rockwood; Charles I. Shaffer, Ralphton; W. W. Westfall, Somerset.

TIOGA COUNTY MEDICAL SOCIETY.—Harry B. Knapp, Wellsboro; Harry Williamson, Elkland.

VENANGO COUNTY MEDICAL SOCIETY.—F. P. Phillips, Franklin; F. M. Summerville, Oil City.

WARREN COUNTY MEDICAL SOCIETY.—Ira A. Darling, Hamblen C. Eaton, Francis J. Krugh, Warren.

WASHINGTON COUNTY MEDICAL SOCIETY.—John A. Douglass, McDonald; L. D. Sargent, Emil Sposato, Washington.

WESTMORELAND COUNTY MEDICAL SOCIETY.—C. D. Ambrose, Ligonier; John S. Anderson, Jean C. Bailey, Greensburg; W. Craig Byers, Webster; C. W. Dixon, Export; Albert S. Kaufman, New Kensington; R. E. L. McCormick, Irwin; Bert F. Ober, Thomas St. Clair, Latrobe; James P. Strickler, Scottdale.

YORK COUNTY MEDICAL SOCIETY.—Jackson W. Allison, Julius H. Comroe, Eli Eichelberger, York; John C. Gable, Windsor; W. F. Gemmill, Lawton M. Hartman, Jr., York; Francis L. Heikes, Dillsburg; George E. Holtzapple, York; N. Allen Overmiller, East Prospect; Charles Rea, H. M. Read, York; Clyde L. Seitz, J. S. Seitz, Glen Rock.

MINUTES OF THE SECTION ON SURGERY

Tuesday, Oct. 1, 1935

The Section on Surgery convened in Room F, Farm Show Building, Harrisburg, and was called to order at 2 p. m. by Chairman Edward J. Klopp, Philadelphia.

A paper entitled "Perforated Gastric and Duodenal Ulcers" (lantern demonstration) was read by Robert L. Schaeffer, Allentown, and discussed by Isidor S. Ravdin, Philadelphia; Samuel J. Waterworth, Clearfield; and in closing by the essayist.

Harold L. Foss, Danville, read a paper entitled "Hyperthyroidism and Heart Disease" (lantern demonstration), which was discussed by Jesse L. Lenker, Harrisburg; William M. Donovan, Scranton; Donald Guthrie, Sayre; Samuel J. Waterworth, Clearfield; and in closing by the essayist.

A paper entitled "The Treatment of Injuries of the Head" was presented by Walter E. Dandy, Baltimore, Md. (guest).

A paper entitled "Differential Diagnosis in Abdominal Tragedies" was read by Maxwell Lick, Erie, and discussed by Donald Guthrie, Sayre; M. G. Wohl, Philadelphia; and in closing by the essayist.

A paper entitled "Spinal Cord Tumors" (lantern demonstration) was read by Francis C. Grant, Philadelphia, and discussed by Samuel S. Allen, Jr., Pittsburgh.

A paper entitled "Varicose Veins—Evaluation of Injection Treatment" was read by W. Minster Kunkel, Harrisburg, and discussed by Gilson Colby Engel, Philadelphia.

The session adjourned at 5:15 p. m.

Wednesday, Oct. 2, 1935

JOINT MEETING OF SECTION ON SURGERY AND SECTION ON MEDICINE

A joint meeting of the Section on Surgery and the Section on Medicine was held in the Auditorium of the Farm Show Building, and was called to order at 2 p. m. by the chairman of the Section on Medicine, William D. Stroud, Philadelphia; the chairman of the Section on Surgery, Edward J. Klopp, presided thereafter.

A paper entitled "The Results of Thoracoplasty in the Treatment of Tuberculosis" (lantern demonstration) was presented by John H. Gibbon, Jr., Philadelphia, and discussed by John B. Flick, Philadelphia; H. R. Decker, Pittsburgh; and Moses Behrend, Philadelphia.

A paper was presented by George Willauer, Philadelphia, on "Intrapleural Pneumolysis in Collapse Therapy of Pulmonary Tuberculosis" (lantern demonstration). This paper was discussed by Royal H. McCutcheon, Bethlehem.

James Alexander Miller, New York City (guest), presented the subject, "Thoracic Surgery in the Treatment of Pulmonary Tuberculosis from the Standpoint of the Internist."

Damon B. Pfeiffer, Philadelphia, read a paper entitled "The Indications for Surgery in Gallbladder Disease," which was discussed by Harvey F. Smith, Harrisburg, and Moses Behrend, Philadelphia.

A paper entitled "The Role of Infection and the Disturbed Cholesterol Metabolism in Cholelithiasis" (lantern demonstration), by Henry L. Bockus, John H. Willard, and Harry N. Metzger, Philadelphia, was read by Dr. Bockus and discussed by Walter Estell Lee, Philadelphia.

A paper entitled "Recent Advances in Surgery of the Pancreas" (lantern demonstration) was read by Allen O. Whipple, New York City (guest).

A paper entitled "Pancreatic Enzyme Studies" (lantern demonstration) was read by Maurice I. Stein, Harrisburg, and discussed by Thomas A. Johnson, Drexel Hill.

The session adjourned at 5:30 p. m.

Thursday, Oct. 3, 1935

The section convened at 1:40 p. m. and was called to order by Chairman Edward J. Klopp, Philadelphia.

A paper entitled "Undescribed Lesion of the Shoulder Girdle of Frequent Occurrence" (lantern demonstration) was presented by Joseph P. Replogle, Johnstown, and discussed by Calvin M. Smyth, Jr., Philadelphia; Edward Pardoe, Johnstown; and in closing by the essayist.

A paper entitled "Artificial Ankylosis of Joints" (lantern demonstration) was presented by John A. Heberling, Pittsburgh, and discussed by Paul B. Steele, Pittsburgh; David E. Hoff, Harrisburg; and in closing by the essayist.

A paper entitled "Fractures About the Ankle and Wrist" (lantern demonstration) was read by Frederick W. Heyer, Nanticoke, and discussed by William L. Estes, Jr., Bethlehem; David E. Hoff, Harrisburg; and in closing by Dr. Heyer.

A paper entitled "Incurable Vesicovaginal Fistula" (lantern demonstration) was presented by J. Norman White, Scranton, and discussed by Walter J. Larkin, Scranton, and in closing by the essayist.

As the Executive Committee was not present, the officers of the Section on Surgery for the ensuing year were not nominated. Dr. Klopp stated that he would

personally write to the members of the Executive Committee and request the appointment of a chairman and a secretary.

(The Executive Committee has since recommended the following: Chairman, John P. Griffith, Pittsburgh; secretary, Wm. L. Estes, Jr., Bethlehem.)

The chairman expressed his appreciation to those who had participated in the program and declared the Section adjourned at 4:40 p. m., *sine die*.

EDWARD J. KLOPP, *Chairman*,
GEORGE W. HAWK, *Secretary*.

Members Registered in Section on Surgery

ADAMS COUNTY MEDICAL SOCIETY.—J. M. Dickson, Gettysburg; Allen W. Kelcy, East Berlin; Bruce N. Wolff, Gettysburg.

* ALLEGHENY COUNTY MEDICAL SOCIETY.—H. S. Arthur, McKeesport; R. J. Behan, A. A. Bornscheuer, E. P. Buchanan, Walter A. Dearth, H. R. Decker, Charles G. Eicher, McKees Rocks; Josiah R. Eisman, Ph. A. Faix, C. B. Forcey, Sewickley; George V. Foster, John P. Griffith, Arthur H. Gross, Bellevue; John A. Heberling, Merle R. Hoon, L. W. Johnson, J. Clarence Kelly, McKeesport; George Leibold, David B. Ludwig, Harold Henderson Meanor, Coraopolis; Curtis C. Mechling, William A. Nealon, N. C. Ochsenhirt, Lloyd W. Pumphrey, C. C. Rinard, Homestead; John W. Shirer, Paul B. Steele, James R. Watson, Grover C. Weil.

BEAVER COUNTY MEDICAL SOCIETY.—B. C. Painter, New Brighton.

BEDFORD COUNTY MEDICAL SOCIETY.—Norman A. Timmins, Bedford; Harold R. Vogel, Everett.

BERKS COUNTY MEDICAL SOCIETY.—George R. Curry, C. F. Freed, Leo R. Gorman, W. D. Griesemer, George W. Kehl, Henry D. Kunkle, Reading; A. E. J. Lohmann, Shillington; J. F. Menges, J. B. Pearah, Reading; George F. Potteiger, Hamburg; Earl W. Rothermel, Frank G. Runyon, Harold L. Strause, Gilbert I. Winston, Reading.

BLAIR COUNTY MEDICAL SOCIETY.—D. G. Burket, Joseph D. Findley, W. H. Howell, B. L. Hull, James S. Taylor, Edward F. Williams, Altoona.

BRADFORD COUNTY MEDICAL SOCIETY.—Donald Guthrie, George W. Hawk, Sayre.

BUCKS COUNTY MEDICAL SOCIETY.—J. Fred Wagner, Bristol.

CAMBRIA COUNTY MEDICAL SOCIETY.—Davis S. Bantley, Johnstown; Benjamin F. Bowers, Barnesboro; H. L. Hill, J. B. Lowman, Arthur Miltenberger, William J. Murray, Edward Pardoe, Joseph P. Replogle, R. J. Sageron, Johnstown.

CARBON COUNTY MEDICAL SOCIETY.—John H. Kupp, Palmerton.

CENTER COUNTY MEDICAL SOCIETY.—Enoch H. Adams, LeRoy Locke, J. G. Weixel, Bellefonte.

CHESTER COUNTY MEDICAL SOCIETY.—Robert C. Hughes, Paoli; J. Ashbridge Perkins, Charles H. Stone, Jackson Taylor, Coatesville.

CLEARFIELD COUNTY MEDICAL SOCIETY.—E. E. Houck, Dubois; Austin C. Lynn, Philipsburg; S. J. Waterworth, Clearfield.

CLINTON COUNTY MEDICAL SOCIETY.—F. P. Dwyer, Renovo; T. E. Teah, David W. Thomas, Lock Haven.

COLUMBIA COUNTY MEDICAL SOCIETY.—James R. Gemmill, Monessen; C. M. Hower, John J. John, Bloomsburg.

CUMBERLAND COUNTY MEDICAL SOCIETY.—W. A. Boyson, Mechanicsburg; Charles M. Shaffer, Carlisle.

DAUPHIN COUNTY MEDICAL SOCIETY.—J. C. Bolton, Thomas E. Bowman, Albert H. Bucher, Carson Coover, Lewis G. Crawford, W. Paul Dailey, W. T. Douglass, C. C. Englehart, Oscar B. Feldser, Samuel B. Fluke, Harrisburg; Andrew J. Griest, Steelton; H. F. Gross, G. W. Hartman, D. E. Hoff, Harrisburg; Daniel E. Hottenstein, Millersburg; William S. Houck, Harrisburg; Eurfryn Jones, Camp Hill; Stephen S. Landis, Harrisburg; E. K. Lawson, Penbrook; G. L. Lavery, W. K. McBride, William B. Miller, Howard E. Milliken, Thomas D. Mills, A. J. Mogavero, C. E. Moore, Edwin A. Nicodemus, J. F. Reed, Harrisburg; H. A. Shaffer, Williamstown; Norman B. Shepler, M. H. Sherman, Morris A. Silver, Harvey F. Smith, George H. Stein, George B. Stull, Frederick L. Van Sickle, Paul C. Walter, Harrisburg; E. R. Whipple, Steelton; L. S. Withcrow, Harrisburg.

DELAWARE COUNTY MEDICAL SOCIETY.—John O. Crist, William B. Evans, Francis G. Miller, Chester; John J. Sweeney, Upper Darby.

ELK COUNTY MEDICAL SOCIETY.—Augustine C. Luhr, St. Marys.

ERIE COUNTY MEDICAL SOCIETY.—Clayton W. Fortune, Frank B. Krimmel, Maxwell Lick, Ray H. Luke, Erie.

FAYETTE COUNTY MEDICAL SOCIETY.—D. C. Fosselman, D. S. Newill, Connellsville.

FRANKLIN COUNTY MEDICAL SOCIETY.—J. C. Hudson, Lewis H. Seaton, Chambersburg; W. C. Schultz, Waynesboro; S. D. Shull, Chambersburg.

GREENE COUNTY MEDICAL SOCIETY.—D. R. Jacobs, Waynesburg.

HUNTINGDON COUNTY MEDICAL SOCIETY.—C. G. Brumbaugh, William A. Doebele, Howard C. Frontz, Francis S. Mainzer, Huntingdon.

INDIANA COUNTY MEDICAL SOCIETY.—J. C. Lee, Clymer.

JEFFERSON COUNTY MEDICAL SOCIETY.—F. A. Lorenzo, Punxsutawney.

LACKAWANNA COUNTY MEDICAL SOCIETY.—H. W. Albertson, William R. Davies, Scranton; M. B. Finneran, Carbondale; Ulrich P. Horger, Taylor; Walter J. Larkin, Scranton; J. W. Lyons, Jessup; Charles E. Thomson, Jr., J. Norman White, J. William White, B. B. Wormser, Scranton.

LANCASTER COUNTY MEDICAL SOCIETY.—James Z. Appel, Theodore B. Appel, John L. Atlee, John L. Atlee, Jr., Lancaster; Dorsey F. Butterbaugh, Francis S. Chambers, Elizabethtown; Stanley J. Cohen, Lancaster; John D. Denney, Columbia; Charles S. Duttenhofer, Churchtown; C. R. Farmer, John L. Ford, M. K. Hessen, Harold K. Hogg, E. Ross Proctor, T. C. Shookers, Isaac S. Simons, Charles W. Ursprung, Lancaster.

LAWRENCE COUNTY MEDICAL SOCIETY.—S. W. Perry, John P. Prioletti, Paul H. Wilson, New Castle.

* Where no address is given, Pittsburgh is indicated.

LEHIGH COUNTY MEDICAL SOCIETY.—Rowland W. Baehman, Thomas W. Cook, F. A. Fetherolf, Allentown; Charles R. Fox, Northampton; W. F. Fox, Coplay; W. A. Hausman, Jr., Joel Nass, Robert L. Schaeffer, Wayne G. Stump, Takeo Yamashita, Allentown.

LUZERNE COUNTY MEDICAL SOCIETY.—L. M. Catantach, Wilkes-Barre; Frank J. Conlon, Pittston; J. P. Dougherty, Ashley; W. J. Doyle, Wilkes-Barre; V. P. Edwards, Edwardsville; A. G. Gibbs, Nanticoke; H. B. Gibby, Wilkes-Barre; A. W. Grover, Kingston; Frank R. Hanlon, Wilkes-Barre; Fred W. Heyer, Nanticoke; D. A. Johnston, Hazleton; Nicholas D. Mauriello, Wyoming; Michael J. Murphy, F. A. Muschlitz, Pittston; Charles F. Netzel, Plymouth; Frank M. Pugliese, Wilkes-Barre; M. C. Rumbaugh, Charles L. Shafer, Kingston; Ralph L. Shanno, Forty Fort; A. Burton Smith, Wyoming; L. H. Smith, Hazleton; Irving O. Thomas, Wilkes-Barre.

LYCOMING COUNTY MEDICAL SOCIETY.—Marc W. Bodine, James H. Burrows, W. E. Delaney, Jr., Williamsport; L. M. Goodman, Jersey Shore; J. Frank Gordner, Montgomery; R. M. Grieco, A. C. Haas, Albert F. Hardt, J. P. Harley, L. M. Hoffman, L. A. Krimm, F. H. Paternostro, Williamsport; Warren N. Shuman, Jersey Shore.

McKEAN COUNTY MEDICAL SOCIETY.—Carl Danielson, Guy Vogan, Kane.

MONTGOMERY COUNTY MEDICAL SOCIETY.—Robert E. Brant, Spring City; J. Elmer Gotwals, Phoenixville; J. E. Griffiths, Bryn Mawr; J. B. Sherbon, Pottstown; Francis D. Ventura, Norristown.

MONTOUR COUNTY MEDICAL SOCIETY.—H. L. Foss, Danville.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—James A. Betts, Paul Correll, Easton; William L. Estes, William L. Estes, Jr., Bethlehem; Clarence D. Hummel, Stephen E. Murray, Easton; Frederick J. Pearson, George A. Petruilas, D. K. Santee, Herbert J. Schmoyer, Dudley P. Walker, Arno R. Zack, Bethlehem; Frederick O. Zillessen, Easton.

NORTHUMBERLAND COUNTY MEDICAL SOCIETY.—Mark K. Gass, L. M. Holt, J. W. McDonnell, Sunbury; George W. Reese, Shamokin; Henry F. Ulrich, Middleburg.

*PHILADELPHIA COUNTY MEDICAL SOCIETY.—J. M. Alesbury, J. O. Arnold, Edward W. Beach, Henry P. Brown, Jr., Charles A. Behney, Moses Behrend, Basil R. Beltran, F. F. Borzell, Frederick A. Bothe, John O. Bower, Irvine M. Boykin, Alexander E. Burke, Louis H. Clerf, James N. Coombs, Kirksey L. Curd, Lawrence Curtis, J. M. Deaver, George M. Dorrance, Harry A. Duncan, Gilson C. Engel, John B. Flick, Donald C. Geist, John H. Gibbon, Jr., Nicholas Gotten, Francis C. Grant, Bradford Green, Frank C. Hammond, John G. Hand, William B. Harer, DeHaven Hinkson, Brady A. Hughes, S. Leon Israel, Robert H. Ivy, Paul N. Jepson, James A. Kelly, Orville C. King, Edward J. Klopp, Norman L. Knipe, Carl F. Koenig, Wilmer Krusen, Walter E. Lee, Daniel Longaker, Clifford B. Lull, James B. Mason, Charles Mazer, C. Kenneth Miller, George D. Morton, Honeybrook; George P. Muller, Douglas P. Murphy, M. J. Oppenheimer, Hubley R. Owen, William E. Parke, Benjamin

Parish, Damon B. Pfeiffer, S. Raydin, James L. Richards, J. Torrance Rugh, Charles T. Russell, Jr., Samuel R. Skillern, Jr., Richard M. Smith, Calvin M. Smyth, Jr., Irvin Stein, James M. Surver, William B. Swartley, Joseph J. Toland, Jr., Elsie R. Treichler-Reedy, Hoke Wammock, George Willauer, Leo J. Wojczynski.

SCHUYLKILL COUNTY MEDICAL SOCIETY.—L. D. Heim, Schuylkill Haven.

SOMERSET COUNTY MEDICAL SOCIETY.—H. C. Hoffman, Somerset.

SUSQUEHANNA COUNTY MEDICAL SOCIETY.—Lawrence M. Thompson, Montrose.

TIOGA COUNTY MEDICAL SOCIETY.—Lloyd G. Cole, Blossburg.

VENANGO COUNTY MEDICAL SOCIETY.—Elmer L. Dickey, Oil City.

WASHINGTON COUNTY MEDICAL SOCIETY.—James H. Corwin, John Ralph Maxwell, Samuel A. Ruben, Washington.

WESTMORELAND COUNTY MEDICAL SOCIETY.—Charles C. Crouse, D. R. Murdock, O. B. Snyder, Greensburg; William H. Taylor, Irwin.

YORK COUNTY MEDICAL SOCIETY.—John H. Bennett, Roland Jessup, Richard M. Klussmand, L. S. Landes, York; Roland S. Murt, Hellam; William S. Weakley, York; F. W. Wright, Hanover.

MINUTES OF THE SECTION ON EYE, EAR, NOSE, AND THROAT DISEASES

Tuesday, Oct. 1, 1935

The first meeting of the Section on Eye, Ear, Nose, and Throat Diseases convened at 2 p.m., in Room B of the Farm Show Building, Harrisburg, Chairman George W. Schlindwein, Erie, presiding.

Joseph I. Gouterman, Philadelphia, read a paper entitled "Macular Dystrophy," which was discussed by Luther C. Peter, Philadelphia; George F. Gracey, Harrisburg; Burton Chance, Philadelphia; and Dr. Gouterman, in closing.

Wilfred E. Fry, Philadelphia, read a paper entitled "Inflammatory Pseudotumors of the Orbit," which was discussed by Jay B. Rudolph and J. Thomas Krall, Philadelphia, and Dr. Fry, in closing.

James Watson White, New York City (guest), read a paper entitled "The Screen Test and Its Modifications."

Leonard G. Redding, Scranton, read a paper entitled "Vitamin Deficiency and Phlyctenular Disease," which was discussed by William Zentmayer, Philadelphia.

Henry W. George, Middletown, read a paper entitled "Ophthalmology of the Near East."

Isaac S. Tassman, Philadelphia, read a paper entitled "Problem Cases in Refraction," which was discussed by Alexander G. Fewell, Philadelphia.

P. Harold Decker, Williamsport, read a paper entitled "The Problem of Increased Intra-ocular Tension in Concussion Injuries of the Eye," which was discussed by Warren S. Reese, Philadelphia.

The Tuesday afternoon meeting adjourned.

* Where no address is given, Philadelphia is indicated.

Wednesday, Oct. 2, 1935

The Wednesday afternoon meeting convened at 2 o'clock, Chairman George W. Schlindwein presiding.

The Executive Committee made its report, nominating the following section officers for the ensuing year: Chairman, William Zentmayer, Philadelphia; secretary, Warren S. Reese, Philadelphia. On motion, duly seconded, these officers were declared elected.

The following Symposium on Sinuses was presented:

"The Clinical Anatomy and Development of the Paranasal Sinuses," by J. Parsons Schaeffer, Philadelphia.

"Etiology and Diagnosis of Sinusitis," by Walter D. Chase, Bethlehem.

"Roentgen-ray Diagnosis of Accessory Sinus Disease," by Willis F. Manges, Philadelphia.

"Treatment of Sinus Disease," by Arthur W. Proetz, St. Louis (guest).

There being no discussion of the papers presented, the Wednesday afternoon meeting adjourned.

Thursday, Oct. 3, 1935

The Thursday afternoon meeting convened at 1:30 o'clock, Chairman George W. Schlindwein presiding.

George B. Jobson, Franklin, presented for inspection an insulated electrosurgical snare for the removal of tonsils.

Matthew S. Ersner and David Myers, Philadelphia, presented a paper entitled "Outstanding Signs and Symptoms in Sinus Thrombosis—Merits and Demerits of Internal Jugular Ligation in the Treatment of Lateral Sinus Thrombosis," which was discussed by C. Wearne Beals, Dubois; J. Homer McCready, Pittsburgh; George B. Jobson, Franklin; George W. Mackenzie, Philadelphia; George F. Gracey, Harrisburg; John F. Culp, Harrisburg; John R. Simpson, Pittsburgh; and Dr. Ersner, in closing.

John B. Price, Norristown, read a paper entitled "Remote Symptoms in Upper Respiratory Infections," which was discussed by George M. Coates, George L. Whelan, and George W. Mackenzie, Philadelphia; and Dr. Price, in closing.

Chevalier L. Jackson, Philadelphia, read a paper entitled "Endoscopy for Foreign Body," which was discussed by William Edward Chamberlain (by invitation) and Louis H. Clerf, Philadelphia.

Max M. Strumia, Bryn Mawr (by invitation), read a paper entitled "Blood Pictures in Middle-Ear Infection with Special Reference to Differential Diagnosis and Prognosis," which was discussed by Curtis C. Eves, Philadelphia.

The Thursday afternoon meeting adjourned.

GEORGE W. SCHLINDWEIN, *Chairman*,
WARREN S. REESE, *Secretary*.

Members Registered in Section on Eye, Ear, Nose, and Throat Diseases

ALLEGHENY COUNTY MEDICAL SOCIETY.—J. C. Anderson, Robert G. Diess, Sharpsburg; Louis L. Friedman, M. W. Kneeder, C. F. Lauer, Thomas B. McCollough, Thomas H. Manley, Jr., M. H. Moss, Pittsburgh; I. E. Rowland, Elizabeth; Alvin A. Schlegel, John R. Simpson, Harvey E. Thorpe, Hunter H. Turner, Pittsburgh.

BERKS COUNTY MEDICAL SOCIETY.—Arthur A. Bobb, Paul C. Craig, Isaac B. High, James E. Landis, Solon L. Rhode, Jesse L. Wagner, Reading.

BLAIR COUNTY MEDICAL SOCIETY.—Harry B. Corl, Lewis P. Glover, S. P. Glover, Altoona; J. W. Hershberger, Martinsburg; W. E. Preston, J. W. Stitzel, Hollidaysburg.

BRADFORD COUNTY MEDICAL SOCIETY.—N. S. Weinberger, Sayre.

CAMBRIA COUNTY MEDICAL SOCIETY.—Herman G. Difenderfer, Beaverdale; Harold M. Griffith, Paul McCloskey, Johnstown; Edwin C. Miller, Portage; Ray Parker, Johnstown.

CARBON COUNTY MEDICAL SOCIETY.—William R. Bonner, Summit Hill; Clinton J. Kistler, Lehighton.

CENTER COUNTY MEDICAL SOCIETY.—J. V. Foster, State College.

CHESTER COUNTY MEDICAL SOCIETY.—Thomas G. Aiken, Berwyn.

CLARION COUNTY MEDICAL SOCIETY.—Frank Vierling, Knox.

CLEARFIELD COUNTY MEDICAL SOCIETY.—William S. Piper, Clearfield.

COLUMBIA COUNTY MEDICAL SOCIETY.—M. W. Freas, Berwick; G. P. Moser, Ringtown.

CRAWFORD COUNTY MEDICAL SOCIETY.—Maurice T. Leary, Meadville.

DAUPHIN COUNTY MEDICAL SOCIETY.—Byron B. Bobb, Harrisburg; Clarence C. Bobb, Lykens; John F. Culp, Gilbert L. Dailey, Matthew M. Douglas, Charles B. Fager, H. Hershey Farnsler, B. Milton Garfinkle, Forney P. George, Harrisburg; Henry W. George, Middletown; Louis C. Goldman, George F. Gracey, M. V. Hazen, Robert M. Hursh, Harrisburg; M. F. Kocovar, Steelton; Harold F. Lanshe, David I. Miller, Harrisburg; F. R. Perfect, Lykens; Lloyd C. Pierce, A. J. Podboy, George H. Seaks, J. W. Shaffer, Jay D. Smith, C. C. Stauffer, J. L. Zimmerman, Harrisburg.

DELAWARE COUNTY MEDICAL SOCIETY.—George H. Cross, C. Irwin Stiteler, Chester.

ELK COUNTY MEDICAL SOCIETY.—J. C. McAllister, Ridgway.

ERIE COUNTY MEDICAL SOCIETY.—G. W. Schlindwein, Erie.

FAYETTE COUNTY MEDICAL SOCIETY.—David E. Lowe, Uniontown.

FRANKLIN COUNTY MEDICAL SOCIETY.—Frank N. Emmert, Chambersburg.

HUNTINGDON COUNTY MEDICAL SOCIETY.—William T. Hunt, Huntingdon.

INDIANA COUNTY MEDICAL SOCIETY.—W. F. Weitzel, Indiana.

JEFFERSON COUNTY MEDICAL SOCIETY.—C. W. Beals, Dubois; Jacob A. Walter, Punxsutawney.

LACKAWANNA COUNTY MEDICAL SOCIETY.—F. J. Bishop, Scranton; C. D. Miller, Carbondale; Leonard G. Redding, M. M. Rosenberg, Merwyn M. Williams, Scranton.

LANCASTER COUNTY MEDICAL SOCIETY.—Roy Deck, W. H. Lefever, W. G. Moorehouse, J. Paul Roebuck, Lancaster.

LEBANON COUNTY MEDICAL SOCIETY.—Charles E. Gardner, Lebanon.

LEHIGH COUNTY MEDICAL SOCIETY.—William G. Hertz, George F. Seiberling, J. M. West, Allentown.

LUZERNE COUNTY MEDICAL SOCIETY.—Stanley W. Blazjewski, Ernest U. Buckman, Lewis T. Buckman, Samuel T. Buckman, Joseph V. Connole, Wilkes-Barre; John J. Dailey, Hazleton; Thomas R. Gagon, Pittston; Charles J. Kistler, Kingston; O. F. Kistler, Wilson C. Marsden, Wilkes-Barre; Lewis S. Reese, Kingston; O. C. Reiche, Hazleton; N. Louis Schappert, Wilkes-Barre; J. E. Scheifly, Kingston.

LYCOMING COUNTY MEDICAL SOCIETY.—H. P. Haskin, Wesley F. Kunkle, J. Gibson Logue, Williamsport.

McKEAN COUNTY MEDICAL SOCIETY.—F. S. Bodine, Kane; Persis S. Robbins, Bradford.

MERCER COUNTY MEDICAL SOCIETY.—B. A. Black, Grove City; Edith MacBride-Dexter, Sharon.

MIFFLIN COUNTY MEDICAL SOCIETY.—Paul M. Allis, James Koshland, Lewisburg.

MONROE COUNTY MEDICAL SOCIETY.—Walter L. Angle, East Stroudsburg.

MONTGOMERY COUNTY MEDICAL SOCIETY.—Joseph E. Biedeman, C. J. Flotte, Norristown; Cecil W. Hancock, Pottstown; John B. Price, Norristown.

MONTOUR COUNTY MEDICAL SOCIETY.—Reid Nebinger, Danville.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—Walter D. Chase, Bethlehem; C. C. Daigle, Easton; Paul H. Kleinhans, Bethlehem; Harry C. Pohl, Nazareth; George L. deSchweinitz, Bethlehem; F. W. Uhler, Easton.

NORTHUMBERLAND COUNTY MEDICAL SOCIETY.—W. S. Wentzel, Sunbury.

* PHILADELPHIA COUNTY MEDICAL SOCIETY.—Wm. H. Annesley, Leighton F. Appleman, Simon Ball, J. Allan Bertolet, Samuel Horton Brown, Seth A. Brumm, Mary Buchanan, Louis J. Burns, Miriam M. Butt, Burton Chance, George M. Coates, Samuel Cohen, John W. Croskey, Thomas R. Currie, L. W. Deichler, Louis K. Elfinan, M. S. Ersner, Curtis C. Eves, A. G. Fewell, John W. Froggatt, Wilfred E. Fry, Joseph I. Gouterman, Samuel B. Greenway, Otto C. Hirst, David N. Husik, C. L. Jackson, Chevalier Jackson, George E. Johnson, Kelvin A. Kasper, James H. Kates, Howard F. Keating, J. Thomas Krall, Daniel J. Langton, N. M. Levin, John E. Loftus, Robert M. Lukens, C. T. McCarthy, Geo. W. MacKenzie, Willis F. Manges, Edwin B. Miller, M. Valentine Miller, Edward K. Mitchell, George H. Moore, Upper Darby; Walter S. Nied, A. H. Perskey, Luther C. Peter, Paul J. Pontius, Thomas H. Price, John D. Reese, Warren S. Reese, Jay B. Rudolph, J. Parsons Schaeffer, George E. Schaffer, James S. Shipman, Merchantville, N. J.; William T. Shoemaker, B. H. Shuster, Henry O. Sloane, Morris Smith, Charles J. Swalm, Isaac S. Tassman, Gabriel Tucker, Arthur J. Wagers, William F. Whelan, Carrol S. Wright, Morris L. Yubas, William Zentmayer.

SCHUYLKILL COUNTY MEDICAL SOCIETY.—William J. Cress, Pottsville; Harry K. Hobbs, James J. Monahan, Shenandoah; I. E. Sausser, Valley View; T. Lamar Williams, Mt. Carmel.

SOMERSET COUNTY MEDICAL SOCIETY.—R. J. Heffley, Berlin; J. R. Hemminger, Henry I. Marsden, Somerset.

VENANGO COUNTY MEDICAL SOCIETY.—Joseph Aaronoff, Oil City; George B. Jobson, Franklin; F. Earle Magee, Oil City.

WESTMORELAND COUNTY MEDICAL SOCIETY.—Joseph G. Alter, New Kensington; Homer R. Mather, Latrobe; W. C. Toll, Monessen.

YORK COUNTY MEDICAL SOCIETY.—Charles L. Fackler, J. Ferdinand Klinedinst, Maurice C. Wentz, York.

MINUTES OF THE SECTION ON PEDIATRICS

Tuesday, Oct. 1, 1935

The Section on Pediatrics convened in Room D, Farm Show Building, Harrisburg, at 2:00 p.m.

The meeting was called to order by Chairman Francis T. O'Donnell, Wilkes-Barre.

A paper entitled "Plans of the State Health Department" was read by Edith MacBride-Dexter, Secretary of Health of the Commonwealth of Pennsylvania.

A paper entitled "Recent Advances in Nutrition" (lantern demonstration) was read by E. V. McCollum, Sc.D., Baltimore (guest).

A paper entitled "The Clinical Significance of Skeletal Roentgen-Ray Assessment in Children" (lantern demonstration) was read by T. Wingate Todd, Cleveland (guest).

A paper entitled "Conservation of Vision in the Child" was read by George E. de Schweinitz, Philadelphia. This paper was discussed by David H. Boyd, Pittsburgh.

A paper entitled "Recent Advances in the Bronchoscopy of Children" was read by Chevalier Jackson, Philadelphia. This paper was discussed by James K. Everhart, Pittsburgh.

The section adjourned at 5:00 p.m.

At 6:30 p.m. an informal subscription banquet was held at the Harrisburger Hotel for members and friends of the Pediatric Section, honoring the dean of Pennsylvania Pediatrics, J. P. Crozer Griffith, Philadelphia.

Dr. Griffith read a paper entitled "History and Recollections in the Development of Pediatrics in Philadelphia."

Wednesday, Oct. 2, 1935

The Section on Pediatrics convened in the Nurses' Auditorium of the Harrisburg Hospital at 2:00 p.m.

The first period of the program consisted of a clinic, at which time cases were presented by Mary E. Clough, Henry R. Douglas, Richard R. Spahr, and O. Benj. Millard. A paper accompanied each presentation.

A paper entitled "An Interesting Case of Bronchial Asthma in a Child" was presented by Mary E. Clough, Harrisburg.

A paper entitled "A Case of Splenohepatomegaly" was read by Henry R. Douglas, Harrisburg.

A paper entitled "An Unusual Congenital Anomaly as to Situation" was read by Richard R. Spahr, Mechanicsburg.

A paper entitled "An Unusual Endocrine Disturbance in a Child" was read by O. Benj. Millard, Harrisburg.

A paper entitled "Early Diagnosis of Acute Infec-

* Where no address is given, Philadelphia is indicated.

tious Osteomyelitis" was read by Carson Coover, Harrisburg. Dr. Coover did not present a case.

At this time the chairman called for the report of the Executive Committee, which was presented by Norbert D. Gannon, who submitted the name of Joseph Stokes, Jr., Philadelphia, for chairman, and of Theodore O. Elterich, Pittsburgh, for secretary, to serve for the ensuing year.

There being no further nominations, these candidates were unanimously elected.

The section then proceeded with the second period of the program which also assumed the form of a clinic, a case being presented with each paper. This period of the program concerned "The Normal Child—Illustrative Health Examination for Each Age Period." With the presentation of cases the following papers were presented: "Newborn Child," by John F. Sinclair; "Infant," by J. Claxton Gittings; "Preschool Child," by Emily P. Bacon; "School Child," by Howard Childs Carpenter; and "Adolescent Boy and Girl," by Frederick J. Kalteyer, all of Philadelphia.

A paper entitled "The Application of Mental Hygiene Methods in Pediatric Practice," was read by Harry M. Little, Pittsburgh.

A paper entitled "The School Physician and the Pediatrician" was read by Allen M. Kerr, Pittsburgh, representing the Pennsylvania School Physicians' Association. This paper was discussed by Norbert D. Gannon, Erie.

A paper entitled "Presentation of Cases Illustrating the Commoner Types of Mental Deficiency" (lantern demonstration and motion pictures) was read by Archibald Laird, Polk.

A paper entitled "Our Present Conception of the Treatment of Pneumonia in the Child in the Home" (motion pictures) was read by Ellsmer Piper, Pittsburgh.

This paper was discussed by H. B. Emerson, Erie, and Robert T. Devereux, West Chester.

The chairman then stated that on behalf of the section he wished to convey thanks and appreciation to Dr. Page, the nurses, and the hospital management for their coöperation in making the day's program a success, and to thank the mothers who had brought their children; also that the secretary of the section would be instructed to send a letter of appreciation to the superintendent of the hospital.

The section adjourned at 5:30 p.m.

Thursday, Oct. 3, 1935

The Section on Pediatrics convened at 1:45 p.m. in Room D, Farm Show Building, Harrisburg, and was called to order by the secretary, Theodore O. Elterich.

A paper entitled "Xanthomatosis (Hand-Schüller-Christian's Disease)" (lantern demonstration) was read by Hyman A. Slesinger, Windber.

At this time the chairman requested Alfred Hand, one of the persons for whom the disease is named, to make some comment on the subject. Dr. Hand commented very favorably on Dr. Slesinger's paper.

A paper entitled "Congenital Ectodermal Defect—Report of Case" was read by John D. Stevenson, Beaver.

A paper entitled "Further Studies on the Thymus and Pinal Glands" was read by Jefferson H. Clark, Philadelphia, one of the co-authors. This paper was prepared by Leonard G. Rowntree, Nathan H. Einhorn, Wm. A. Shannon, A. Steinberg, Adolph M. Hanson, and Dr. Clark, of the Philadelphia Institute for Medical Research in the Philadelphia General Hospital, the

laboratories of the Philadelphia General Hospital, and the Hanson Research Laboratory, Faribault, Minnesota.

A paper entitled "Problems in the Neurosurgery of Children" (lantern demonstration) was read by Charles H. Frazier, Philadelphia. This paper was discussed by George J. Feldstein, Pittsburgh.

A paper entitled "Significant Factors Resulting from the Studies of the Emergency Child Health Committees of Pennsylvania" was read by Samuel McC. Hamill, Philadelphia, and Henry T. Price, Pittsburgh. The discussion was opened by Joseph S. Brown, Lewistown; Chas. H. Smith, Uniontown; and Robert M. Alexander, Reading.

A paper entitled "Pediatric Therapeutics" was read by William N. Bradley, Philadelphia. This paper, which was to be discussed by W. Frederick Mayer, Johnstown, was discussed by Henry T. Price, Pittsburgh.

A paper entitled "Modern Methods of Preventing Measles" (lantern demonstration) was read by Lloyd W. Pumphrey, Pittsburgh, and Joseph S. Baird, Pittsburgh.

A paper entitled "How to Eradicate Diphtheria from Pennsylvania" was read by Henry J. Benz, Pittsburgh.

The 2 latter papers were discussed by J. Moore Campbell, Harrisburg.

The section adjourned, *sine die*, at 4:30 p.m.

FRANCIS T. O'DONNELL, *Chairman*,
THEODORE O. ELTERICH, *Secretary*.

Members Registered in Section on Pediatrics

ALLEGHENY COUNTY MEDICAL SOCIETY.—Joseph S. Baird, Henry J. Benz, D. H. Boyd, Pittsburgh; Victor W. Cowan, McKeesport; Theodore O. Elterich, James K. Everhart, George J. Feldstein, Pittsburgh; F. Janvier, Nanty Glo; Allen M. Kerr, Harry M. Little, E. R. McCluskey, Ellsmer L. Piper, Henry T. Price, David Steinman, Pittsburgh; Herbert E. Woelfel, Bellevue.

BEAVER COUNTY MEDICAL SOCIETY.—George B. Rush, Aliquippa; John D. Stevenson, Beaver.

BERKS COUNTY MEDICAL SOCIETY.—William E. Fisher, Henry L. Kieser, Reading; Donald G. Moyer, Wyomissing; George W. Overholser, Reading.

BLAIR COUNTY MEDICAL SOCIETY.—Frank Keagy, Ellwood W. Stitzel, Altoona.

BRADFORD COUNTY MEDICAL SOCIETY.—Mahlon B. Ballard, Troy; C. Melvin Coon, Athens.

CAMBRIA COUNTY MEDICAL SOCIETY.—H. A. Slesinger, Windber.

CENTER COUNTY MEDICAL SOCIETY.—Charles H. Light, Center Hall; Thomas G. McQueen, Millheim; Clara B. Owens, State College.

CHESTER COUNTY MEDICAL SOCIETY.—Robert T. Devereux, West Chester; James T. Taylor, Pomeroy.

CLEARFIELD COUNTY MEDICAL SOCIETY.—James L. Cornely, Morrisdale; Dorothea F. McClure, Clearfield; Milton U. McIntyre, Dubois; John M. Quigley, Clearfield.

CRAWFORD COUNTY MEDICAL SOCIETY.—Luther J. King, Meadville.

CUMBERLAND COUNTY MEDICAL SOCIETY.—Richard R. Spahr, Mechanicsburg.

DAUPHIN COUNTY MEDICAL SOCIETY.—Mary E. Clough, Samuel J. Dickey, Henry R. Douglas, Sr.,

Harrisburg; Ruby C. Lehman, Middletown; O. Ben Millard, Mary Riggs Noble, Arthur L. Page, Harrisburg; John R. Plank, Steelton; R. F. Richie, Harrisburg.

DELAWARE COUNTY MEDICAL SOCIETY.—Alla Nekrasova, Lansdowne; Walter E. Wentz, Jr., Media.

ERIE COUNTY MEDICAL SOCIETY.—H. B. Emerson, Norbert D. Gannon, Erie.

FAYETTE COUNTY MEDICAL SOCIETY.—Herbert E. Hall, John D. Sturgeon, Jr., Uniontown.

FRANKLIN COUNTY MEDICAL SOCIETY.—James H. Swan, St. Thomas.

HUNTINGDON COUNTY MEDICAL SOCIETY.—Walter Orthner, Huntingdon.

INDIANA COUNTY MEDICAL SOCIETY.—Milton Auslander, Indiana.

JEFFERSON COUNTY MEDICAL SOCIETY.—J. Gardner Kearney, Reynoldsville.

LACKAWANNA COUNTY MEDICAL SOCIETY.—Vincent T. Curtin, Scranton; David E. Lewis, Peckville.

LANCASTER COUNTY MEDICAL SOCIETY.—G. A. Sayres, Lancaster; Arlene B. Schlott, Ephrata; E. Kearney Smith, Lancaster; Paul H. Ulrich, Elizabethtown; M. H. Yoder, Lititz.

LAWRENCE COUNTY MEDICAL SOCIETY.—Mary J. Baker, Rozella Popp, New Castle.

LEBANON COUNTY MEDICAL SOCIETY.—J. DeWitt Kerr, Lebanon.

LEHIGH COUNTY MEDICAL SOCIETY.—Frederick R. Bausch, Thomas H. Weber, Allentown.

LUZERNE COUNTY MEDICAL SOCIETY.—J. J. Korn, Nanticoke; Francis T. O'Donnell, Wilkes-Barre.

LYCOMING COUNTY MEDICAL SOCIETY.—Robert K. Rewalt, Williamsport.

MIFFLIN COUNTY MEDICAL SOCIETY.—H. C. Cassidy, Lewistown.

MONROE COUNTY MEDICAL SOCIETY.—Charles S. Flagler, Stroudsburg.

MONTGOMERY COUNTY MEDICAL SOCIETY.—Louise C. Glockner, Conshohocken; Percival Nicholson, Ardmore; D. Stewart Polk, Rosemont; J. K. Williams Wood, Willow Grove.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—H. O. Rohrbach, Bethlehem; Lewis A. Smith, Pen Argyl.

NORTHUMBERLAND COUNTY MEDICAL SOCIETY.—William J. Jacoby, Emily R. Shipman, Mt. Carmel.

PHILADELPHIA COUNTY MEDICAL SOCIETY.—Emily P. Bacon, S. Lincoln Baron, Edward L. Bauer, Leonard F. Bender, Israel Binder, Rudolph Bloom, William N. Bradley, Philadelphia; Ralph S. Bromer, Bryn Mawr; Howard Childs Carpenter, Walter S. Cornell, Jean Crump, G. E. deSchweinitz, Carl C. Fischer, John C. Gittings, Samuel Goldberg, Harry W. Goos, Alfred Hand, Samuel McC. Hamill, Thomas Charles Kelly, Harry Lowenburg, Pascal F. Lucchesi, Herbert Rovno, Philadelphia; B. Franklin Royer, Tunkhannock; John Porter Scott, John F. Sinclair, Joseph Stokes, Jr., Ralph M. Tyson, Philadelphia; J. Rey Van Meter, Elkins Park; Miriam Warner, Ruth H. Weaver, Philadelphia.

SCHUYLKILL COUNTY MEDICAL SOCIETY.—Ella R. Summa, Shenandoah.

VENANGO COUNTY MEDICAL SOCIETY.—Archibald Laird, Polk.

WASHINGTON COUNTY MEDICAL SOCIETY.—Robert A. Knox, Washington; Edwin M. McKay, Charleroi; F. I. Patterson, Washington.

WESTMORELAND COUNTY MEDICAL SOCIETY.—Sonia Cheifetz, Greensburg.

YORK COUNTY MEDICAL SOCIETY.—H. C. Hetrick, Lewisberry; William A. Myers, W. R. Swartzwelder, York.

MINUTES OF THE SECTION ON DERMATOLOGY

Tuesday, Oct. 1, 1935

The Section on Dermatology met on the second floor of the Farm Show Building, Harrisburg, and was called to order by Chairman Robert L. Gilman, Philadelphia, at 2:00 p.m.

There was a short business session. The Executive Committee reported nominations as follows: Chairman, Abram Strauss, Philadelphia; secretary, Lawrence G. Beinhauer, Pittsburgh.

The resignation of Frederick M. Jacob, Pittsburgh, as secretary for the meeting, was offered, and Lawrence G. Beinhauer, Pittsburgh, was made temporary acting-secretary.

The chairman called for nominations from the floor, but none was forthcoming and a motion that the nominations be closed was unanimously carried. Drs. Strauss and Beinhauer were declared chairman and secretary, respectively, for the ensuing year.

Vaughn C. Garner, Philadelphia, introduced Harry M. Robinson, Baltimore, and moved that this visitor be granted the courtesy of the floor. The motion was carried.

During the first period from 2:00 to 2:55 p.m., the following papers were read: "A Practical Consideration of Carcinoma of the Skin," by Charles L. Schmitt, Pittsburgh; "Resistant Syphilis," by Sigmund S. Greenbaum, Philadelphia; "The Patch Test in the Determination of Arspenamine Sensitization," by Herman Beerman, Philadelphia.

These papers were discussed by Lester Hollander, Pittsburgh; Carroll S. Wright, Philadelphia; Harry M. Robinson, Baltimore; and Drs. Greenbaum, Schmitt, and Beerman, in closing.

In the second period from 3:00 to 3:55, Earl D. Osborne (guest), Buffalo, N. Y., presented a paper entitled "Industrial Dermatoses" (lantern demonstration).

In the third period from 4:00 to 4:55 p.m., the following papers were read: "Diagnosis and Treatment of Pellagra," by George J. Busman, Pittsburgh; "Sporotrichosis," by Lawrence G. Beinhauer, Pittsburgh; "Pityriasis Rubra Pilaris," by Mashel F. Pettler, Beaver Falls.

These papers were discussed by Stanley Crawford, Pittsburgh; Earl D. Osborne, Buffalo; and Robert L. Gilman and Vaughn C. Garner, Philadelphia.

A rising vote of thanks was given to Dr. Osborne, guest speaker, for his excellent presentation.

The meeting adjourned.

ROBERT L. GILMAN, *Chairman*,
LAWRENCE G. BEINHAUER, *Secretary*.

Members Registered in Section on Dermatology

ALLEGHENY COUNTY MEDICAL SOCIETY.—Lawrence G. Beinhauer, Daniel N. Bulford, George J. Busman, Stanley Crawford, Pittsburgh; Abraham Fisher, McKeesport; Lester Hollander, Frederick M. Jacob, Zoe Allison Johnston, George S. Reetenwald, Charles L. Schmitt, Joseph M. Shelton, Pittsburgh.

BEAVER COUNTY MEDICAL SOCIETY.—Mashel F. Petter, Beaver Falls.

BERKS COUNTY MEDICAL SOCIETY.—Thomas Butterworth, Reading.

CAMBRIA COUNTY MEDICAL SOCIETY.—J. Walter Barr, Johnstown.

DAUPHIN COUNTY MEDICAL SOCIETY.—Park A. Deckard, Joseph H. Gerdes, Harrisburg.

LACKAWANNA COUNTY MEDICAL SOCIETY.—William D. Whitehead, Scranton.

LUZERNE COUNTY MEDICAL SOCIETY.—James A. Conlan, Pittston.

LYCOMING COUNTY MEDICAL SOCIETY.—B. H. Hamner, Williamsport.

MIFFLIN COUNTY MEDICAL SOCIETY.—O. M. Weaver, Lewistown.

PHILADELPHIA COUNTY MEDICAL SOCIETY.—Herman Beerman, Edward F. Corson, Vaughn C. Garner, Robert L. Gilman, S. S. Greenbaum, Jacques P. Guequierre, Frank C. Knowles, J. F. McCahey, Lorenzo F. Milliken, Henry G. Munson, C. W. Ostrum, George E. Pfahler, Henry Sangree, William G. Shields, Jr., Herbert J. Smith, A. Strauss, Philadelphia.

WESTMORELAND COUNTY MEDICAL SOCIETY.—N. L. Kerr, Scottdale.

MINUTES OF THE SECTION ON UROLOGY

Wednesday, Oct. 2, 1935

The Section on Urology convened on the second floor of the Farm Show Building, Harrisburg, at 2 p.m. and was called to order by Chairman George A. Holliday.

James L. Whitehill, Rochester, opened the session with the presentation of a paper entitled "Fibrous Stricture of the Urethra," which was discussed by Ralph P. Beatty, Uniontown.

Henry G. Bugbee, New York City (guest), read a paper on "Cancer of the Prostate," which was discussed by Henry Sangree, Philadelphia.

A paper on "The Treatment of the Chronically Infected Prostate" was read by Lorenzo F. Milliken, Philadelphia. This paper was discussed by Joseph C. Birdsall, Philadelphia.

William C. Bryant, Pittsburgh, presented a paper entitled "Inflammation of the Urinary Bladder—A Case of Gangrenous Cystitis," which was discussed by Benjamin R. Almquist, Pittsburgh.

A paper on "The Etiology, Diagnosis, and Treatment of Hydronephrosis" (lantern demonstration) was presented by Joseph C. Birdsall, Philadelphia. This paper was discussed by Lorenzo F. Milliken, Philadelphia; Elmer Hess, Erie; Henry Sangree, Philadelphia; and Dr. Birdsall, in closing.

A paper entitled "The Experimental Production of Enlargement of the Prostate and Accessory Sex Organs

in the Rat" was presented by James F. McCahey, Philadelphia, and David Soloway, Philadelphia (by invitation). This paper was discussed by D. Roy McCullagh, Cleveland.

Thursday, Oct. 3, 1935

The second session met at 1:30 p.m. Chairman Holliday, owing to the absence of the Executive Committee, had appointed a committee consisting of S. M. Hankey, Joseph C. Birdsall, and P. P. Mayoek to place in nomination officers for 1936.

The report of the Committee was as follows: Chairman, Carlyle Haines, Sayre; secretary, David P. McCune, McKeesport; executive committee—George A. Holliday, Pittsburgh; Willard H. Kinney, Philadelphia; and Edgar S. Everhart, Harrisburg. Upon motion, regularly seconded and carried, the recommendations of the Executive Committee were approved and these officers unanimously elected.

The first paper presented at the afternoon session was entitled "Urinary Hemorrhage—A Symptom not a Disease," by Elmer Hess, Erie. This paper was discussed by Theodore R. Fetter, Philadelphia.

George E. Pfahler, Philadelphia, read a paper on "The Diagnosis and Treatment of Cancer of the Bladder by Means of the Roentgen Ray" (lantern demonstration). This paper was discussed by Theodore R. Fetter and Lloyd B. Greene, Philadelphia; Elmer Hess, Erie; and Dr. Pfahler, in closing.

A paper on "Ureteral Transplants" (lantern demonstration) was presented by George V. Foster, Pittsburgh, which was discussed by Alexander Randall, Philadelphia and Carlyle N. Haines, Sayre.

Leon Herman, Philadelphia, presented a paper on "Vesical Diverticulum" (lantern demonstration), with Lloyd B. Greene, Philadelphia. This was discussed by Carlyle N. Haines, Sayre; David P. McCune, McKeesport; Lloyd B. Greene, Philadelphia; and Dr. Herman, in closing.

A paper entitled "Calculi Formation in Fracture or Traumatic Group" was read by Edward J. McCague, Pittsburgh. This was discussed by Alexander Randall, Philadelphia; Elmer Hess, Erie; Leon Herman, Philadelphia; Lloyd B. Greene, Philadelphia; and Dr. McCague, in closing.

"The Diagnosis of Neurogenic Bladder by Means of a Cystometer" (lantern demonstration) was presented by Maurice Muschat, Philadelphia. This was discussed by Abraham Rubenstone, Philadelphia; Alexander Randall, Philadelphia; and Dr. Muschat, in closing.

The meeting adjourned.

GEORGE A. HOLLIDAY, *Chairman*,
DAVID P. MCCUNE, *Secretary*.

Members Registered in Section on Urology

ALLEGHENY COUNTY MEDICAL SOCIETY.—Benjamin R. Almquist, Robert L. Anderson, William C. Bryant, Glenn H. Davison, Stacy M. Hankey, George A. Holliday, Clifford M. Lane, Pittsburgh; David P. McCune, McKeesport; Alfred A. Zangrilli, Pittsburgh.

BEAVER COUNTY MEDICAL SOCIETY.—James L. Whitehill, Beaver.

BERKS COUNTY MEDICAL SOCIETY.—David S. Grim, Ralph L. Reber, Reading.

BRADFORD COUNTY MEDICAL SOCIETY.—John R. Haines, Sayre.

CAMBRIA COUNTY MEDICAL SOCIETY.—Daniel P. Ray, Johnstown.

DAUPHIN COUNTY MEDICAL SOCIETY.—Edgar S. Everhart, Lemoyne; John H. Fager, Jr., Samuel L. Grossman, Paul S. Herr, John L. Lanshe, John Oen-slager, Jr., J. W. Plowman, S. J. Roberts, Louis W. Wright, Harrisburg.

DELAWARE COUNTY MEDICAL SOCIETY.—Walter A. Blair, Chester.

ERIE COUNTY MEDICAL SOCIETY.—Elmer Hess, Erie.

FAYETTE COUNTY MEDICAL SOCIETY.—Ralph P. Beatty, Uniontown.

JEFFERSON COUNTY MEDICAL SOCIETY.—Hollister W. Lyon, Punxsutawney.

LACKAWANNA COUNTY MEDICAL SOCIETY.—Paul F. Kerstetter, Scranton.

LANCASTER COUNTY MEDICAL SOCIETY.—Harry Pom-erantz, Lancaster.

LEBANON COUNTY MEDICAL SOCIETY.—Paul S. Sea-bold, Lebanon.

LEHIGH COUNTY MEDICAL SOCIETY.—W. C. Mason-heimer, Allentown.

LUZERNE COUNTY MEDICAL SOCIETY.—William Baurys, Nanticoke; William J. Daw, Forty Fort; August G. Hinrichs, West Pittston; Francis P. Judge, Miners Mills; Charles W. Letcher, Peter P. Mayock, Wilkes-Barre; Thomas H. Murphy, Duryea; James B. Purcell, Wilkes-Barre; H. B. Wilcos, Kingston.

LYCOMING COUNTY MEDICAL SOCIETY.—J. Stanley Smith, Williamsport.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—B. M. Hance, Easton.

PHILADELPHIA COUNTY MEDICAL SOCIETY.—Theodore R. Fetter, Leon Herman, Maurice Muschat, Alexander Randall, Philadelphia.

SCHUYLKILL COUNTY MEDICAL SOCIETY.—James E. McDowell, Pottsville; Joseph J. Mullen, Shenandoah.

YORK COUNTY MEDICAL SOCIETY.—C. C. Neff, York.

Members Registered, Section Not Designated

ALLEGHENY COUNTY MEDICAL SOCIETY.—William H. Mayer, Pittsburgh; Harold A. Miller, Harrisburg.

BERKS COUNTY MEDICAL SOCIETY.—Norman W. El-ton, George Major, S. Banks Taylor, Reading.

BLAIR COUNTY MEDICAL SOCIETY.—G. E. Boesinger, Altoona.

BUTLER COUNTY MEDICAL SOCIETY.—D. Gordon Jones, Butler.

CAMBRIA COUNTY MEDICAL COUNTY.—S. D. Boucher, Portage.

CENTER COUNTY MEDICAL SOCIETY.—Joseph A. Par-rish, Bellefonte.

CHESTER COUNTY MEDICAL SOCIETY.—A. H. Pierce, Coatesville.

CRAWFORD COUNTY MEDICAL SOCIETY.—R. E. Brenne-man, Meadville.

CUMBERLAND COUNTY MEDICAL SOCIETY.—S. I. Cad-wallader, West Fairview; J. Bruce McCreary, Ship-pensburg.

DAUPHIN COUNTY MEDICAL SOCIETY.—Howard A. Coyer, New Cumberland; Henry R. Douglas, Jr., John H. Harris, J. H. Kreider, W. M. Kunkel, H. A. Lakin, P. A. Petrie, A. Z. Ritzman, Harrisburg; Henry R. Shallenberger, Hershey; Harvey A. Stine, Herman H. Van Horn, Harrisburg.

DELAWARE COUNTY MEDICAL SOCIETY.—P. J. Ken-nedy, Lansdowne.

FAYETTE COUNTY MEDICAL SOCIETY.—James H. Wil-son, Belle Vernon.

HUNTINGDON COUNTY MEDICAL SOCIETY.—John M. Keichline, Huntingdon.

JUNIATA COUNTY MEDICAL SOCIETY.—W. H. Banks, Mifflintown.

LANCASTER COUNTY MEDICAL SOCIETY.—H. B. Davis, Lancaster; B. Elizabeth Herbert, Columbia; Jacob E. Hostetter, R. D. 1, Gap; Louise E. Keasly, S. W. Miller, Lancaster; H. G. Reemsnyder, Ephrata; N. H. Rupp, Akron; G. W. Stoler, Lancaster; Vere Treichler, Elizabethtown.

LEHIGH COUNTY MEDICAL SOCIETY.—W. J. Fetherolf, Steinsville; Martin S. Kleckner, Allentown; Asher G. Kreibel, Lynnville; E. H. Mohr, Jr., Alburtis; Wil-liam J. Schatz, Allentown.

LUZERNE COUNTY MEDICAL SOCIETY.—W. S. Carter, Hazleton; George A. Clark, Anatole Desjardins, G. N. Fluegel, J. B. Tobias, Wilkes-Barre.

LYCOMING COUNTY MEDICAL SOCIETY.—C. L. Young-man, Williamsport.

MIFFLIN COUNTY MEDICAL SOCIETY.—George R. Bar-nett, R. R. Decker, Lewistown.

MONTGOMERY COUNTY MEDICAL SOCIETY.—R. K. Powell, Rosemont.

MONTOUR COUNTY MEDICAL SOCIETY.—George B. M. Free, York; Edward B. Shellenberger, Danville.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—Carl Gaines, Easton; E. A. N. Seyfried, Nazareth.

NORTHUMBERLAND COUNTY MEDICAL SOCIETY.—Chester A. Marsh, Selinsgrove.

PERRY COUNTY MEDICAL SOCIETY.—Henry B. Hoff, Liverpool.

PHILADELPHIA COUNTY MEDICAL SOCIETY.—Charles H. Frazier, Walter A. Graham, J. Garrett Hickey, Ber-nard D. Judovich, M. Fraser Percival, Philadelphia; Joseph W. Post, Wyncote.

SCHUYLKILL COUNTY MEDICAL SOCIETY.—J. W. Schultz, Tremont.

WASHINGTON COUNTY MEDICAL SOCIETY.—Guy H. McKinstry, Washington.

WAYNE-PIKE COUNTY MEDICAL SOCIETY.—Robert G. Barckley, Milford.

YORK COUNTY MEDICAL SOCIETY.—Edward J. Fisher, Dallastown; C. H. Venus, York.

Guest Physicians

Walter E. Dandy, E. V. McCollum, Baltimore; Earl D. Osborne, Buffalo; Max Thorek, Chicago; Allen Graham, T. Wingate Todd, Cleveland; Harold M. Marvin, New Haven; Henry G. Bugbee, James A. Miller, Allen O. Whipple, James W. White, New York

City; Arthur W. Proetz, St. Louis; Frederick F. Tisdall, Toronto, Ontario.

Visitors

Henry I. Klopp, Allentown, representing Pennsylvania Homeopathic Society; Daniel C. Baker, Jr., Philadelphia; Arthur Baptiste, Jr., Harrisburg; B. R. Beale, Lemoyne; C. R. Brandt, Mechanicsburg; L. Emmitt Brown, Jr., Philadelphia; Herman R. Bull, Jr., Allentown; Leonard F. Bush, Michael Cammarata, Danville; Noble F. Crandall, F. W. Deardorff, Philadelphia; William H. Dearing, Danville; M. A. DeLaney, Carlisle; Arthur M. Dewees, Paoli; William C. Diess, Jr., Sharpsburg; Garfield G. Duncan, Philadelphia; Harris Fisher, Pittsburgh; William M. Fitzhugh, Jr., Philadelphia; John S. Gates, Lebanon; G. H. Gillis, Wiconisco; Mary A. Gleckner, Harrisburg; William E. Glosser, Williamsport; Chester A. Good, D.D.S., Harrisburg; Marvin C. Goodman, Altoona; Anna P. Halkovich, Harrisburg; George P. Heffner, Philadelphia; Asa L. Hickok, Somerset; Clark Hollister, D.D.S., Harrisburg; Stephen A. Jones, Nanticoke; W. G. Karr, Philadelphia; Wayde D. Kelly, D.D.S., Harrisburg; Paul B. Kietz, Bethlehem; C. H. Kivler, Retreat; H. M. Kirkpatrick, D.D.S., Harrisburg; Edgar W. Kline, York; Edward S. Kronenburg, Jr., Carlisle; C. W. Lindeman, Allentown; A. E. Livingston, D. A. McKinnon, Jr., Lewis C. Manges, Jr., Hans May, Philadelphia; E. W. Meiser, Lancaster; Freeman Weeks Metzger, Arthur Rappoport, Philadelphia; E. T. Rhodes, York; Neil C. Rogers, Lancaster; James T. Rountree, Lewisburg; Eugene Ruskin, Nanticoke; C. E. Rutter, Northumberland; Della M. Ryan, William C. Ryan, Philadelphia; Paul H. Schraer, Harrisburg; Mary Ellen Smith, Salem, N. J.; M. C. Stayer, Carlisle; Max M. Strumia, Penn Valley; Edward Suckle, Harrisburg; Ralph W. Thumma, Schaefferstown; E. L. Walmer, Harrisburg; A. C. Wappler, College Point, N. Y.; Frederic B. Westervelt, Pittsburgh; McClellan Wilson, Jr., Pennhurst; Paul L. Yingling, Latrobe; G. A. Zimmerman, Harrisburg; L. A. Zinsmeister, Sproul; Robert R. Gaw, Ph.G., Pittsburgh, representing Pennsylvania Pharmaceutical Association; Esther R. Entriiken, R.N., Harrisburg, representing Pennsylvania Nurses' Association; Richard B. Cattell, Boston; W. Edward Chamberlain, Philadelphia; Robert Charr, White Haven; Charles Geschickter, Baltimore; Thomas S. Lee, Washington, D. C.; George C. McElfatrick, Wilmington, Del.; James F. Percy, Los Angeles; Robert T. Phillips, Boston; William H. Stoner, Tuckahoe, N. Y.; Ralph F. Young, Baltimore.

Registration of Members by Counties

	Membership	At Harrisburg
Adams	25	8
Allegheny	1305	118
Armstrong	48	3
Beaver	89	8
Bedford	15	2
Berks	171	62
Blair	98	19
Bradford	39	9
Bucks	60	3
Butler	49	2
Cambria	173	24
Carbon	32	4
Center	24	13

	Membership	At Harrisburg
Chester	105	15
Clarion	29	3
Clearfield	62	14
Clinton	23	5
Columbia	33	9
Crawford	56	4
Cumberland	39	12
Dauphin	206	178
Delaware	159	19
Elk	24	4
Erie	158	15
Fayette	109	13
Franklin	62	17
Greene	25	2
Huntingdon	29	12
Indiana	46	8
Jefferson	48	6
Juniata	5	3
Lackawanna	258	34
Lancaster	173	66
Lawrence	74	6
Lebanon	33	12
Lehigh	149	30
Luzerne	322	78
Lycoming	115	43
McKean	49	6
Mercer	72	4
Mifflin	26	19
Monroe	26	6
Montgomery	188	32
Montour	40	18
Northampton	139	35
Northumberland	81	17
Perry	11	4
Philadelphia	2122	283
Potter	13	...
Schuylkill	159	26
Somerset	40	9
Susquehanna	15	1
Tioga	26	3
Venango	56	7
Warren	45	3
Washington	138	10
Wayne-Pike	22	1
Westmoreland	163	19
Wyoming	14	...
York	142	29

Total Registered Attendance of Members .. 1415
(The total registered attendance of members at the last Harrisburg Session in 1925 was 1005.)

Summary of Registered Attendance

Members	1415
Guest physicians, including interns	71
Total physicians	1486
Dentists	4
Woman's Auxiliary	446
Other visitors	16
Grand total registered attendance	1952

Two English authorities consider whooping cough the most important epidemic disease in London in causing physical suffering, loss of school attendance, impairment of physique, and mortality.—*Science News Letter*, Sept. 28, 1935.

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

THE HARRISBURG SESSION

The 1935 meeting of The Medical Society of the State of Pennsylvania which may well be remembered for a number of years at least as the Harrisburg session, was marked by many evidences of painstaking preparation on the part of the local committees on arrangements, who had labored for months in advance of the first week in October.

We believe we cannot better express the underlying motive of the endeavors of the members of the Dauphin County Medical Society, which were climaxed in a series of successful events and comfort-assuring preparations, than to quote from the greeting extended to all who registered, as it was printed on the first page of the Convention Issue of the *Dauphin Medical Academician*, the official journal of the county medical society and the Harrisburg Academy of Medicine, as follows:

A sincere expression of welcome is extended to the Eighty-fifth Annual Meeting of the Medical Society of the State of Pennsylvania, in Harrisburg, Sept. 30 to Oct. 3, 1935. . . . To make this session a memorable experience is to materialize the fondest dream of the Dauphin County Medical Society.

The contents of the *Academician* were comprehensive in scope; the booklet was illustrated in good taste, and handsomely bound—all in all, a 60-page publication of great credit to its editorial staff and eminently characteristic of the organizations which it represents, whose transactions and progress it voices from month to month throughout the year.

REGISTRATION

A total of 1415 members of the State Society registered at the Harrisburg session. At the last previous session of the State Society held in Harrisburg, in 1925, the total registration of members was 1009. It is hoped that at the 1936 session, which will be held in Pittsburgh, there will be a total registration of 1900 members, with a grand total of 2100 physicians—including members, guests, and interns. (Total registration of physicians at Pittsburgh Session in 1932 was 1890.)

On page 130 of this issue of the JOURNAL may be found an interesting comparison between the number of members of your own county medical society and the number who registered

at Harrisburg. There are observers and commentators who are inclined to use as one of several measuring sticks for computing the advancement and interest of the component societies in medical organizational affairs the rate of growth in their members' attendance at the State Society's annual meetings.

MEDICAL SERVICE IN STATE-OWNED SCHOOLS

The House of Delegates for a number of years has been engaged with the discussion of the subject of contract medical practice in state-owned schools. A report on the subject by a committee of the Board of Trustees (published in the Sept., 1934, JOURNAL) proved unsatisfactory to the 1934 House of Delegates. The report of a committee of the House of Delegates (published in the Sept., 1935, JOURNAL), which again brought forth free discussion, resulted in action which for the first time, in our opinion, approves a set of rules definitely applicable to any specific form of contract practice.

A copy of the rules, which in 1932 were promulgated by the State Department of Public Instruction and accepted by the presidents of the various state teachers' colleges, has been forwarded to the officers of our component societies in the counties in which state-owned schools are located. All members of the society, however, should be interested in reading not only the rules (see page 107) but the committee's report, also the discussion recorded and published in the minutes of the House of Delegates in this issue of the JOURNAL (page 106).

CALLS UPON OFFICERS' TIME AND ENERGY

Attention is directed to the remarks of President Alexander H. Colwell as published in this issue (page 108) in the minutes of the meeting of the House of Delegates, Wednesday, Oct. 2, relative to the demands which are made upon the president and the president-elect of our society for their attendance upon county medical society meetings. Apparently there will always remain a few instances in which the officer or committeeman responsible for a given program of a county medical society meeting, not having had the foresight and energy to prepare his program in advance, at a perilously late date in desperation calls upon the president or the president-elect of the State Society to fill his program

for a meeting which will be attended by only a handful of the members of the society. It is in keeping with the avowed purposes of our State Society that its chief executive officer shall be informed and competent to appear before large lay organizations having health interests. However, in order to conserve his time and energy, his fellow members throughout the state should be thoughtful and permit him, except in certain particular instances, to limit his appearances before our membership to program assignments at annual councilor district meetings.

WORKING HOURS FOR NURSES

The problem of reduced working hours for nurses was briefly discussed recently at the opening General Meeting of the 1935 session of our society by the delegate from the Pennsylvania State Nurses' Association. It was also the subject of an official communication from the nurses' organization (see page 111, this issue of the JOURNAL). Being recognized by the House of Delegates as requiring studious consideration the subject was referred for study to a committee of the Board of Trustees. Chairman Edgar S. Buyers has appointed on this committee Drs. Robert L. Anderson, Augustus S. Kech, and Laurrie D. Sargent, and they have already invited comment from members qualified to express an opinion on the subject.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contributions to the Fund:

Woman's Auxiliary, Lackawanna County Medical Society	\$200.00
Woman's Auxiliary, Indiana County Medical Society	50.00
Dr. Moses Behrend, Philadelphia	50.00
Woman's Auxiliary, Bucks County Medical Society	10.00

Total contributions since 1935 report ... \$626.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to October 11:

ALLEGHENY: *New Members*—William C. DeNinno, 1139 Heberton Ave.; Smith D. Morton, Jenkins Bldg.; N. T. Segall, 7201 Hamilton Ave.; Nathan S. Rubin, 5881 Darlington Road; James A. Zewe, 646 Mt. Washington Road, Mt. Lebanon, Pittsburgh. *Reinstated Member*—Kenneth D. Eskey, 237 Brownsville Road, Pittsburgh. *Death*—Heinz Langer, Pittsburgh (Friederich-Alexanders-Universitat Medizinische Fakultät, Bavaria, '17), Sept. 28, aged 47; Ralph V. Robinson, Pittsburgh (Univ. Pgh. '11), Oct. 5, aged 51.

CAMBRIA: *New Member*—Lycurgus M. Gurley, Jr., 406 Main St., Johnstown. *Death*—Stanley A. E. Bral-

lier, Conemaugh (Med. Chi. Coll., Phila. '99), Aug. 29, aged 66.

CARBON: *New Member*—Michael S. Merman, Nesquehoning.

CHESTER: *Reinstated Member*—Frederick A. Riemann, Parkesburg. *Death*—Willis N. Smith, Phoenixville (Univ. Pgh. '92), recently, aged 77.

CUMBERLAND: *New Members*—Edward S. Kronenberg, Jr., Carlisle. *Transfer*—Charles R. Brandt, Mechanicsburg, from Dauphin County Society. *Death*—Jacob B. Spangler, Mechanicsburg (Jeff. Med. Coll. '86), Oct. 7, aged 72.

DAUPHIN: *New Member*—William B. Fulton, 190 Centerfield Road, Progress.

LANCASTER: *Death*—Asher F. Snyder, Mt. Joy (Univ. Pa. '08), Oct. 5, aged 50.

LEHIGH: *Death*—John Lear, Trexlertown (Univ. Pa. '89), Oct. 7, aged 76.

LUZERNE: *Reinstated Members*—Shem A. Everett, 402 Adams St., Freeland; Walter W. Kistler, 142 Hanover St., Wilkes-Barre.

MONTGOMERY: *New Member*—Lewis B. Saslaw, Wilcox Grove.

McKEAN: *New Member*—James M. Rodgers, Smethport. *Removal*—Matthew A. McGrail from Quaker Bridge to I. O. O. F. Bldg., Bradford.

NORTHAMPTON: *New Members*—Joseph N. Corriere, 305 Bushkill St., Easton; Anthony J. Turtzo, 38 E. Penna. Ave., Pen Argyl.

PERRY: *Reinstated Members*—H. B. Hoff, Liverpool; B. H. Anderson, Andersonburg; Montgomery Gearhart, Millerstown; Morris J. Gerber, Duncannon.

PHILADELPHIA: *New Member*—Bernard Behrend, 435 W. Upsal St., Mt. Airy, Philadelphia. *Reinstated Members*—William H. Schmidt, 1601 Walnut St.; Nelson M. Brinkerhoff, 1930 Chestnut St.; Robert Boyer, 1513 Girard Ave.; Samuel Ellis, 541 S. 46th St.; John Raftery, Grant Ave., Torresdale; John C. Siggins, 1930 Chestnut St.; Meyer Corff, 609 W. Montgomery Ave.; Harry S. Weaver, Jr., 4503 Spruce St.; Isaac Rodman, 12th & Chew Sts., Gtn.; Michael Corcoran, 2033 Pine St.; George E. Berner, 6006 Greene St., Gtn.; Clarence P. Franklin, 1527 Spruce St.; Lester L. Bower, 4920 City Line Ave.; Edmund B. Sweeney, 1721 N. 16th St.; Charles E. G. Shannon, 1930 Chestnut St.; Louis H. Weiner, 4025 Girard Ave.; Herman E. Albrecht, 217 S. 46th St.; Virginia M. Alexander, 2104 Jefferson St.; J. Bernard Bernstein, 2007 Pine St.; Henry G. Blessing, 3477 St. Vincent St.; Perce De Long, 20th & Chestnut Sts.; Arthur Feibus, 931 Spruce St.; George W. Firth, 1802 E. Schiller St.; Henry V. Grahn, 5132 Chester Ave.; Samuel B. Greenway, 2717 N. 12th St.; Frank H. Krebs, 1914 E. Cumberland St.; John Q. McDougald, 4061 Aspen St.; Valentine R. Manning, 800 E. Allegheny Ave.; Henry M. Minton, 1130 S. 18th St.; John A. Nevergole, Allens Lane & Lincoln Drive, Chestnut Hill; Thomas W. Phillips, 5133 Chestnut St.; Forest M. Reid, 815 N. 13th St.; Benjamin Robinson, 5214 Sansom St.; Harry K. Roessler, 3456 York St.; E. Quintard St. John, 1831 Chestnut St.; Saul P. Savitz, 2008 Pine St.; James F. Schell, 1824 Spruce St.; Michael Susman, 529 Pine St.; Joseph A. Turner, 911 N. Fourth St.; S. Elizabeth Winter, Brookwood Farm, Media; Stansbury M. Carter, 42 E. Haines St.; William F. Horan, 6309 Overbrook Ave.; Edward A. Leonard, Jr., 6045 Oxford St.; Theodore S. Wilder, 627 Glen Echo Road, Mt. Airy; Courtland W. White, 6611 N. 10th St., Philadelphia; Horace J. Forman, Jr., U. S. Vet. Adm., Arlington Bldg., Washington, D. C.; Kempton P. A. Taylor, Prado 98, Havana, Cuba. *Resignation* (to join other state medical

societies)—James S. P. Beck, Charleston, W. Va.; Melbourne J. Cooper, San Antonio, Texas; John N. Marquis, West Va.; Frank H. Krusen, Rochester, Minn.

POTTER: *Death*—William H. Tassell, Coudersport (Coll. Phys. & Surg., Balt. '83), Sept. 5, aged 80.

WASHINGTON: *New Members*—George H. P. Christman, 40 McKennan Ave.; Robert W. Dunlap, 41 Acheson Ave.; William A. Schmid, Washington; Joseph E. Downey, California; Charles T. Graves, Monongahela; Amos G. Kunkle, Morganza; Thomas W. Prideaux, Claysville; William H. Tomasecki, Langloeth; William W. Weygandt, Thomas. *Reinstated Member*—Harold H. McBurney, Avella.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since September 16. Figures in first column indicate county society numbers; second column, State Society numbers:

Sept. 17	Montgomery	187	8030	\$3.75
20	Luzerne	324	8031	7.50
	Chester	105	8032	7.50
26	Cambria	173	8033	3.75
	Philadelphia	2103-2118	8034-8049	120.00
	Allegheny	1307-1313	8050-8056	30.00
30	Carbon	33	8057	3.75
Oct. 2	Perry	9-14	8058-8063	45.00
8	Washington	129-138	8064-8073	41.25
9	Philadelphia	2119-2151	8074-8106	247.50
10	Dauphin	210	8107	3.75

EMERGENCY MEDICAL RELIEF IN PENNSYLVANIA

HAROLD A. MILLER, M.D., *Director*
Harrisburg

REGULATIONS GOVERNING COD LIVER OIL

The State Pharmaceutical Association has agreed to supply cod liver oil to relief recipients under the Emergency Relief Administration in original sealed packages containing 16 ounces and conforming to the standards of the USP-X-1934 Revision for 35 cents per bottle.

Effective October 9 cod liver oil may be prescribed on a medicinal basis by any participating physician to whom a medical order has been presented. The regulation prescription form (SERB Form 77P) will be used for this purpose and the regular procedure for authorizing prescriptions must be followed.

Cod liver oil must be prescribed by the physician and furnished by the pharmacist only in the original 16-ounce bottle and at the above-specified maximum price per bottle. Invoices will be approved and bills paid only when these instructions are followed.

CAMP POSITIONS OPEN

Any licensed and registered physician desiring to obtain a position as a camp physician, with a salary of \$150 per month and found, should contact the office of the director of Emergency Medical Relief at Harrisburg. At the present time there are several available positions.

A glance at the *London Times* of June 23 would sound familiar to medical readers. Headlines like "Outpatients Who Abuse Hospitals," "Work Filched from Doctors," "Waste of Time and Money," are examples.

Briefly, Dr. Alfred Cox, former secretary of the British Medical Association, when speaking at the opening of an extension of the Wilson Hospital, Mitcham, said:

"I regret that many hospitals deliberately encourage the use of their outpatient department by all and sundry, who regard it as a place to get a cheap or gratis bottle of medicine and to enjoy a chat over the 'old complaint' with the habitual haunters of such places.

"This is encouraged so that the hospital, in appealing for subscriptions, may boast about the large numbers of outpatients, whereas they ought to be ashamed of them.

"It is like using a steam hammer to crack a nut to use a hospital for such purposes, and a shocking waste of the subscribers' money and the doctors' time.

"The hospitals encourage people to apply for charity when the thing they need can be quite well supplied at their own cost.

"If they find difficulty in paying doctors' bills, they can, in any part of London and in most large centers, now get the doctor of their own choice without any suspicion of charity through the public medical service, which provides them with a family doctor on easy terms.

"The outpatient department has had a very bad effect on the doctors who have to live by their practices, which the outpatient departments are poaching from them.

"These doctors, finding much of their work being filched from them, naturally become less interested in their profession, less experienced in their practice, and, therefore, less useful to the public they are supposed to serve."—*N. Y. State J. M.*, Aug. 1, 1935.

County Society Reports

BERKS

Sept. 10, 1935

The meeting was held at Medical Hall, Reading, President William L. Krick, presiding; 47 members and guests were present. Ralph Tyson, professor of pediatrics, Temple University Medical School, spoke on "The Physical Examination of Children." Dr. Tyson said in part:

Hitherto it has been a most difficult problem to establish the physical characteristics of a normal child. In the past few years, instead of establishing what is an ideal normal, the tendency has been to learn more about growth, development, and nutrition. The present physical examination offers a fair appraisal of the child. Not only must the weight, height, and age be considered, but also the state of nutrition and the well-being of the child. Although there are various body types, weight, height, and age are necessary. A few essential factors in the growth and development in relationship to weight and height should be memorized.

The average child at birth weighs 7 pounds; at 6 months, the weight is doubled (2×7); at 1 year, the weight is tripled (3×7); at 2 years there is a gain of 7 pounds, or 4×7 ; during the third, fourth, fifth, sixth, and seventh years, the gain is approximately 4 pounds a year; at the end of the seventh year, the average child should weigh 7×7 or 49 pounds. Boys from age 8 to 12, and girls from age 8 to 10 gain on an average of 4 to 5 pounds a year; girls from age 10 to 13, gain 8 to 10 pounds a year; boys from age 12 to 16 gain from 8 to 15 pounds a year; girls from age 13 to 16 gain only 3 pounds a year.

The normal height of an average child at birth is 20 inches; during the first year it grows about 9 inches. From then on to 7 years, when the height is 50 inches, they gain on an average of 3 inches a year; after the seventh year the average gain per year is 2 inches, up to age 16, after which the increase in height is negligible.

Considering the height and weight in relation to age, is it possible to decide the state of nutrition and development of the child? Other factors must be considered. There are different types of children, and these may be classified into 3 main groups—the slender-tall, the broad-stocky, and a combination of these two. In the stocky type, the children show a broad framework, usually muscular, and with a greater amount of fat than the other types. The slender child has narrow shoulders, narrow hips, and the framework does not show much fat. The slender type may be equally as healthy as the broad type. It is therefore impossible to establish a normal.

The child should appear alert and happy; restlessness and unnecessary movements should not be present; he should also show a personality and individuality without any trace of stubbornness; neither should the child be fearful.

The skin of a normal child frequently shows quite decidedly the appearance of good or poor health. Healthy skin is soft, velvety, and smooth with a ruddy color; a poor skin appears anemic and sallow in color. Blood counts should be taken for hemoglobin and red blood cells. Examine all the visible mucous membranes, also the nail beds. Determine the amount of subcutaneous tissue and fat; examine the biceps and triceps, abdominal and calf musculature.

Considering the posture, it should be kept in mind that, though it may sometimes be subconscious, it may occasionally denote fatigue. Good posture should present level shoulders, head forward with the chin in; there should be a natural curve to the spine, forward in the cervical region, slightly backward in the thoracic region, and forward in the lumbar region. The upper part of the chest should be more prominent than the abdomen. The legs should be straight with no knocking of the knees; the arches should be good.

After thorough inspection, palpation, percussion, and auscultation of the chest and abdomen should be performed; special tests may be made if there is the least suspicion of a pathologic change or any abnormality.

In discussion Louis Livingood asked how much children were influenced by parental characteristics, and Dr. Tyson replied that children frequently have the same characteristics as their parents. Paul Holmer stated that the emotional side of the child should be emphasized; the state the child is in during physical examination is very important. Every child is fearful of a medical examination and this influences the heart and respiratory rates and many other factors. In a clinic, when children are seen over a period of from 6 to 8 months, a great deal of information about their emotional status may be gathered. A calm manner during an examination does much towards alleviating fright and gaining the confidence of the child.

Oct. 8, 1935

The meeting was held at Medical Hall, Reading, President William L. Krick presiding; 75 members and guests were present. Edgar S. Buyers, councilor for the Second Councilor District of the State Medical Society, spoke briefly on the policies of the State So-

ciety. Charles Brown, professor of medicine, Temple University Medical School, gave an address on "Fever of Obscure Origin." Dr. Brown said in part:

One of the greatest problems of to-day is the diagnosis of the cause of fevers of obscure origin. Almost every physician comes across cases in which the cause of fever is not obvious. This does not refer to acute fevers, but to those of long duration, and those considered as low-grade. We are quite cognizant of the fact that low-grade fevers have periods of activation. The etiology of fevers of obscure origin range in 3 groups—tuberculosis, rheumatic fever, and malignancy. Remaining chronically obscure, fever sometimes appears in the form of one of these 3 diseases.

In the beginning fever is looked upon as an expression of infection. Try to find the foci of infection. It is sufficient to say the foci of infection are amenable to thorough study. Most of these are found in the upper respiratory tract (nose, throat, and sinuses), but in many instances the focus of infection is in the lower respiratory tract. This is often seen in children and not manifested by a cough. If in doubt about the cause of fever, start examination of the upper respiratory tract. In regard to the urinary tract, infection here may be the cause of fever. Pyelitis or pyelonephritis may be the cause of fever. The genito-urinary tract is the seat of many obscure fevers; in women, especially, pelvic inflammatory disease is frequently the cause. Foci of infection are often found in the gastrointestinal tract, especially the gallbladder, appendix, and colon. Such diseases as peptic ulcer are not the cause of an obscure fever unless there is a penetration of the ulcer through the wall of the stomach with perigastritis and periduodenitis. An infected gallbladder, though not presenting a clinical picture, nevertheless provides sufficient medium low-grade inflammation to cause a fever. A study of the bile is often an aid. Many chronic colon manifestations are accompanied by fever. The crypts of the rectum should be considered in obscure fever.

Rheumatic fever is prevalent in this country, and should always be kept in mind when looking for fevers of obscure origin. If a patient has tender red joints which are very uncomfortable, accompanied by a high fever, and is relieved by salicylates, the diagnosis is not difficult. We should, however, realize that rheumatic fever has bizarre symptoms. Postmortem rheumatic lesions are found in certain portions of the body, usually in the abdomen. The lesions are found with hemorrhage from the vessels of the mesentery. The presence of leukocytosis is an aid in the diagnosis. Other diseases respond to salicylates which are not rheumatic in origin. Index or sedimentation tests are considered helpful in diagnosing rheumatic fever. The sedimentation rate is a measure or index of activity of the infection. Watch the heart for the development of murmurs.

Another cause of obscure fever is Hodgkin's disease. When it occurs ordinarily, it is not difficult to recognize, if the superficial lymph nodes are involved, but there are many instances in which these are not involved and the diagnosis remains obscure.

In a neoplasm which has had interference with the blood supply in its center, necrosis takes place, and the patient runs a fever. For this reason many large neoplasms are accompanied by fever. Neoplasms in the liver, or metastasis to this organ, elevate the body temperature. Another of the obscure types which cause fever is hypernephroma. If hematuria is present, it

will call attention to the kidney region, and the diagnosis will not be missed.

Can one have fever without any organic disease? Why does one have fever? Fever can be caused by a neurophysiologic disturbance. The body temperature is dependent upon heat production and heat dissipation. Dissipation of heat in a large measure is proportionate to surface area and certain other conditions. The status of the circulation is very important in the dissipation of heat. A great deal of heat dissipation goes on in the extremities. The upper extremities take part in this dissipation. In the neurovascular diseases, the patients have cold hands, while in hyperthyroidism, they have warm hands. The dissipation of heat is dependent upon the circulation of the skin. There is such a thing as a neurophysiologic fever, but such a diagnosis should be made only after organic diseases have been ruled out.

Undulant fever may exist outside of Malta from those who have visited the place. The types are *Brucella melitensis* and *Brucella abortus*. In these types, the symptoms common to all kinds of fever are present—joint symptoms and headaches. Do agglutination tests for the undulant fever. Most cases are of the *Brucella melitensis* type. In undulant fever, the fever rises, then drops to normal for about 10 days, and then rises again. The only positive evidence of the disease is the agglutination test, which is interpreted as positive if there is an agglutination in a dilution greater than 1 to 100.

Another interesting condition which is sometimes seen and not recognized is meningococcic septicemia. The meningococcus enters through the nasopharyngeal membranes and thence to the spinal membranes. The diagnosis is not always made early, because the organism is found in the blood stream and is very difficult to grow. The diagnosis can be made on patients having headaches, fever, and stiff neck, although not every patient will have these manifestations. Care should be exercised in selecting the correct culture media for use at the bedside.

If the fever does not subside in 10 days or 2 weeks but continues chronically low-grade in character, the cause had better be determined. It is advisable to keep in mind that tuberculosis, rheumatic fever, Hodgkin's disease, neoplasms, whether benign or malignant, undulant fever, and meningococcic infections, all may be the cause of obscure fever.

PEARL E. HACKMAN, *Reporter*.

ERIE

Sept. 19, 1935

Arthur Davis presided; the guest speaker was Louis Hamman, Baltimore, associate professor of medicine, Johns Hopkins University Medical School, who discussed the following cases:

CASE 1.—Charles G. Strickland presented a white woman, age 50, who had been acutely ill for more than 4 weeks. The symptoms of abdominal shock had come on immediately following an enema. Four days later a continuous type of temperature had begun, which remained to date. There was little acute pain; urinary retention began early and continued unremittingly. Pus was noted in the urine 10 days before, and a cystoscopic study showed the pus to be coming from the posterior wall of the bladder; the growth cultured *B. coli*.

Doctor Hamman emphasized that many chronic illnesses are first manifested by sudden changes, men-

tioning the myocardial insufficiency of a prolonged hypertension as an example. In this case there was a history of a few pounds' loss of weight within the past year, with slightly increased constipation. The present illness must be considered as due to an acute perforation of a diseased intestinal wall. Carcinoma and diverticulitis are the most likely conditions, especially the latter. Nonspecific ulceration of the colon, tuberculosis, and lymphogranuloma are possibilities, but remote; any one of these should show associated generalized symptoms.

Conservative treatment has proven its value in this case, as it does in the usual case of diverticulitis without frank abscess. If localization appears, drainage can and should then be done. One month after the onset, there is little risk of upward spread, and localization can be safely awaited. It required considerable courage to stand by without operative intervention in the earlier days of the more active pelvic spread of the process.

CASE 2.—Thomas P. Tredway presented a woman, age 24, whose complaint was weakness for one year. There was pain in the shoulders. A tonsillectomy a year before was followed by the development of a daily temperature running to about 100° F. A roentgenogram of the chest was clear, the basal metabolic rate was slightly subnormal, and slight tachycardia was present.

On the basis of this case, Dr. Hamman discussed in considerable detail the problem of obscure fevers. Forty per cent of these cases eventually will be diagnosed; 50 per cent will get well without a diagnosis. Typhoid fever, although the cause of long-continued fever, should be diagnosed easily eventually; tuberculosis usually is localized within a reasonable time and should not be considered if the patient has been thoroughly studied over a long time. Malta fever is to be considered, and the agglutination test for the *B. melitensis* should be carefully estimated. The presence of rheumatic infection always should be suspected; a cardiac murmur later will clinch the diagnosis. The electrocardiographic tracing may indicate rheumatism through a delay in conduction.

Focal infection plays a minor part in the diagnosis and treatment of obscure fever. New growth always has to be considered; kidney tumors especially do not give early localizing symptoms, and roentgen-ray examination should be made. The aleukemic stage of leukemia requires a careful smear study for its elimination. In cases in which the fever is of the relapsing type and recurs in bouts, Hodgkin's disease is the most likely cause.

The hyperthyroid case should be recognized by associated signs and symptoms. Menstruation, especially in the tuberculous woman, will cause temperature elevation. The factor of emotional states has not been settled. The case under discussion would seem to be in the classification of neurocirculatory asthenia, although *Br. abortus* infection is possible.

CASE 3.—George Stoney presented a man, age 62, complaining particularly of dyspnea and dizzy spells. He had worked for 15 years as a moulder in his earlier life.

According to Dr. Hamman, the respiratory movements were largely abdominal, with restriction of movement on the left side of the chest. The percussion note in this area was "wooden," with moist râles elicited. These findings coupled with the fact that the dyspnea was not increased by the patient's lying down indicate that the cause was a pulmonary fibrosis. This

observation was confirmed by the roentgenograms of the chest. The outstanding cause of a diffuse fibrosis is silicosis, a specific reaction to a specific substance, or a chemical effect.

CASE 4.—Maxwell Lick presented a man, age 35, whose complaint was of right lower quadrant pain for more than one year, associated with intermittent blood in the stools. A pronounced secondary anemia had developed. A barium meal study of the alimentary canal was negative; the double contrast barium colon enema demonstrated a small filling defect in the descending colon, thought to be due to a polyp.

In discussing upper intestinal hemorrhages, Dr. Hamman mentioned especially peptic ulcer, gastric carcinoma, and rupture of esophageal varices. The likely causes of lower intestinal bleeding, with bright blood in the stools, are carcinoma, ulceration, papillomata, hereditary familial telangiectasia, and hemorrhoids.

CASE 5.—Charles Leone presented a young man with a tumefaction deep in the right lower quadrant; he complained of shooting pains for a year in the lower back region. On one occasion there had been chills and fever, and a loss of 15 pounds in weight in the attack; this weight loss had been regained. Pyelographic and barium enema studies were negative for definite findings. A deformity of the right psoas muscle was demonstrated. According to Dr. Hamman, the enlargement could have been caused by a tumor in the psoas sheath or by enlarged lymphatic glands in this area.

RALPH BACON, *Reporter*.

FRANKLIN

Sept. 15, 1935

The meeting was held at Mount Alto Sanatorium, South Mountain, and dinner was served to 39 members and 16 visitors.

Charles C. Custer, director of the sanatorium, presided. State Secretary of Health Edith MacBride-Dexter, Harrisburg, spoke on the problems attached to medical work as seen from her official viewpoint.

Francis S. Chambers, surgeon-in-chief at the Hospital for Crippled Children, Elizabethtown, Pa., gave an address on "Anterior Poliomyelitis." He said in part:

Fortunately poliomyelitis is relatively infrequent, compared to scarlatina, diphtheria, and similar maladies. It has so far been a disease of sporadic incidence, but it is a malady which demands consideration. Our greatest hope in handling this protean infection is to prevent its occurrence, since it seems literally to mock at any ordinary quarantine measures.

As to treatment, a vast amount of work is being done to obtain a serum or vaccine that may be of definite value. No simple test has yet been contrived. The monkey serum neutralization test is the only one at present which may be trusted as effective, but this has the inherent obstacle of being costly and far from simple.

John A. Kolmer declares that the majority of children under age 10 are devoid of antiviral antibodies. In a group of 128, of varying ages above 15, about 25 per cent were found to be susceptible to poliomyelitis. Other workers have developed evidence that there is a definite familial hereditary factor. Kolmer's serum for immunization was described.

Davide, in 2 Swedish villages, protected 75 persons under age 25, by the use of convalescent serum, using a group of 84 persons of like age as controls. Only

one case of poliomyelitis developed in the first group, whereas in the control group there were 14 cases.

W. B. Brebner protected 1300 children in a Pennsylvania town during the epidemic of 1932 without the occurrence of a single frank case of poliomyelitis, but 32 cases of this disease occurred in the remaining unprotected child populace of 3000.

The Philadelphia Department of Health immunized 2255 children during the epidemic of 1932, using chiefly whole blood from parents. There were 4 cases with paralysis and 8 nonparalytic cases, which incidentally is a rate of occurrence greater than that of the general population of Philadelphia.

It is difficult to draw definite conclusions regarding the value of serum in prevention of poliomyelitis.

Vaccination long has held out the promise of being of value in prophylaxis, and various competent workers have expended great effort in trying to overcome the recognized difficulties of this method of attack. Brodie, of New York City, has obtained a suitable vaccine. During the past summer this vaccine has been given an extensive trial in North Carolina and Virginia under the direction of the United States Public Health Service with Dr. James P. Leake in charge. Alternate children were selected by lot from the panel of those requesting such treatment—one being used for treatment, the second one for control. The report on these studies should be of extreme value.

John A. Kolmer, of Temple University Medical School, Philadelphia, has attacked the problem in a different way from Brodie. The Kolmer vaccine is administered subcutaneously; it has been given by Kolmer to himself, his family, and medical associates. A number of children likewise have been vaccinated. No ill effects of importance have been observed. Local reactions of varying amount were observed, but no local infections. These vaccinations were controlled by neutralization tests. Kolmer alleges that virus killed by heat or chemicals is less effective, requiring larger doses, with consequent increase in the possibility of allergic reactions from protein. Given subcutaneously, the Kolmer vaccine is apparently a safe procedure even though the attenuated virus is viable. Three doses are given a week apart, although Kolmer suggests that perhaps it would be better to lengthen this period to 10 days. Children should receive 3 doses of 0.25 c.c., 0.50 c.c., and 0.50 c.c.; the dose should be increased according to age. Doses of one-half c.c., 1 c.c., and 2 c.c., are thought suitable for an adult. The majority of the patients developed some immunity even after the first dose.

A rather novel idea has been brought out by a Hungarian physician, Barla-Szabo, who believes that anti-rabic virus is able to develop neutralizing substances against poliomyelitis. He injected the rabies vaccine subcutaneously into 10 acute cases of poliomyelitis as well as into 17 subacute cases 3 to 6 weeks after the onset of the disease. All the patients with acute conditions recovered. He admits the 10 patients might have recovered without the vaccine. In the group of subacute cases convalescent serum had failed to effect the results desired. Of the 17 subacute cases 4 recovered in 5 to 6 days and were able to walk, 7 recovered after 20 to 21 days, and 6 were slightly better after 22 days following the injections. This is a small series on which to form conclusions.

It is definitely known that vaccination is of value as shown by laboratory tests, and there is lacking only confirmation in the presence of a large epidemic. It is possible that studies will be forthcoming from the

recent occurrence of a considerable number of cases in North Carolina and Virginia.

Not all the children receiving vaccine will develop immunity, and unfortunately there is no quick simple test whereby we may select susceptible or know when to repeat the vaccinations. In an epidemic, children under age 10 should be vaccinated, particularly those whose parents have had poliomyelitis.

As to treatment, sera, however injected, have not proved their worth to the speaker. Orthopedic treatment obviously favors the healing of acutely inflamed parts. The importance of bed rest and suppression of all motion of affected parts should be insisted upon. The affected members must be so supported as to relieve them of the slightest need for muscular effort.

If symptoms of respiratory failure are detected, the patient should be hastened to an institution equipped with a respirator. Spontaneous recovery from respiratory paralysis often occurs provided respiration can be maintained.

Heat during the acute stage seems of value in the form of hot packs applied to the affected parts. Gentle passive motion of the affected members may be instituted when pain and tenderness subside. Do not maintain immobilization sufficiently long to stiffen joints.

Convalescence begins with the end of quarantine. The acute symptoms will have abated, although the parts attacked will remain sensitive for 6 to 8 weeks from date of onset, even longer sometimes. Baking and very gentle massage usually alleviate the residual tenderness. So long as the parts remain sensitive no active exercise or any motions that may be painful should be allowed.

Intelligent care and guidance are essential during the ensuing 9 to 12 months. Parents should be cautioned not to encourage the patients to be on their feet too soon. Faulty positions put the weakened muscles to a disadvantage and should always be avoided.

Continued weight-bearing in unsuited positions often causes deformities that may eventually demand surgery for correction.

The problem at this stage is: Prevent deformities by braces and splints, as indicated; restore the paralyzed muscles by proper treatment, which must never exhaust the weakened muscles.

Water gymnastics are highly valuable. The water should be at 90° F. The virtue of this hydrotherapy is that the buoyancy lifts in part the flaccid member, weakened muscles may function without much effort, and the patient is further helped by seeing that he is able to move the damaged members. A word of caution is that the patient must be carefully prevented from overdoing the exercises. This is the work of a trained physical therapist and certainly is not suited to the average swimming instructor. Every patient should be taught to swim properly according to special needs. Unsupervised activities often produce deformity.

Under proper treatment all of the paralyzed muscles likely to recover will have regained some power at the end of the first year. Further increase in muscle power is possible, but always with the caution already mentioned.

In discussion J. Elmond Kempter, of Chambersburg, related his rather strenuous experience with a small epidemic of poliomyelitis a few years ago.

FASSETT EDWARDS, *Reporter*.

LACKAWANNA

Aug. 15, 1935

The annual outing was held at the Abington Hills Country Club at Dalton. Luncheon was served and games were provided.

In the evening, the dinner guests included T. A. Eynon, president of the Lackawanna County Dental Society, and Thomas Evans, president of the Lackawanna County Pharmaceutical Society. State Representatives William Munley, Robert Cordier, Russell Phillips, E. J. Coleman, and Harry O'Neill were guests of Representative Emlyn T. Davies, vice-president of the medical society.

Many prizes were awarded; 150 were in attendance.

Sept. 10, 1935

The first meeting of the fall season was called to order by the president, Ray J. Garvey, at the Chamber of Commerce auditorium. Weekly broadcasts of material received from American Medical Association headquarters will be begun over station WGBI in October, members of the local society to provide the necessary broadcasting talent. John J. Brennan, for the Committee on Public Health Legislation, reviewed the excellent work done during the past session and noted that all legislators of Lackawanna County had voted as a unit for the legislation favored by the local society.

Four applications for membership were referred to the censors. Walter J. Reedy, Seranton, was elected to membership. It was decided to accept the proposition of a local photographer to assemble a composite picture of the members of the society. An invitation to attend a joint meeting, extended by the Lackawanna County Dental Society, was accepted.

FREDERIC B. DAVIES, *Reporter*.

LEHIGH

Sept. 10, 1935

The meeting was held at the Sacred Heart Hospital, Allentown. The scientific session consisted of a clinical demonstration of "The Simplicity of Cardiac Diagnosis and Treatment." Edward J. G. Beardsley, Philadelphia, clinical professor of medicine, Jefferson Medical College, demonstrated the various etiologic groups of cardiac cases as found in the medical wards of the Sacred Heart Hospital.

VAUGHAN SPRENKEL, *Reporter*.

NORTHAMPTON

June 21, 1935

The meeting was held at the Easton Hospital at 11 a.m.

A. J. Turtzo, Pen Argyl, and J. N. Corriere, Easton, were elected to membership. Walter J. Cathrall, Bethlehem, was made an affiliate member. Applications for membership were received from Richard W. Morgan, Bethlehem, and J. T. Urban, Easton.

The following delegates were elected to represent the society at the annual meeting at Harrisburg: Paul Correll and Arno Zack; first alternates, W. Gilbert Tillman and James E. Brackbill; second alternates, Clinton F. Stofflet and Harvey O. Rohrbach.

W. Gilbert Tillman, Joseph S. Cohen, and Walter D. Chase were appointed as a Committee on By-laws.

Herbert Kelly of the Presbyterian and Graduate hospitals, Philadelphia, presented a paper on "Diabetes Mellitus." He said that 25 per cent of patients who have cholelithiasis develop diabetes. All cholelithiasis patients should have glucose-tolerance tests. These tests are dangerous and should not be carelessly given, for they have been known to convert mild diabetics into severe ones. In the therapy of coma, insulin, glucose, and normal saline solution are the essentials. Alkalies are not necessary.

Sept. 19, 1935

A special meeting was held at the Easton Hospital. Arno Zack, chairman of the Committee on Economics, presented a plan for a health survey of Northampton County, to be performed through aid from the Works Progress Administration. He also presented a second project to utilize the data obtained through the first project. Francis F. Borzell, chairman of the State Committee on Medical Economics, discussed these measures.

A motion was adopted to endorse and approve the work of the committee in arranging a program for a survey of the health needs of the unemployed, indigent, and those who cannot afford the care of a private physician; and to submit the second or continuation project to Dr. Borzell's Committee on Economics to be presented to the House of Delegates of the State Medical Society at the annual session at Harrisburg.

A motion was passed to approve the second project and to proceed with the plans and preparations as an individual organization subject to the approval of the State Medical Society.

Sept. 20, 1935

The regular meeting was held at St. Luke's Hospital, Bethlehem.

R. W. Morgan and J. T. Urban, Easton, were elected to membership.

Harvey O. Rohrbach, reporting for the Public Relations Committee, stated that he had been in communication with certain officers of the State Society relative to a letter sent by a member of the Easton Women's Club requesting payment at the rate of \$1.50 each for the diphtheria immunizations done at Easton during this past summer. Dr. Rohrbach was instructed to inform the State Society that the letter in question was entirely unauthorized as far as any members of this society were concerned.

A letter from the Easton Y. W. C. A. requesting the cooperation of this society in a proposed health week was referred to the Public Relations Committee.

James W. McConnell, associate professor of neurology at the University of Pennsylvania Graduate School of Medicine, Philadelphia, was the guest speaker. He discussed several patients whom he had recently seen in order to point out the extreme value of careful complete physical examinations. Most of these patients had been referred to him because of unusual neurologic findings. Four of them proved to have metastatic lesions in the spinal column, secondary to prostatic malignancy. In none of them had a rectal examination been made by the referring physician. The general practitioner who would continue to be the mainstay in caring for the health of the community should keep abreast of the main recent findings in malignancy control. Among these the simple rectal examination should be constantly kept in mind.

FREDERICK J. PEARSON, *Reporter*.

WARREN

Sept. 19, 1935

The meeting was held at Warren. Robert D. Mussey, Obstetrical Division of the Mayo Clinic, gave a talk on the symptoms, early recognition, and treatment of preëclampsic toxemia. He described this condition as a toxemia preëminently affecting the finer vascular system; it can be likened to a vascular spasm, the cause of which has not been definitely determined. It produces changes in the capillaries of different organs—liver, brain, or kidney—and careful and frequent examination of the ocular fundus may reveal its presence even before the urine shows albumin.

This toxemia is not a nephritis primarily; the nephritis is a secondary result. Hypertension is an early sign. The blood pressure of the average primipara is lower than normal; therefore an increase beyond 130 is a warning to be heeded. In the multipara, however, the blood pressure, because of previous injury, may be higher and cannot have the same significance.

If eclampsia is to be avoided, a few simple measures can be undertaken as a part of the prenatal care: (1) Blood pressure should be taken at regular intervals and recorded, not only as a precaution but as a matter of record for subsequent pregnancies. Albuminuria with a low blood pressure is seldom serious; (2) the weight should be recorded and kept under rather than above normal. There is a tendency for an increase in weight in toxemic cases and after the third month the weight increase may be due to edema of the tissues.

Urinalysis is important. Examination of the eyegrounds for retinal changes should be made.

If any of the warning signs occur, the treatment, if promptly carried out, may be successful in obviating surgery or terminating labor and may also save the child.

The results of prenatal eclampsia may be: (1) Complete recovery; (2) apparent recovery with recurrence in a future pregnancy; (3) definitely damaged heart, liver, or kidney. Keep the weight down by limiting the total intake of food, carbohydrates especially, fats, and salt; limit activity and prescribe rest; secure ample elimination; as to sedatives, the barbitol group are of value.

If the condition becomes worse, hospitalize, but get the patient in best condition possible and do not be in too great a hurry to bring on labor. Get the kidneys to function; if edema is present, use ammonium chloride or nitrate. If pressure increases, use glucose intravenously to act on liver. Use morphine to allay spasm of the capillaries, and if convulsions do occur use pentobarbital intravenously. Labor may then occur spontaneously; if it does not and toxemia cannot be combated, induce labor, reserving cesarean section only for cases in which there is a pelvic condition that warrants such a measure in the absence of toxemia. In other words, try to prevent toxemia, treat it early if warning symptoms are present, and bring the patient as near to term as possible by active treatment of the severer types before attempting interruption so as to give nature a chance to empty the uterus, bring about the birth of a live child, and place the patient in the best possible condition to withstand the shock of induced labor or surgery if demanded.

Dr. Mussey pleaded for intelligent observation and conservatism, and said this was possible without any extensive laboratory procedures or elaborate equipment; the average general practitioner could give this care.

Twenty-six members and 4 visitors attended the meeting.

A class for graduate instruction is being inaugurated.
MICHAEL V. BALL, *Reporter*.

WASHINGTON

Oct. 9, 1935

The meeting was held at Washington; President Milton F. Manning presided. The announcement was made that Laurrie D. Sargent, Washington, had been elected Councilor and Trustee of the Eleventh Council District by the House of Delegates at the annual meeting of the State Medical Society held in Harrisburg.

A scientific program was presented by Richard J. Behan, president of the Allegheny County Medical Society, who read a paper on "The Treatment of Cancer of the Breast." A compendium of his remarks follows:

Medical science is still confronted with the unsolved problem of cancer, its cause, and its most efficient treatment. In this discussion only 2 phases of the cancer problem will be considered. The first is the proper selection of cases for the different methods employed in treatment and the second is a brief description of methods which the author has found most valuable.

The treatment of cancer should be conducted according to definite plans which are based upon the latest conception of the disease, and the most recent facts which have been elucidated by experiment and research.

All qualified experience shows that there is at the present time no remedy or remedies which will surely and absolutely check the progress of a cancerous disease.

In the treatment of cancer we must use methods and therapeutic measures, which, though somewhat crude and not definitely specific, are the only ones at hand. These measures are of various kinds and are directed primarily against the growth but also against the underlying constitutional disposition. The latter are concerned with the reduction of the tendency to further growth and the prevention of recurrences.

In the application of cancer therapy, the general practitioner has a well-defined part and may, in most instances, conduct the treatment under the supervision of one who is more experienced in this therapy.

It cannot be too emphatically stated nor too often stressed that detailed consideration must always be given to the cancer patient whose general state of health must be subjected to a critical investigation. In every patient in whom the general health is disturbed, an attempt must be made to restore it as nearly as possible to normal and in this way increase the patient's resistance.

The future progress in cancer therapy will not be in the direction of more efficient means of destruction and eradication of the local lesion, but will be in that direction in which there is developed more effective methods, some of which perhaps are yet to be discovered, of inhibiting constitutional cancer predisposition and acquired tendencies.

That curative forces do exist in a cancerous patient is indicated by the occasional spontaneous regression of malignant tumors, for although spontaneous cures of cancer lesions are unusual and rare they are not unknown. Physicians have reported many instances of such regression of malignant tumors.

It should also be emphasized that almost as long a period is required for the regression and cure of a malignant tumor as was necessary for its development.

The cancer therapist also should realize that he has not performed his full duty towards his patient when he has applied only one particular type of treatment. He should never be content to consider that his therapeutic interference is completed, for it never is. The advanced cancer therapist carefully studies his patient and uses for her benefit the latest advances and discoveries which have been obtained not only from the medical but from every branch of science.

Radical destruction of a cancerous tumor, even though it does thoroughly remove the local lesion, does not necessarily change underlying metabolic and other processes which are active in inducing the primary cancerous lesion.

Surgery combined with pre- and postoperative irradiation offers for most cancerous lesions, and especially for cancer of the breast, the best percentage of 5-year recoveries. It is to the credit first of modernized surgery and then of surgery plus irradiation that the average percentage of 5-year recoveries is much greater to-day than it was 50 years ago. But even the most advanced and radical surgery and the most effective irradiation have their limitations and are unsuccessful when the lesion has progressed beyond a certain stage, and frequently it seems that we are unable, at any stage, to check the ravages of the cancerous lesion.

It may be accepted as axiomatic that the earlier the total operative removal of a cancerous growth, the better is the end result, so that most physicians are now cognizant of the evil portent of new growths in the breast and plead for the immediate removal of every suspicious tumor. This is good practice, and it is unquestioned that far more harm results from delaying too long before resorting to operation than from operating too early. If one is in doubt as to the definite pathologic character of a lesion, a biopsy should always be performed.

The better results are also due to the fact that physicians are constantly being impressed with the importance of the prophylactic removal of all irritative lesions. Chronic inflammatory changes in old individuals who have an inherited tendency should merit a very careful consideration.

Persistent pressure upon the breast such as occurs from a corset or a drag from clothes should in all cases be relieved. If medical treatment has been carried out with no relief and if the patient is over age 40, removal of the breast is to be considered. When the disease is further advanced and there is very little doubt that the breast lesion is a cancer, the question of treatment then becomes insistent and must immediately be instituted.

In every case of cancer of the breast after the diagnosis of cancer has been made, the question of operative removal or treatment by other means intrudes itself very definitely. Above all, the danger of delaying treatment should be properly emphasized.

In the conference between the patient, relatives, and the doctor, the methods of treatment available in the circumstances of that particular patient may be discussed. The methods of treatment which will enter into such a discussion are operation as against irradiation, operation plus irradiation, irradiation, local applications, and general constitutional treatment. Sometimes it is difficult to make a specific and definite recommendation of a particular mode of treatment be-

cause, in their attitude toward the methods of treatment of cancer, cancer therapists themselves are divided into 2 groups, whose conclusions in regard to treatment are more or less at variance. The one group which is composed mostly of radiologists believe that irradiation may be used as a curative measure in cancer of the breast, though only a minority of this group believe that irradiation should be used to the exclusion of surgery. The other group (the surgical group) believe that surgery is the best method of treatment in all patients in whom the cancerous lesion is not too far advanced, and that irradiation if given at all is only to be considered as supplementary to surgery. In the irradiation group the method of application of radiation has been deemed of great importance.

As an evaluator and a standard by which to measure the benefit of treatment, remember that the average expectancy of life in untreated cancer of the breast is 3.6 years (W. Wynen). Unless treatment of the breast cancer keeps the patient alive for a longer period, it must be regarded as a failure.

If operation is to be done, it should be thorough. The complete operative removal of the breast with wide excision of perimammary and axillary fascia and supraclavicular dissection preceded and followed by irradiation therapy gives the longest and most permanent cure.

The operability of a cancer and its successful removal may be predicated upon:

1. *The more localized the cancerous growth*, the greater is the possibility of cure, but wide extension of the cancer is no criterion of the absolute inoperability of the tumor.

2. *The malignancy of the cancer* is of great importance in determining the course of action and is of special significance when it is considered that perhaps as high as 30 per cent of the cancerous tumors of the breast are so malignant that cure is impossible. Even though fixation of the growth to the chest wall and extensive axillary and supraclavicular lymph-node involvement have been regarded as absolute contraindications to operation, Behan considers that even with these most disadvantageous complications a complete mammary removal and axillary dissection may be done with considerable possibility of a successful result if the dissection is done with the electrosurgical knife and if postoperative irradiation is given by radium (by direct external application of radium), or by the insertion of radium needles or radon seeds, either at the time of or shortly after the operation. He has had good results from the insertion of radon gold or platinum seeds at the time of operation directly into the area.

All enlarged lymph nodes which may be present in a patient who has a cancer of the breast are not necessarily cancerous; they may be inflammatory. Therefore, it is difficult, almost impossible, to diagnose correctly a cancer as inoperable from the size and the extent of the lymph-node involvement.

Furthermore, in a fat individual the accurate diagnosis of enlarged nodes is difficult, because in such a patient it is impossible to distinguish between enlarged lymph nodes and the thickened lobules of chronically inflamed fat; both give the same hard, rounded, and shot-like sensation to the examining fingers. For this reason, we frequently are at a loss in fat individuals and cannot determine whether the small rounded masses of tissue which we can feel in the axilla are enlarged lymph nodes or masses of fat. When doubt exists it is best to diagnose the mass as an involved metastatic cancerous lymph node.

3. *The generalization of metastases.* When generalized metastases are found in the lung, in the mediastinum, or in the bones, the operative treatment which is to be selected should consist of either one of the following procedures:

(A) *Palliative treatment* should be used if the patient has advanced cancer of the breast which may be locally removed, but in whom the metastases in the adjacent lymph nodes, though they are impossible to remove, may be amenable to other treatment.

(B) *Procedures in a nonoperable patient.* Operation is inadvisable in those patients in whom generalized metastases are present, especially if such metastases are in the bones or in the lungs. Metastases in the lungs are indicated by difficulty in breathing, a sputum which may be bloody, differences in the auscultatory breath sounds of the 2 sides, and abnormal variation of the breath sounds in different areas on the same side. In such cases there is also a reduction in resonance, and intrathoracic pain may be present. The above symptoms are usually associated with positive roentgenographic evidence. Pain in the back or in the chest or constant coughing in patients who have a cancer of the breast are signs which usually accompany lung metastases and are not to be ignored. SAMUEL A. RUBEN, *Reporter*.

WYOMING

Oct. 9, 1935

The quarterly meeting was held in Tunkhannock. Luncheon was served to the medical society and the auxiliary.

William W. Lazarus reported on the Emergency Medical Relief meeting held at Towanda, at which Harold A. Miller was present. Nothing new developed apparently except that it seems the physician will be the "goat" in the case of obstetric patients not reporting for a relief slip in time for the doctor to make the necessary prenatal visits and so be entitled, according to the rules, to the full fee.

William M. Donovan, of Scranton, spoke on "The Use and Abuse of Cardiac Stimulants," based on an accurate knowledge of the physiology of their action. He advised the use of quabain in certain cases in which digitalis seems to be losing its effect, returning to digitalis in a short time when its action will often be found restored. He spoke of quabain, used intravenously in one-half grain doses, as useful in desperate cases of decompensation.

ARTHUR B. DAVENPORT, *Reporter*.

YORK

Sept. 18, 1935

The meeting was held at York; C. C. Spangler, second vice-president, presided. Wm. Egbert Robertson, Philadelphia, spoke on "Clinical Aspects of Heart Disease, Including Treatment."

Dr. Robertson prefaced his address with a reference to his perennial interest in heart disease. He felt that consideration of heart disease should have an appeal irrespective of the field of endeavor. He showed and discussed a number of slides of pathologic hearts.

Heart disease is prevalent chiefly during 2 periods of life—in childhood and middle life. Acute heart disease occurs in childhood, the subacute forms in late

childhood and early adult life, and the chronic types in adult life and old age.

In childhood the presence of early or developing heart disease without any clinical evidence of valvular or muscular damage should be suspected when there is persistent pallor. Many disastrous lesions would be less severe or would not develop if the patient could be kept at rest in bed for a long time. In large vegetative lesions there is always the danger of emboli. Here prolonged rest is of great importance; the strength of ventricular contractions is reduced and the danger of the separation of fragments from vegetations is lessened. In a child the first essential is the recognition of a potential heart lesion.

The most reliable means of determining whether an endocardial lesion is active or not, even with a normal temperature, are the pulse rate and the sedimentation time. Rapid sedimentation time means active disease. As a rule these cases are not edematous. Activity should not be permitted until the pulse and sedimentation time are lowered.

In adults edema and obesity are important factors in bringing about dilatation. A failing left heart results in edema, dyspnea, cough, and the local signs of enlargement. A failing right heart begins with involvement of the base of the right lung; later right-sided pleural effusion and then liver enlargement develop. Low venous pressure occurs in right-sided cases. Here venesection is helpful.

A maculopapular eruption on the body composed of minute tufts which do not disappear on pressure is an almost constant finding in cases of myocardial degeneration. It is persistent except in syphilitic cases.

Syphilitic hearts are associated with aortic involvement. It is important in any given heart case to determine the presence of syphilis. All syphilitics sooner or later develop effusions and cannot be dealt with unless treated as syphilitics. Tapping is seldom done.

Hypertensive and cardiorenal cases are apt to have nocturnal dyspnea.

Auricular fibrillation occurs chiefly during 2 periods of life: In early life as mitral stenosis, and later in life called senile fibrillation. There are slow and rapid fibrillations. Slow fibrillation and effort are compatible. Rapid fibrillation and effort are never compatible. Patients with rapid fibrillation often develop psychoses.

Complete heart block is usually easily recognized by bradycardia, partial block usually only with the aid of an electrocardiogram.

The proper and accurate use of the senses, the careful taking of histories, the bedside contact with and study of the patient will, in the great majority of cases, give all the information and knowledge that can be obtained from any source, and it is only in exceptional instances that the electrocardiograph and fluoroscope can give information that will make our knowledge and understanding of a given case more complete.

Angina pectoris may be considered as the supersigmoid and the coronary types. In the supersigmoid type the pain is located behind the upper part of the sternum; in the coronary type the pain is located near the lower end of the sternum. In the first type there is not the pain radiation so common to the coronary type, which is toward the neck and into the arms, and in which there is fever, leukocytosis, friction rub, and fall in blood pressure, together with the pulse variations, all dependent upon the degree of coronary disease and the size of the portion of ventricular muscle involved.

The treatment for an attack of coronary occlusion is prolonged rest, for broken compensation 6 to 8 weeks in bed. The next resort is usually digitalis. If the patient is water-logged the first thing to do is to mobilize fluids. Pleural effusions should be removed early. Venesection, repeated daily, removing from 8 to 16 ounces, should be done in right-sided cases.

Give calomel, 5 to 10 grains; salyrgan and similar preparations are useful. Do not use Southey's tubes. Scarify the swollen legs and over the scarifications apply compresses soaked with a solution of 1 per cent sodium chloride and 1 per cent sodium citrate, equal parts. This application will produce marked depletion. Use digitalis in large doses, 4 to 5 drams at a single dose, and repeat in a week. Never use digitalis early in coronary disease.

Do not attempt treatment of elderly patients with slow fibrillation. Give a preliminary intravenous injection of strophanthin, $\frac{1}{100}$ grain to $\frac{1}{64}$ grain, to patients with rapid fibrillation. Inject slowly, taking 5 minutes for 1 c.c. The effect lasts for 3 days. Then give digitalis.

It is important to use a fresh and reliable tincture of digitalis. For large dosage it is more convenient than the dry preparations.

H. MALCOLM READ, *Reporter*.

SECOND COUNCILOR DISTRICT MEETING

The annual meeting of the Second Councilor District of The Medical Society of the State of Pennsylvania was held Sept. 19, at the Reading Country Club. District Councilor Edgar S. Buyers, Norristown, presided. William F. Krick, president of the Berks County Medical Society, extended a welcome.

Two-minute reports were given by the district censors. Irwin H. Hartman, of Berks County, reported a membership of 179. The average attendance was 54 per cent. Three deaths occurred during the year—Ira G. Shoemaker, Solis-Cohen B. Hertzog, and Joseph A. Stockler. Monthly scientific meetings were held throughout the year except during July and August. Social meetings were held in January for members only, and in July for members and their wives. The society contemplates starting graduate seminars in October.

William G. Moyer, of Bucks County, stated that the membership had increased from 59 to 66 during the past year. Robert B. Heimbach died during the year. Six regular and 2 extra business meetings were held during the year. One public meeting was held in May at the County Court House.

U. Grant Gifford, of Chester County, reported 105 active members and 2 affiliate members. Willis N. Smith died during the year. Ten scientific and 2 business meetings were held. A joint meeting was held with the Health and Welfare Council, and one public meeting.

C. I. Stiteler, of Delaware County, reported an increase of 15 members, making a total membership of 157. There were no deaths during the year. Five scientific, one social, and 4 meetings on economics and relief were held. The average attendance was 42. Educational newspaper releases appear daily in the *Chester Times*.

Howard W. Hassel, of Montgomery County, reported a membership of 186, a gain of 13 over last year. The deaths of Robert W. Randall and Clark S. Long occurred during the year. Ten scientific and one medico-

legal meeting addressed by the district attorney were held during the year. A health survey of Montgomery County, sponsored by the Medical Society, was made by the United States Public Health Service.

J. A. Lessig, of Schuylkill County, reported a membership of 158. There were 3 deaths during the year—Benjamin F. Bartho, Rudolph A. Constien, and Joseph P. Morris. Six scientific and 4 clinical meetings were held. The outstanding event of organized medicine was the second successful graduate course, with 40 members participating.

A brief history of the Berks County Medical Society was given by David S. Grim, Reading.

Philip F. Williams, Philadelphia, member of the State Society Committee on Maternal Welfare, gave an address on "Intrapartum Care in Relation to Maternal Mortality." Dr. Williams said in part: Good intrapartum care is of tremendous importance to the profession and the laity, and necessitates a knowledge of the normal mechanism of labor, the abnormalities that may arise, the accepted methods of treatment of the mechanical hazards and physiologic abnormalities which may occur, as well as the basic principles of asepsis. Thorough prenatal examination will reveal to the physician the presence of any medical complication or previous abnormal deliveries or both. Inspection, palpation, and auscultation usually reveal the position and the presentation of the child or the presence of a multiple pregnancy. Toxemia, dystocia, hemorrhage, and sepsis should be adequately provided for at the onset of labor. Examination into the cause of death during labor reveals that in many such circumstances the avoidable factor includes in the large majority errors not only in the performance of some operation but in judgment in mistakenly choosing the time, the method, and the situation in which to interfere.

The Committee on Maternal Welfare of the Medical Society of the State of New Jersey recommended that in all general hospitals with a courtesy maternity staff a qualified consultant should see: (1) All prolonged labors (over 24 hours); (2) cases requiring cesarean section; (3) breech presentations (unless very premature); (4) difficult forceps cases or versions; (5) occipitoposterior presentations requiring forceps or version; (6) other complicated cases such as eclampsia, abruptio placenta, and placenta previa.

Plass, in his report on operative deliveries to the White House Conference, states that forceps are not needed in obstetric practice in more than 5 per cent of the cases, although forceps incidence in some hospitals ranges as high as 60 per cent. Whether or not the frequency of this operation is warranted is questionable, and yet the follow-up study of Aldridge in the New York Women's Hospital would seem to indicate better end results as compared to spontaneous delivery in so far as the integrity of the pelvic floor and the presence of cystocele and rectocele were concerned. Whether or not consultation is obligatory by hospital rule, it might well behoove the younger practitioner to ask for sage counsel and skillful assistance in his earlier work of this type.

Performance of version carries an undoubted hazard for both mother and child. That the breech should be routinely extracted when full dilatation of the cervix has occurred is still under debate. The work of Mayes in Brooklyn is convincing evidence that the intravaginal instillation of mercurochrome in the parturient woman is of value. General care of the woman in labor necessitates careful attention to the fact that she receives sufficient easily assimilable, highly concentrated food

during labor. In certain situations this requires the giving of intravenous injections of glucose. Elimination should not be overlooked. It is also necessary to consider the relief of pain during labor, not only for reasons of analgesia or amnesia but for safeguarding the woman's physical resources by allaying her mental and nervous output.

Early and adequate prenatal observation, a vigilantly expectant intrapartum care, a cautious attitude toward intervention, and a courageous conviction to proceed with obstetric surgery when true indications for intervention arise are the responsibility of the physician in his relation to maternal welfare.

Clarence A. Patton, Philadelphia, member of the State Society Committee on Mental Hygiene, gave an address on "Some Mental Hygiene Viewpoints on the Sterilization of the Unfit." Dr. Patton said in part: Human sterilization is the surgical procedure, applying equally to both sexes, unsexing neither, and designed merely to make parenthood impossible. Sterilization applied to the human race is a very complex problem, since the span of life is relatively long and the various races so intricately and intimately blended. Much of the literature concerning the subject deals with the possible relief of tax burdens, the prevention of crime, and the greater protection to society.

Eugenics, however ideal, comes in direct conflict with so-called humanitarianism. Social hygiene protects and nurtures unfitness at the expense of fitness; if modern society expended as much time, energy, and recovery in aiding and encouraging the efforts of the deserving normal as it does for the care and protection of the unfit, a positive eugenic advance would be definitely established. If something is not done to decrease the percentage of dependents, those who are healthy will have only a limited chance for future development because of the millstone load of unfitness hanging forever about their necks.

Sterilization is applicable only to inherited disease and defect. In the human race where lineal descent is so confused and intangible, the potentialities in the germ plasm are clearly unpredictable. Though the eugenists tend to separate environment from heredity, modern science considers them of nearly equal importance. Most laws dealing with sterilization indicate that the operation may be performed upon those who are *likely* to transmit defectiveness. The test confronting the eugenicist and the doctor is the determination *without the possibility of doubt* just what persons will transmit characteristics of defectiveness to their offspring. Sterilization laws generally apply to mental deficiency, insanity, epilepsy, criminalism, certain inheritable physical and neurologic defects, moral degeneracy, and alcohol or drug addiction.

After the luncheon, which was attended by members of the component county societies and auxiliaries, testimonials were presented to Anthony F. Myers, Blooming Glen; Josiah B. Keylor, Cochranville; Levi S. Walton, Jenkintown; and William Evans, West Chester, for having been engaged in the active practice of medicine for 50 years. Dr. Myers, who has been secretary of his county society for 40 years, expressed thanks for the many courtesies that had been extended to him by the profession. He has not lost one patient in confinement in 50 years of practice.

Brig. General Matthew A. DeLaney, of the Medical Department of the United States Army, Carlisle (Pa.) Barracks, read an address on "What the Medical Department of the United States Army Has Contributed to Human Progress." Dr. DeLaney said in part:

Colonel Robert M. O'Reilly, realizing the gravity of typhoid fever, pledged himself to do all in his power to combat the disease. Later, as Surgeon General, O'Reilly had with him a keen young medical man, Captain F. F. Russell, who had been working with Sir Almroth Wright in London, and had greatly improved Wright's technic in the preparation of antityphoid vaccination. This vaccine was investigated by a specially chosen board of leading medical men in the United States to determine its value. This board recommended that all troops be vaccinated and the Secretary of War was among the first. In 1911, when troops were assembled in Texas, 20,000 men were inoculated and not one case developed. During the World War, vaccination for typhoid was compulsory, and although other countries had many thousands of cases, the United States had but 1535.

When yellow fever broke out in the wards of Old Point Comfort, Major Walter Reed came to study the disease, suspecting the mosquito *Aedes aegypti*, which he later confirmed in Cuba. An army surgeon who made the work of Reed and Gorgas possible in Cuba was General Leonard Wood. Major Gorgas, carrying out the recommendations of Reed's board, cleared Havana of yellow fever for the first time in 300 years. When the United States began the construction of the Panama Canal, General Gorgas became the chief health officer. Sixty per cent of deLessep's employees had died of yellow fever and malignant malaria, and the rest were invalids. Ross had shown that the *Anopheles* mosquito was the vector of malaria. By the execution of sanitary measures, Panama was soon as healthful as the homeland. The last case of yellow fever on the Isthmus was in 1906, and the morbidity rate dropped from 281 per thousand to 6 per thousand. A sanitary triumph!

Pneumonia in South Africa was conquered through proper housing, isolation of patients, and proper sanitary installation, by Surgeon General Gorgas in 1913.

Some of the problems which were encountered in the Philippine Islands were the scourges—leprosy, cholera, smallpox, beriberi, dysentery, tuberculosis, and malaria. A leper colony, the largest in the world, has been established on the Island of Culion. The United States Bureau of Science has perfected a vaccine against cholera, and in 1930, 2,000,000 people were vaccinated against this disease alone in the Philippines. During the year before smallpox vaccination became compulsory, 49,000 people died of the disease. Beriberi, a dread disease of the tropics, is due to a dietary deficiency, and when an alcoholic extract was made from the rice hulls, mortality was reduced. Dengue was found to be transmitted by the *Aedes aegypti*. The precautions taken against yellow fever were effective for this disease.

With the aid of Flexner, Barker, and others, it was shown that several different varieties of dysentery were present in the Islands. The amebic form was the most prevalent and not at all related to the bacillary types. The greatest complication was abscess of the liver. Emetine was found to be specific for the amebic type. Bacillary dysentery is still prevalent, and a vaccine is used as a prophylactic. Malaria has been and will be a dread plague in the inaccessible poverty-stricken tropical provinces.

Other advances made by the Medical Department are: (1) The physiology of digestion by Army Major William Beaumont; (2) the discovery of the pneumococcus by Surgeon General Sternberg; (3) the eradication of the hookworm in Porto Rico by Ash-

ford; (4) the establishment of the Surgeon-General's Library at Washington, and the Index Catalogue and Index Medicus by Colonel John Shan Billings of Pennsylvania; (5) the work of General Gilchrist as chief of the Chemical Warfare Service; (6) the starting of the Weather Bureau by General Albert J. Myer; (7) the work of an army surgeon who showed the incalculable value of chlorine to render water potable; (8) John Morgan, second Surgeon-General, founded the University of Pennsylvania in 1765; (9) General O'Reilly established the first Medical Reserve Corps in 1908.

The Medical Field Service School at Carlisle Barracks began its first instruction in 1920, training reserve officers, National Guard, and R. O. T. C., and numbers among its graduates many distinguished officers of foreign countries and the United States Naval Medical Corps. Since the school was established, 11,000 officers have been graduated. It teaches, primarily, how doctors, dentists, and veterinarians can aid in the conservation of man power in peace and war by bringing aid to the sick and injured, especially in the prevention of disease and injury in peace and war.

Moses Behrend, president of the State Medical Society, gave an address on "Collapse Therapy in Pulmonary Tuberculosis." Dr. Behrend said: During the last 2 years, Pennsylvania surgeons have become actively engaged in thoracoplasty. In Philadelphia, bi-monthly conferences are held in the fluoroscopic room of the Philadelphia General Hospital at which time problematic cases are discussed. Patients are not admitted to the conference. Out of 133 cases since 1933, there have been only 2 deaths. This record is due to the intense interest on the part of the resident physicians and the operative care and preparation. The operations performed consist of pneumothorax, phrenicectomy, thoracoplasty, Jacobus operation for adhesions, apicolysis, and oleothorax. Dr. Behrend illustrated his talk with lantern slides and motion pictures.

Francis F. Borzell, chairman of the State Society Committee on Medical Economics, spoke on "The County Society and Medical Service Plans." He said in part: A committee was appointed by the A. M. A. to study existing county medical society plans and to develop a project that might be appropriate to the needs of the various component societies. It is impossible to make all county society plans the same, but the basic principle must be maintained. There must, however, be an equitable plan which is both ethical and legal.

It is necessary for the county societies to be cognizant of the activities of lay welfare organizations. Their tendency is to assume a knowledge of medical matters which have never been a part of their curriculum. Intelligent cooperation should result in the education of these groups to the fact that medical services must be controlled and distributed by the profession. A hasty, ill-considered acceptance of any form of sickness insurance will be disastrous. The medical society plan is necessarily an experiment, and will need frequent and drastic or radical modification. Since the medical profession was too lethargic, compensation insurance legislation was passed without a sign of a struggle before it was too late. We must be on the alert to prevent further legislation foisting on us unemployment, old age, invalidity, and sickness insurance.

Medical societies must be prepared to cope with any and all complications affecting the organization of medical care. (Some of the complications and dangers are listed in Dr. Borzell's paper entitled "Recent Trends

in Medical Economics," which will appear in the December issue of the JOURNAL.)

Since all the great problems of social insurance involve human life and happiness, organized medicine should be vitally concerned. It is necessary, therefore, that we be included in all councils and be as important a factor as any other group. It is our ever-increasing duty to defend our ethical integrity and to identify ourselves actively with the study of all social problems through a strongly knit organization backed by the moral and financial support of every ethical practicing physician.

George L. Laverty, chairman of the State Society Medical Advisory Committee to SERB, spoke on "The Present Status of the Emergency Medical Relief Program." He said: There are many basic principles behind the present relief program. It is unfortunate that the criterion of relief can be measured only in dollars and cents. Between 1,250,000 and 1,750,000 persons are on relief. The money paid to the physician for medical relief is \$3,750,000; to the sister professions, including pharmacy and nursing, \$1,250,000, making a total of 5 million dollars. No effort has been made for adequate compensation for the physician, as the money is not available. There is no way of evaluating the amount of actual service performed by the profession. The amount of free work has been tremendous. The public should know what the profession has done in this time of economic cataclysm. In the beginning, medical relief was looked upon with skepticism, but the most proficient part of the entire relief program has been medical relief. In the works project, no provision was made for medical assistance to the family. Due to budgetary deficiency, transient shelters will be closed after Oct. 1; even cod liver oil and milk can be provided in adequate amounts only by prescription from the family physician. It is therefore necessary for us to face these problems in an active way in order to contribute something constructive.

C. L. Palmer, chairman of the State Society Committee on Public Health Legislation, gave an address on "Legislative Problems Concerning Public Health." Dr. Palmer said: Since the Senate is Republican and the House Democratic, it behooves the medical profession in its legislation to be nonpartisan. Because patronage is a part of politics, the profession must be care-

ful about formulating policies and consider the interpretations put upon its publication. If connected with an institution, it is better for the individual medical practitioner to be diplomatic in political affairs so as not to jeopardize the welfare of the institution. The Medical Practice Act as written by our esteemed predecessors was a superb achievement. The recent legislation concerning barbituric acid and its derivatives has not prevented druggists from dispensing the drug, but permits it only on prescription. In order for the medical profession to achieve legislation, to maintain the higher ethical standards, and to protect the people from the cultists, plans for an active campaign should be formulated by state and national societies.

William H. Mayer, chairman of the State Society Committee on Public Relations, spoke on "Some Phases of Public Relations." Dr. Mayer said in part: What we do depends on legislation. Since legislators are elected by districts, it is necessary for the medical profession to use influence on their local legislators. We must stress unselfishness and service. Our work must be properly publicized. How can this be put across? Not through us as individuals, but by influencing our patients and taking time to converse with them. Out of abuses grow the rackets. Stand behind the high principles of our State Society. Let our ideal be service, but do not let idealism make us forget our everyday duties in the community.

Wilmer Krusen, president of the Philadelphia College of Pharmacy and Science, expressed appreciation.

Walter F. Donaldson, secretary of the State Medical Society, and Frank C. Hammond, editor of the PENNSYLVANIA MEDICAL JOURNAL, discussed the coming State Convention at Harrisburg.

Arthur C. Morgan, a member of the Board of Medical Education and Licensure, said that at a special meeting of a National Committee on Medical Economics in February, 1935, plans were made, according to Section 7A of the NRA allowing for collective bargaining, to send a representative to Washington. This representative was given the promise from the Executive Office that the medical profession would not be affected during the present session of Congress, but no guarantee was made as to how future sessions would react; therefore, further plans must be made for the future.

PEARL E. HACKMAN, *Reporter*.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE TO THE WOMEN OF PENNSYLVANIA

Still holding the enthusiasm of the meeting at Harrisburg, your president is speaking in earnest terms. That the impetus and inspiration given by the women of Dauphin County to auxiliary work may not pass with the closing days of the convention, but become cumulative throughout the state, is now your task and hers.

A president surrounded, as this one is, by an official family made up of earnest-thinking women has a great responsibility to face. Between what she hopes to accomplish and what will be accomplished in the coming year stretches a long road. How far she travels will be measured by the help you give her.

A large increase in membership under the able leadership of her predecessor, Mrs. Laurrie D.

Sargent, means more potential power. Use it. The president has little or perhaps nothing to suggest as a policy for her administration. Our policies have been well shaped and developed by the national organization under the direction of the Advisory Council. What is there for each auxiliary to do? We realize at once that it is impossible to prepare a distinct program of action that will apply alike to county auxiliaries. There must be certain modifications to suit regional needs and to catch the coöperative spirit of the members. In the president's letter, sent to all county presidents, she has outlined a tentative program. In it you may find your piece of work, for that is her thought.

The president caught your spirit at Harrisburg. It will carry her through many a day, and so with the confidence it gave her, with courage and faith in you the president opens the door of a new year.

MRS. W. BURRILL ODENATT,
President.

A LETTER FROM THE EDITOR

MY DEAR FELLOW MEMBERS:

Pennsylvania has 49 organized county auxiliaries and 5 affiliated with other county auxiliaries.

During the past year reports have been received from the following: Allegheny, Berks, Blair, Bucks, Cambria, Chester, Clinton, Dauphin, Delaware, Elk-Cameron, Erie, Franklin, Indiana, Lackawanna, Lawrence, Lebanon, Lehigh, Luzerne, Lycoming, Mercer, Montgomery, Montour, Northampton, Philadelphia, Schuylkill, Washington, Westmoreland, and Venango.

If your county was not represented in the reports this year, won't you please try to be in next year's list?

We are going to try for 100 per cent next year and I am sure we can reach our goal if each one will send reports regularly after each meeting.

We desire, also, to have reports from the councilor meetings; so please remember, councilor, when you have your meeting to have your secretary send a report to me.

It would be better to send in the results of your elections rather than the preliminary announcement of the candidates and so avoid duplication.

Please note that reports are to be in double-spaced type, written on one side of the paper only, and sent to the editor before the tenth of the month.

The uniform kindness and courtesy extended to me during the past year has greatly encouraged me to continue to bring this very necessary part of our work program before all the members.

By close association we will continue to grow in interest, strength, and friendliness.

JESSIE (MRS. GEORGE C.) YEAGER,
Editor.

EDITORIAL

The activities of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania and of the woman's auxiliaries of the component county medical societies have been so helpful and far-reaching in their influence that the counties in Pennsylvania which have not organized a woman's auxiliary are rather derelict as shown by the altruism of those counties that have done so.

We are very much interested in reading in the Convention Issue of *The Dauphin Medical Academician*, the official journal of the Dauphin County Medical Society, the history of the Woman's Auxiliary to the Dauphin County Medical Society. It appears that the formerly organized group of women in Dauphin County was known as the Wimodausis Society. The following quotation constitutes the first 2 paragraphs of this history.

"Relying solely upon the memories of members of the Wimodausis the following brief history of the original organization was obtained. At a State Society convention held in Harrisburg, when the wives of the Dauphin County Medical Society were called upon to entertain the visiting doctors' wives, it was discovered that the hostess group were themselves strangers to each other.

"Realizing that doctors' wives and families had the same daily problems and routine peculiar to the profession, in order to promote sociability among them, a group of wives organized in 1919 and called themselves 'The Wimodausis' (wives, mothers, daughters, and sisters of doctors)."

These 2 paragraphs tell the story. The history further states that it was purely a social group and succeeded in accomplishing its chief aim, bringing together the doctors' families.

COUNTY AUXILIARY REPORTS

Allegheny.—The auxiliary held its opening meeting on Sept. 24, at the William Penn Hotel, Pittsburgh. It was President's Day; the new president, Mrs. Herbert E. Woelfel, presided.

Dr. Charles H. Henninger talked on "Development of Mental Hygiene as a Public Health Measure." He opened his address by stating that, in a survey made by Dr. Hartman of the University of Pennsylvania, the physician stood first in the estimation of the people. The reason may be attributed to the fact that, when illness comes, there are but 2 sources of help—the divine and the family physician. He gave the entire credit for the formation of the mental hygiene movement to Clifford Beers, who wrote his experiences in his book, *A Mind That Found Itself*.

The Medical Hygiene Committee of the State Medical Society has subdivisions in each county. The research of these committees is available to Child Guidance Clinics, parent-teacher associations, and all organizations interested.

Dr. Henninger believes in developing the child along normal lines and in using common sense in feeding, guiding, and punishing. Personality is the greatest factor in adjustment and thrives best in happy, comfortable surroundings. The importance of the intelligence test has been overrated in judging personality. Intelligence is that factor of the mind that remains after everything is forgotten.

Then following the same thought was a review of Clifford W. Beers' book, *A Mind That Found Itself*, given by Mrs. Anna Webb, of Washington, Pa. This story is an autobiography of the author's life while suffering from fear of epilepsy. Finally an attack comes, and from this point the story deals with life in the various kinds of institutions in which such cases are treated. It has been said that this book has done more to make institutions humanely efficient in their care of mental patients than any other one factor.

A musical program was given and tea was poured for the 150 guests, among whom was Mrs. Laurrie D. Sargent, president of the State Auxiliary.

Bucks.—The meeting of the auxiliary was conducted at Grand View Hospital, Sept. 11. Mrs. Frank Lehman, of Bristol, gave a description of her trip to the west coast. Motion pictures were shown by Mrs. Herman C. Grim illustrating some of the points visited by Mrs. Lehman; films of an educational variety were also shown.

The Oct. 9 meeting of the auxiliary was conducted at the George Washington Inn, Washington's Crossing; Mrs. Herbert T. Crough, president, presided. Some of the members visited the historic places along the Delaware while others listened to the scientific lectures delivered by Drs. J. Walter Hendricks, Gulden Mackmull, and Redding H. Rufe.

Delaware.—The annual meeting and luncheon of the auxiliary was held at the Wallingford Inn, Wallingford, Sept. 21. Twenty-five members and 3 guests were present. The retiring president, Mrs. Arthur Whitney, presided, and following the election of officers presented the gavel to the new chief executive, Mrs. Walter E. Egbert. Mrs. John B. Klopp was elected vice-president, and Mrs. Francis G. Miller and Mrs. Walter A. Landry were reelected treasurer and secretary respectively.

Mrs. C. I. Stiteler was elected delegate to the approaching Harrisburg convention and Mrs. A. V. B. Orr, alternate. Delegates previously elected were Mrs. W. E. Egbert and Mrs. Ralph E. Bell; alternates, Mrs. F. R. Nothnagle and Mrs. Walter E. Wentz, Jr.

The treasurer reported a balance of \$56.93 in the treasury and 56 paid-up members.

As a closing feature 2 members of the auxiliary entertained.

Erie.—The meeting of the auxiliary was held Oct. 7, at Hamot Hospital, with 40 members in attendance. The afternoon was devoted to sewing for the hospital and reading a report of the State Convention, given by Mrs. Frank B. Krimmel, president of the auxiliary. All members who attended the convention reported a delightful time. The Erie County Medical Society and its auxiliary are very proud of the fact that Dr. Maxwell Lick is president-elect. Tea was poured.

Northampton.—The monthly meeting of the auxiliary was held Oct. 9, at Old Sun Inn, Bethlehem. Mrs. Delbert K. Santee, Mrs. Walter D. Chase, and Mrs. J. Edward Brown were hostesses. Luncheon was served.

The report of the card parties given by members for the benefit of the Medical Benevolence Fund was given as follows: July, \$15; August, \$25; September, \$34.75; and October, \$11.75.

Mrs. Clarence Hummel, Easton, delegate to the State Convention, gave a complete report of the meeting. It was decided to hold a board meeting before the regular meeting in November to vote on changing the ending of the fiscal year to May 31 instead of Dec. 31, as it is now. The next meeting will be held in Easton.

Schuylkill.—The first anniversary of the auxiliary was celebrated at Pleasant Acres, the summer home of Dr. and Mrs. Joseph T. Murphy.

The new president, Mrs. Ivor D. Fenton, was installed. An entertaining program was given, and a buffet supper was served.

Warren.—The informal celebration of its second birthday anniversary and the opening of its activities for the third year occupied considerable time and attention at the first fall meeting of the auxiliary, held Sept. 19.

Mrs. Monroe T. Smith, the retiring president, was the hostess for the meeting. Sewing was done for the hospital and a social time enjoyed, after the following officers had been installed: President, Mrs. Ira A. Darling; president-elect, Mrs. Erwin S. Briggs; vice-president, Mrs. Edwin S. Africa; recording secretary, Mrs. Michael V. Ball; corresponding secretary, Mrs. Hilding A. Bengs; treasurer, Mrs. LeRoy E. Chapman.

Westmoreland.—There were 42 present at the first fall meeting of the auxiliary, held Sept. 10, at the Greensburg Country Club.

Delegates to the State Convention were elected. Luncheon was served. The 2 guest speakers were Mrs. James H. Corwin, secretary, and Mrs. Laurrie D. Sargent, president of the State Auxiliary. Mrs. Sargent suggested that we have a speaking committee, a group of members who would go to different clubs and give health talks, which would be a great benefit to people of the surrounding towns. She told us how the membership, which was her aim while in office, had grown and how we could get ideas from the other counties at the State Convention and profit by these ideas. A change in the fiscal year has been suggested, the year to end in May or June. This is to be voted on at the convention.

Bridge was played.

Medical News

Births

TO DR. AND MRS. H. CUSTIS WOOD, JR., Philadelphia, a son, Sept. 22.

TO DR. AND MRS. PETER L. BACKMAN, Jerome, a son, Sept. 14, at the Conemaugh Valley Memorial Hospital.

Engagement

MISS HELEN BLAND, daughter of Dr. and Mrs. P. Brooke Bland, Bala, and Mr. J. Hamilton Coulter, Westfield, N. J.

Marriages

MISS ANNA MUNCHAK, Scranton, to Dr. Eugene E. Polgar, Bethlehem, Sept. 7.

MISS MARY J. NOONAN, South Scranton, to Dr. Arthur P. Keegan, Philadelphia, Sept. 28.

MISS JULIA RALSTON YOUNG, Swarthmore, to Dr. Frank Hurron Murray, Chester, Sept. 4.

MISS MARY QUINN, Bayonne, N. J., to Dr. Samuel Linn Grossman, Harrisburg, Oct. 19.

MISS LORETTA KEBLER MERCER, daughter of Dr. and Mrs. Warren C. Mercer, Philadelphia, to Dr. Charles H. LaClair, Jr., Uniontown, Sept. 21.

MISS ALETTA D'A LAIRD, Wilmington, Del., to Mr. Robert N. Downs, 3rd, a son of Dr. Robert N. Downs, Jr., Philadelphia, and the late Mrs. Downs, Sept. 21.

Deaths

SAMUEL BENNEHOFF, Franklin; Cleveland College of Physicians and Surgeons, Medical Department of the University of Wooster, 1873; aged 86; died July 23, of cerebral hemorrhage and pneumonia.

HENRY BIERMAN, Bloomsburg; Hahnemann Medical College and Hospital of Philadelphia, 1888; aged 70; died July 22, in the Geisinger Hospital, Danville, of carcinoma of the sigmoid with metastasis to the liver. Dr. Bierman was a member of his county (past president) and State medical societies and a Fellow of the A. M. A. He served during the World War and was on the staff of the Bloomsburg Hospital.

ALPHONSO A. W. BLEY, who formerly practiced in Philadelphia, died at his home in Los Angeles, Calif., Sept. 29; aged 84. Following his graduation from the Philadelphia College of Pharmacy and the University of Pennsylvania Medical School, he began the practice of medicine in Philadelphia. After practicing there for about 10 years he moved to Los Angeles, where he conducted a drug store and practiced medicine up to a short time before his death. He is survived by 4 children.

JOHN B. BOOTHE, Philadelphia; Howard University Medical School, 1935; an intern at the Mercy Hospital, Philadelphia; died Sept. 26, of malignant hypertension.

IRVINE R. BUSH, Ardmore; Jefferson Medical College, 1883; aged 77; died Oct. 15, from heart disease. Following his graduation in medicine, Dr. Bush practiced in East Stroudsburg, Pa., for a number of years, and also had established practices in Philadelphia and Bristol. He retired from practice 3 years ago due to failing vision. He is survived by a son.

FRANK MONROE CAIN, Pittsburgh; Jefferson Medical College, 1889; aged 73; died June 23, of coronary occlusion and arteriosclerosis.

LOUIS ANTHONY CARLET, Washington; Jefferson Medical College, 1924; aged 35; died July 14, in Philadelphia, of congenital polycystic kidney. Dr. Carlet was on the staff of the Washington Hospital.

HENRY B. GAYNOR, Polk; Temple University School of Medicine, 1910; aged 65; died July 21, in the Jeanes

Hospital, Philadelphia, of malignancy of the bladder. Dr. Gaynor was clinical director of the Polk State Hospital and a member of the American Psychiatric Association.

ELVIN W. JAQUISH, Punxsutawney; Medico-Chirurgical College of Philadelphia, 1913; aged 49; died Oct. 7, of malignant arterial hypertension. He was a member of his county and State medical societies and the A. M. A.

IRA A. KEITER, Wiconisco; University of Pennsylvania School of Medicine, 1897; aged 72; died July 26, in the Shamokin State Hospital, of shock following an operation for strangulated hernia.

HEINZ LANGER, Pittsburgh; Friedrich-Alexanders Universität Medizinische Fakultät, Erlangen, Bavaria; aged 47; died Sept. 29, of pneumonia. Dr. Langer was a native of Hanover, Germany, but spent the past 13 years in United States. He was with the Bavarian Regiment as medical officer during the World War and was in a French prison camp for several months. He was director of physical therapy and roentgen-ray therapy at West Penn Hospital. He was a member of his county and State medical societies, the A. M. A., and the American Roentgen Ray Society.

JOHN LEAR, Trexlertown; University of Pennsylvania School of Medicine, 1889; aged 76; died Oct. 7. Dr. Lear was retired. He was a member of his county and State medical societies and the A. M. A.

NEIL McLEOD, Philadelphia; McGill University Faculty of Medicine; aged 35; was instantly killed in an automobile accident near Lakewood, N. J., Sept. 23. Dr. McLeod spent 2 years in the department of pathology at the Johns Hopkins University and came to the University of Pennsylvania School of Medicine in 1932, where he was an instructor in pathology.

LEO DeLANCE PARRY, Easton; Maryland Medical College, Baltimore, 1912; aged 45; died Oct. 13. Dr. Parry devoted his entire time to roentgenology and was connected with the Easton Hospital. Dr. Parry was born in Girardville, Pa., and completed a premedical course at Bucknell University. He was a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by his wife and 2 children.

ABRAHAM A. PLESS, Philadelphia; Temple University Medical School, 1918; aged 47; died Oct. 8 in Mt. Sinai Hospital. Dr. Pless was born in Russia and came to this country in 1911. He was a member of his county and State medical societies and the A. M. A. He is survived by his wife, a daughter, and a son.

MRS. ANNIE (STUART) WHEELING RADCLIFFE, aged 85, mother of Dr. William S. Wheeling, Windber, died Sept. 22, at the home of her daughter in Barnesboro.

MR. GERALD L. RICE, Carlisle, aged 34, was killed Oct. 17 in an automobile accident on the Hanover-Carlisle highway. Mr. Rice was a son of Dr. George L. Rice, of McSherrystown, who died July 15.

RALPH VINCENT ROBINSON, Pittsburgh; University of Pittsburgh School of Medicine, 1911; aged 51; died Oct. 5. Dr. Robinson was a member of his county and State medical societies and a Fellow of the A. M. A., a member of the American Roentgen Ray Society and the Radiological Society of North America.

ASHER F. SNYDER, Mount Joy; University of Pennsylvania School of Medicine, 1908; aged 50; died Oct. 5. Dr. Snyder was a member of his county and State medical societies and a Fellow of the A. M. A.

FERDINAND COMFORT SOMMER, Bloomsburg; Jefferson Medical College, 1929; aged 30; died Oct. 15, at the Jefferson Hospital, Philadelphia, from meningitis. Dr. Sommer was a graduate of Ursinus College, served his internship at Jefferson Hospital, and practiced in Erie,

Pa., before locating in Bloomsburg. He was born in Port Kennedy, Pa., and his father, Dr. Henry J. Sommer, is superintendent of the Blair County Hospital at Holidaysburg. His brother, Henry Sommer, Selinsgrove, is district attorney of Snyder County. In addition to his father and brother he is survived by his wife and a sister. He was a member of his county and State societies and a Fellow of the A. M. A.

JOSEPH LAUFFER SOWASH, Irwin; Western Pennsylvania Medical College, Pittsburgh, 1897; aged 65; died July 28, of carcinoma of the lung.

JACOB B. SPANGLER, Mechanicsburg; Jefferson Medical College, 1886; aged 71; died Oct. 7. He was a member of his county and State medical societies and the A. M. A.

WILLIAM H. TASSELL, Coudersport; College of Physicians and Surgeons, Baltimore, 1883; aged 80; died Sept. 5. He was a member of his county and State Medical societies and the A. M. A.

Miscellaneous

DR. WILLIAM GUILFORD, Lebanon, celebrated his 103rd birthday, Sept. 24.

APPROXIMATELY 5,000 of the 20,000 New York State physicians have qualified to act in workmen's compensation cases.

FOUND.—At Farm Show Building, a bifocal lens, belonging to a rim spectacle frame. Write or apply to The Medical Society of the State of Pennsylvania, 230 State St., Harrisburg.

AT A RECENT MEETING of the Board of Directors of the Philadelphia County Medical Society, Dr. Charles F. Nassau was elected censor to fill the unexpired term of the late Dr. Barton Cooke Hirst.

AT A RECENT MEETING of the Executive Committee of the Pennsylvania Radiological Society it was decided to hold the next annual meeting at the Lycoming Hotel, Williamsport, Pa., June 5 and 6, 1936.

MISS HILDA SALOMON of the Jewish Hospital, Philadelphia, was elected president of the National Association of Nurse Anesthetists at the annual meeting of the association recently held in St. Louis.

DRS. CHARLES S. HENDRICKS, Altoona, and Charles S. Duttonhofer, Churchtown, were recently advanced to the grades of lieutenant-colonel and major, respectively, in the 103d Medical Regiment, Pennsylvania National Guard.

THE STATE DEPARTMENT OF HEALTH of Connecticut has announced that mumps and chickenpox will no longer be considered as legitimate cause for children in the same domicile not attending school. This is undoubtedly another case of one of life's darkest moments for the school children.

THE MARY SCOTT NEWBOLD LECTURE of the College of Physicians of Philadelphia was delivered, Oct. 2, by Dr. Cyril N. H. Long, director, of the George S. Cox Medical Research Institute, University of Pennsylvania. Dr. Long's subject was "The Interrelationship of the Various Glands of Internal Secretion Concerned with Metabolism."

PHILADELPHIA OBSERVED THE OPENING of National Hearing Week, October 21, with exhibitions of hearing aids and demonstrations of lip reading. The program was conducted daily under the joint sponsorship of the Speech Reading Club of Philadelphia, the Germantown Club for the Hard of Hearing, and the Philadelphia League for the Hard of Hearing.

THE ANNUAL MEETING of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons was held at Skytop, Pa., Sept. 16 to 18. The fol-

lowing officers were elected: Dr. James W. Kennedy, Philadelphia, president; Dr. Frederick H. Falls, Chicago, vice-president; Dr. Lewis F. Snead, Toledo, treasurer; and Dr. James R. Bloss, Huntington, W. Va., secretary.

ANNOUNCEMENT HAS BEEN MADE of the appointment of Dr. David M. Davis as professor of genito-urinary surgery at Jefferson Medical College to succeed the late Dr. Thomas C. Stellwagen. Dr. Davis is a graduate of Princeton and the Johns Hopkins Medical School and was formerly professor of genito-urinary surgery at the University of Rochester Medical School, Rochester, N. Y.

DRS. JOSEPH MCFARLAND, Howard M. Dixon, and Neil McLeod, all of Philadelphia, met with an automobile accident near Lakewood, N. J., Sept. 23. Dr. McLeod, who was seated in the rumble seat, was hurled to his instant death. Dr. McFarland sustained a concussion of the brain; he is making a satisfactory recovery. Dr. Dixon, who was driving the car, escaped injury.

THE SAMUEL D. GROSS prize for 1935 has been awarded to Dr. Owen H. Wangenstein, professor of surgery, University of Minnesota School of Medicine, for an essay entitled "The Therapeutic Problem of Bowel Obstruction." This prize is awarded every 5 years by the Philadelphia Academy of Surgery.

AT THE ANNUAL CONVENTION of the American Hospital Association and allied organizations held in St. Louis, Sept. 30, to Oct. 4, Dr. R. C. Buerki, superintendent, University of Wisconsin General Hospital, Madison, was installed as president, and Dr. Claude W. Munger, director, Grasslands Hospital, Valhalla, N. Y., was chosen as president-elect. Dr. Bert W. Caldwell, executive secretary, was chosen editor of the official publication of the association.

DR. FLORENCE RENA SABIN of the Rockefeller Institute for Medical Research is the third recipient of the M. Carey Thomas prize of \$5000, which is given at intervals by Bryn Mawr College, Bryn Mawr, Pa., to an American woman in recognition of eminent achievement. The presentation was made at the college on Nov. 2, which climaxed the celebration of the fiftieth anniversary of the institution's founding. The first presentation of the prize, founded by the Alumni Association, was awarded in 1922 to Dr. M. Carey Thomas at the time of her retirement from the presidency.

DR. WALTER HUGHSON, who has won national recognition in his study of deafness and its causes and treatment, is now affiliated with the staff of the Abington (Pa.) Memorial Hospital. Dr. Hughson long has been identified with the Johns Hopkins Hospital in Baltimore as associate professor of otology, and in his new position he will have entire charge of all research work in this particular field. Through the generosity of an unnamed donor, a special laboratory has been made available for his use at the Abington Hospital.

THE GOLD MEDAL OF THE American Roentgen Ray Society was awarded, Sept. 28, to the University of Pennsylvania Hospital and School of Medicine for its exhibit on the small intestine at the society's thirty-sixth annual convention, held at Atlantic City.

There were 38 exhibits covering virtually every phase of radiologic diagnosis and therapy.

The bronze medal was awarded for a study of cancer of the cervix, conducted by 4 physicians of Jeanes Hospital, Philadelphia. This exhibit was shown at the 1935 session of our State Society at Harrisburg.

DOUBLE PAY PROHIBITED.—Under the War Department Appropriation Act, fiscal year 1936, the law prohibits any officer of the Organized Reserves who is drawing a pension, disability allowance, disability compensation, or retired pay from the Government of the

(Continued on page xiv.)

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MEDICAL NEWS

(Continued from page 148.)

United States from drawing any further pay allowances, traveling or other expenses from the government. The law, however, does empower the Secretary of War, when he deems it necessary, to place any officer of the Reserve Corps on active duty with a pay and allowance status, provided such officer surrenders his pension, disability allowance, disability compensation, or retired pay for the period of his active duty.—*The Military Surgeon*, Oct., 1935.

CHANGE IN HEIGHT REQUIREMENTS OF CANDIDATES FOR ADMISSION TO THE NAVAL ACADEMY.—On Mar. 23, 1935, the Secretary of the Navy approved the following change in requirements for admission to the U. S. Naval Academy:

Beginning with the class entering the U. S. Naval Academy in 1936, the height of candidates for admission shall be not less than 5 feet 5½ inches (65½ inches), regardless of age, and no increase in height will be required for commission upon graduation. The maximum height remains 76 inches.

Corresponding changes in paragraphs 1442 (a), 1446 (a) (b) (c), 1447 (b), 1563 (c), Manual Medical Department, U. S. Navy, are being recommended.—*The Military Surgeon*, Oct., 1935.

THE OPENING EXERCISES of the Temple University School of Medicine, were held Sept. 25, Dean Parkinson presenting the members of the teaching staff to the new students. Dr. John A. Kolmer, professor of research medicine, delivered an address.

The enrollment for the session 1935-1936 is as follows: First year, 112; second year, 108; third year, 118; and fourth year, 127.

The total of 465 includes 127 students enrolled here for the first time, 110 of whom were admitted to the first-year class and 17 to the third-year class. These students completed their premedical courses in 51 colleges, representing 10 states and one insular possession. There are 89 Pennsylvanians and 15 sons of physicians.

The freshman class was selected from a total of 1090 applicants. Inquiries were received from approximately 2100 persons.

THE ANNUAL CONFERENCE of the National Society for the Prevention of Blindness will be held at the headquarters of the society in Rockefeller Center, New York, Dec. 5 to 7. Among the topics to be discussed will be: Medical Social Eye Work, The Prevention of Eye Accidents Caused by Fireworks, and The Division of Responsibility between Official and Unofficial Agencies in the Movement for Prevention of Blindness.

The following have been elected honorary vice-presidents of the society: Dr. George E. deSchweinitz, Philadelphia, emeritus professor of ophthalmology in the Medical School, University of Pennsylvania; Dr. John H. Finley, associate editor of the *New York Times*; and Miss Lillian D. Wald, president of the Henry Street Settlement of New York City.

Dr. Walter B. Lancaster, Boston, associate in ophthalmology, Harvard University Medical School, and Dr. Bernard Samuels, New York City, professor of clinical surgery, Cornell University Medical School, have been elected to the society's board of directors.

OPERATING ROOM IS NEW DEVITT'S CAMP ADDITION.—To meet the growing demand for surgery in the care and treatment of tuberculosis, Dr. William Devitt has announced the addition of an operating room to the modern facilities already available in the sanatorium bearing his name at Allenwood, near Milton.

Two erstwhile private rooms, each 11 x 12 in size, were utilized in the project. A third adjoining room will be used for sterilization purposes. New equipment

(Continued on page xvi.)



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When Under-Nutrition Calls for Calories *prescribe*



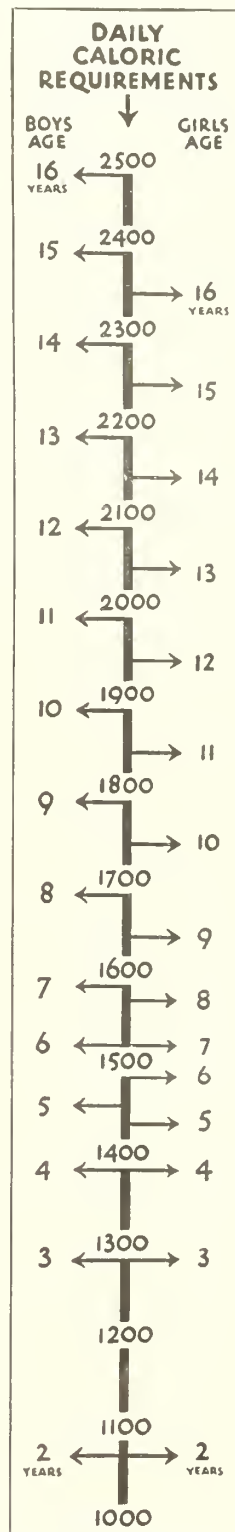
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Figures from Kugelmann's
"Feeding in Infancy and
Childhood"

MEDICAL NEWS

(Continued from page xiv.)

was installed throughout, giving the sanatorium what is regarded as one of the most complete small hospital units in the state.

Dr. W. E. Delaney, Jr., who is associated with the surgical staff of Williamsport Hospital, will be the surgeon-in-charge. Dr. Delaney has served the sanatorium in this capacity for several years. An open staff policy will be enforced, however, to permit wide collaboration with visiting surgeons.

ACTIVE DUTY TRAINING FOR RESERVE MEDICAL OFFICERS.—Inasmuch as the appropriation for officers of the Reserve Corps is not sufficient to give all reserve officers 2 weeks' active duty training, it has become necessary not only to eliminate all reserve officers having physical defects from this training but also to establish priority and ratio lists for those physically qualified. Preference will be given to the priority list of reserve officers because of their junior rank, their branch of the service, and their qualifications as demonstrated in active duty training. Under the present circumstances the War Department does not believe it advisable to place on active duty officers who in an emergency would not be able to perform all field duties. In other words officers not physically qualified will not be given active field training.

In special cases, as duty in Civilian Conservation Corps, the War Department has established a more liberal policy. In this case the primary objective is the efficient conduct of the camps themselves rather than the consideration of military training for future emergencies. According to this ruling, cases in which corps area commanders need the services of reserve officers, they may be called upon even if they do not meet the physical requirements for active field duty.—*The Military Surgeon*, Oct., 1935.

THE ONE HUNDRED AND ELEVENTH Annual Session of the Jefferson Medical College was inaugurated on Sept. 23, in the Assembly Hall of the College. President Wilfred W. Fry, of the Board of Trustees, presided.

The introductory lecture was delivered by Louis H. Clerf, M.D., professor of bronchoscopy and esophagoscropy, on "Medicine as a Career." Dean Ross V. Patterson welcomed the 536 members of the student body. Of this number, 144 are new students, 134 being admitted to the first-year class.

The members of the freshman class were prepared for medical study in 57 different institutions; all of them have completed 4 years of preliminary and preparatory study and have graduated from these institutions. Approximately 1230 students requested information as to the conditions under which they could be admitted to the first-year class. The 134 men who make up the class were chosen from approximately 565 applicants. Approximately 350 applicants with college degrees were rejected. Seventeen members of the first-year class are sons and other relatives of physicians, 12 of whom are Jefferson graduates. Geographically, 18 different states and insular possessions are represented.

THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA issues the following: Chevalier Jackson, M.D., was elected president of the College at the beginning of its eighty-sixth session replacing Mrs. James Starr, who resigned the presidency in order to devote her time more completely to the financial problems of the institution as chairman of the Executive Committee.

Esther M. Greisheimer, M.D., University of Minnesota, 1923, and for 12 years assistant and associate professor of physiology at the University of Minnesota, was appointed full-time professor of physiology.

In the Department of Pharmacology and Applied Therapeutics, of which Dr. Henry Draper Jump is

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This dependable brand of unsweetened evaporated milk is now irradiated—enriched in Vitamin D by the Steenbock Ultra Violet Ray process. In addition to the many other inherent qualities which make Wilson's Milk so reliable for baby feeding, you can now depend upon it to introduce a rich supply of Vitamin D in a baby's diet automatically. You will be pleased with the way your babies thrive when Wilson's Irradiated Evaporated Milk is used in your feeding formulas. All our statements about Wilson's Milk are accepted by the American Medical Association Committee on Foods—and we do not furnish feeding formulas to mothers. WILSON MILK COMPANY, Inc., Box 895, Indianapolis, Ind.

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You gave him Tetanus Gas-Gangrene Antitoxin because you knew that his wounds very likely harbored the dreaded anaerobic organisms—tetanus, perfringens, vibron septique. You knew that he, like all your patients with contaminated wounds, was a potential victim of tetanus or gas-gangrene.

The frequent incidence of the gas-producing bacilli, *B. perfringens* (*B. Welchii*) and *B. Vibron septique*, in anaerobic infections makes it advisable to protect against both of these organisms, as well as against *B. tetani*. Clinical evidence indicates that the remaining anaerobic organisms are a much less frequent cause of infection.

The physician desires no compromise with safety. Protection against these three potential factors in anaerobic infections is afforded by Tetanus Gas-Gangrene Antitoxin (Combined), Refined and Concentrated, P. D. & Co.

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MEDICAL NEWS

(Concluded from page xvi.)

chairman, 2 new full-time appointments were made. Ben King Harned, Ph.D., a graduate of Washington University and professor of pharmacology at the University of Tennessee last year, was appointed professor of pharmacology. Versa Viola Cole, Ph.D., University of Chicago, and research assistant in medicine at Ohio State University last year, was appointed assistant professor of pharmacology.

Hartwig Kuhlbeck, M.D., University of Jena, was appointed acting full-time professor of anatomy. He was privadocent at the University of Breslau from 1927 to 1934 and professor of anatomy at Breslau in 1934. Mary Bickings Thornton, M.D., formerly part-time professor of anatomy, was made professor emeritus.

Marion Fay, Ph.D., Yale University, adjunct and associate professor of biochemistry at the University of Texas from 1925 to 1935, was appointed full-time professor of physiological chemistry replacing Dr. H. H. Bunzeli who was unable to serve full time in the college. Marie Andersch, Ph.D., University of Iowa, and last year medical research worker at that university, was appointed assistant professor of physiological chemistry.

To improve the facilities of the Library a full-time librarian, Alice Adams, has been appointed.

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inciting our attention to merit.

CLINICAL LABORATORY METHODS AND DIAGNOSIS: A Textbook on Laboratory Procedures with Their Interpretation. R. B. H. Gradwohl, M.D., director of the Gradwohl Laboratories; director of the Gradwohl School of Laboratory Technic; director of laboratories, St. Louis County Hospital; chief of staff and pathologist to Christian Hospital; Lieutenant Commander, Medical Corps, Fleet, United States Naval Reserve. With 328 illustrations and 24 color plates. C. V. Mosby Company, St. Louis. Price, \$8.50.

The name of the author alone is sufficient to assure the intrinsic value of this book, not only from the standpoint of the medical student but also as a very valuable reference book to the practitioner.

To the laboratory worker and the medical student the book is of incalculable help; to the practitioner it is of invaluable help as a laboratory diagnostic aid. Modern medicine cannot be satisfactorily practiced without a general knowledge of how to interpret laboratory findings, and how to determine the relation of the laboratory findings to the individual patient.

The chapter on hematology is stressed, as it should be; it is very important.

This book is strongly recommended.

A TEXTBOOK OF BIOCHEMISTRY. Edited by Benjamin Harrow, Ph.D., associate professor of chemistry, The City College, College of the City of New York, and Carl P. Sherwin, M.D., Sc.D., Dr. P. H., LL.D., member of the staff of St. Vincent's Hospital and French Hospital, New York City; 797 pages with 52 illustrations. Philadelphia and London: W. B. Saunders Company, 1935. Cloth, \$6 net.

There exists a group of readers of textbooks who show a preference for books written by a single author. As truly stated in the preface, biochemistry has become so encyclopedic in its scope that it seems an impossible task for any one individual author to write an adequate

(Concluded on page xx.)

HYCLORITE



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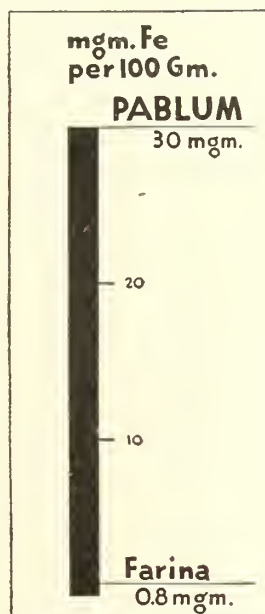
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FAR too often the bland diet prescribed for gastric ulcer, colitis, and similar gastro-intestinal disorders is a deficient diet. An analysis made by Troutt of ulcer diets used by 6 leading hospitals in different sections of the country showed them to be "well below the Sherman standard of 15 milligrams" in iron and low in the water-soluble vitamins.¹ "Vitamin B would appear to be represented at a maintenance level in most cases," writes Troutt, "but the possible relation of vitamin B to gastro-intestinal functions and appetite should make one pause before accepting a low standard."



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Pablum is the only food rich in a wide variety of the accessory food factors that can be fed over long periods of time without danger of gastro-intestinal irritation. Its fiber content is only 0.9%. Yet Pablum contains 37 times more iron than farina and is an excellent source (+ + +) of vitamins B and G, in which farina is deficient. Supplying $8\frac{1}{2}$ mgms. iron per ounce, Pablum is 8 times richer than spinach in iron. It must be remembered, too, that even when such vegetables as spinach are included in the ulcer diet, their iron content is reduced by sieving. Peterson and Elvehjem found, for instance, that orange juice and tomato juice contain only one-third as much iron as the whole fruit.²

Rich in Vitamin B

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(Concluded from page xviii.)

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PREVENTION OF DENTAL CARIES AND THE IMPROVEMENT OF HEALTH BY DIETARY MEANS*†

FREDERICK F. TISDALL, M.D., TORONTO, CANADA

A panel discussion on dental caries was held at the Fourth Annual Meeting of the American Academy of Pediatrics in June, 1934. The academy was fortunate in having a number of the leading members of the dental profession take part in this discussion. A perusal of the report of the discussion shows that there is little unanimity of opinion among the dental profession as to the exact cause of dental caries. This would indicate that there are probably many different factors involved. Using the wealth of information brought out in this informal discussion and the results obtained from investigations at the University of Toronto, I will present from the standpoint of the physician some of the fundamental principles involved in the process of tooth decay and the means which we can take to prevent this most widespread of all diseases.

In 1933, M. C. Agnew, R. G. Agnew, and F. F. Tisdall reported the experimental production of dental caries in rats. This was accomplished by feeding the animals a diet deficient in many factors, particularly phosphorus and vitamin D. This deficient diet also resulted in a lowered resistance to infection, an important fact to keep in mind in the following discussion. Unfortunately the shape of the crevices of the rat's molar teeth is so dissimilar to that of human teeth that subsequent studies showed that other factors were involved which did not allow the results to be strictly applied to humans. However, our microscopic studies, which show identical changes with those of human caries, serve to elucidate the various stages of the pathologic process. These changes must be

clearly understood in order to approach rationally the problem of the prevention of tooth decay.

The enamel or outer layer of the tooth is a dense substance composed largely of calcium phosphate and containing only about 3 per cent of organic material. Underneath the enamel is the dentin layer, which contains approximately 28 per cent of organic material, and in the center of the tooth is the pulp chamber. The tooth is a living structure. No one questions this as far as the pulp and dentin layer are concerned. In the young tooth even the dense enamel layer is a living structure and as such can be affected by the general nutrition of the body.

In dental caries the inflammatory process is the same as would occur in any other part of the body. The microscopic sections show that caries starts on the outside of the enamel layer. It progresses through the enamel at one point and then tends to spread laterally and undermine the enamel. It also progresses into the dentin layer giving the typical picture of an inflammatory process with resultant destruction of tissue. The question at once arises, how can organisms penetrate through the hard enamel? The first step must be a small or even microscopic break in the surface. Developmental defects or slight mechanical injuries may result in such a break. Injury may also be accomplished by acid-producing organisms, such as *Lactobacillus acidophilus*, which thrive in a sugar medium and produce a relatively high degree of acidity. Due to food debris being retained in certain areas on the surface of the tooth the acid may be formed by the bacteria on these areas over a considerable period of time and thus attack and injure the surface of the enamel. Through the defective areas of the enamel, bac-

* Read before the General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

† From the Department of Pediatrics, University of Toronto.

teria, protected from the action of the saliva, can enter and attack the interprismatic cementing substance between the rods of the enamel and thus extend into the dentin.

In a consideration of how tooth decay can be prevented it must be regarded in the same light as any other infective process. Two factors are involved—(1) the attacking organism, and (2) the resistance of the host. Considering first the attacking organism, its presence in the mouth alone is not sufficient to result in tooth decay. It must be in contact with a circumscribed area of the tooth and so surrounded with débris or other material that it is protected from the prophylactic action of the saliva. Tooth decay occurs most frequently in those areas where food débris can be retained. If the invading organism is to be held in contact with a small area of the tooth and also supplied by the most favorable medium for its growth, namely, sugar, the most effective means of doing this is the ingestion of soft sticky food with a high starch or sugar content. Careful observations have indicated that the ingestion of this type of food is an important factor in the production of tooth decay.

Considering next the resistance of the host, the ingestion of an excess of starch and sugars not only can produce conditions in the mouth which are favorable to the localized development of bacteria, but by reducing the intake of other necessary food elements can deleteriously affect the health of the individual and his resistance against infection. Microscopic sections of caries in many cases show very clearly a defense reaction against the inflammatory process even in the enamel layer. It is obvious that the general health of the body and its resistance against infection can be reflected in the tooth itself. Thus any procedure which will tend to increase the resistance of the individual will tend to prevent tooth decay.

The resistance of the host may also evidence itself through the saliva. As the saliva is the great cleansing agent of the mouth any variation in the amount or a change from a thin fluid to a thick ropy saliva would interfere with this cleansing action. As the enamel of the tooth is largely calcium phosphate a change in the chemical composition of the saliva, particularly the concentration of calcium or phosphorus, might conceivably result in conditions favoring the dissolution of the surface of the enamel. The difficulty of obtaining experimental proof in regard to the above statements makes the rôle of the physical and chemical composition

of saliva in the prevention of dental caries largely conjectural.

With the above information in mind, how can we as practicing physicians take an active part in the prevention of this all too prevalent disease?

We can recommend the brushing of the teeth and the cleansing of the mouth as an aid in the prevention of tooth decay, but no brushing can remove all the food débris and bacteria from all the surfaces of the teeth.

We can recommend the feeding of a diet which does not contain an excess of soft sticky carbohydrate material, as this material when adherent to the teeth is a favorable medium for the growth of the attacking bacteria.

We can recommend a diet which will tend to improve the general health of the individual and thus increase the resistance against the attacking organism.

Elmer V. McCollum has drawn attention to the fact that there are no less than 37 individual food elements which must be supplied in adequate amounts for the development and maintenance of optimal health. These are as follows: 18 amino acids, which are supplied by the protein, carbohydrate to supply energy, 1 fatty acid, 11 minerals, and 6 vitamins. During the past few years we have carried on investigations to determine the effect of a lack of some of these on the growing child. It is to be expected that if any one of these 37 food elements is not received in sufficient amounts it will affect the whole health of the individual. The work of Elizabeth Chant Robertson, of the Department of Pediatrics, University of Toronto, has indicated that this is so. In feeding experiments with animals a reduction of the amount of animal protein or of vitamin A, vitamin B-complex, vitamin D, or a number of the minerals resulted in a definite lowering of the resistance of the animals to infection.

Our present dietary standards allow the consumption of more than 30 per cent of our calories in the form of purified food products, such as highly milled flours and refined sugars. These food products are extremely low in, in fact, almost devoid of, most of the minerals and vitamins. If the food consumed to-day is analyzed it will be found that the calories supplied by these refined food products will in many cases constitute nearly one-half of the total calories ingested. It is obvious that a very definite burden is placed on the remaining articles of food consumed to supply a number of the minerals and vitamins in amounts commensurate

with optimal health. J. R. Ross and Pearl F. Summerfeldt, of the Department of Pediatrics, University of Toronto, have found that with normal children on a diet which fulfills the requirements of our present dietary standards they were able to increase the rate of growth and the hemoglobin content of the blood by feeding more than the usual amounts of the vitamin B-complex, calcium, phosphorus, iron, and other minerals. This and other work furnishes considerable evidence that even our present dietary standards do not supply many of the food elements in amounts essential for optimal health.

A study which has a direct bearing on the effect of diet on tooth decay was made recently by P. G. Anderson, C. H. M. Williams, H. Halderson, Cecil Summerfeldt, and R. G. Agnew. It involved the administration of vitamin D to children. Vitamin D is essential for the optimal retention of calcium and phosphorus. Julian D. Boyd has found a distinct correlation between the ability of children to retain calcium and phosphorus and the freedom of these children from caries. An adequate supply of vitamin D should therefore be a factor in the production and maintenance of normal, well-calcified teeth. We have also shown experimentally that a lack of vitamin D lowers resistance against infection. Thus an adequate supply of this food element should help to prevent tooth decay. Adequate amounts of this vitamin are not present in the average diet, and with our inclement weather very little benefit is obtained from the vitamin D effect of sunshine for many months of the year. Thus it is possible that the average individual may be suffering from a lack of this food element. Accordingly, 2 comparable groups of children, ranging from age 5 to age 15 and living under excellent hygienic conditions in an orphanage situated in the country, were given a diet which fulfilled our present dietary standards. To one group vitamin D in the form of viosterol was added to the diet daily over a period of 1 year. Careful dental examination which included roentgenograms of the teeth of every child was made on the children of both groups. It was found that the incidence of dental caries was markedly decreased in the group receiving this additional vitamin D.

What diet should we prescribe therefore to produce and maintain teeth free from decay? Briefly, we should prescribe the diet which will result in optimal health. This diet should contain at least 1½ pints (24 ounces) of milk daily. It is almost impossible to obtain an adequate amount of calcium if this is not done. Meat

should be given daily, particularly to furnish protein of a high biologic value in addition to the protein in milk. Eggs are extremely valuable on account of their protein, mineral, and vitamin content. Incidentally, egg is the only food commonly used which contains appreciable amounts of vitamin D. Even so, additional vitamin D should be given as our observations have shown that 14 egg yolks are required to furnish the vitamin D equivalent of 1 teaspoonful of cod liver oil. Vegetables and fruits, some in their raw state, should be taken daily, particularly for their mineral and vitamin content. There is a definite loss of not only a number of the minerals but also the water soluble vitamins in discarded cooking water. Vegetables and fruit when raw also help to remove some of the sticky food debris from the teeth. It has been shown beyond any question of doubt that if the diets are built around milk, meat, eggs, vegetables, and fruit, and additional amounts of vitamin D supplied, a diet will be prescribed which will not only tend to induce optimal health but will specifically result in a lowered incidence of tooth decay.

SUMMARY

1. Tooth decay is an inflammatory process with the infecting organism entering the tooth from its surface. This entrance is probably accomplished through a local injury or defect of the hard enamel of the tooth. A local injury may be produced by the acid from acid-forming bacteria. Through this injury organisms penetrate through the enamel into the dentin layer and produce a destruction of the tooth substance in a manner similar to any other inflammatory process.

2. Tooth decay may be prevented by: (a) The reduction of sticky foods with a high carbohydrate content, which food material tends to become lodged in inaccessible areas of the tooth surface and thus form a favorable medium for the growth of bacteria; (b) the administration of a diet built up around milk, meat, eggs, vegetables, and fruit, with added vitamin D, which will tend to result in optimal health. Whether this diet acts by increasing the resistance of the tooth itself, by changing the physical or chemical characteristics of the saliva, or by the automatic reduction of the high carbohydrate purified food materials which would otherwise be used is not known. The fact remains, however, beyond any doubt that the administration of this type of diet does decrease tooth decay.

RECENT TRENDS IN MEDICAL ECONOMICS*

FRANCIS F. BORZELL, M.D., PHILADELPHIA

In these days of stress and social upheaval, with the medical profession harassed on all sides, it is heartening to remember the words of René Descartes, the French philosopher of the sixteenth century. He said: "If ever the human race is raised to its highest practicable level intellectually, morally, and physically, the science of medicine will perform that service." If it be not lese majesty, I should substitute the word *spirit* for science, for it is, after all, the spirit of medicine that has sustained us.

It is a far cry from the days of the immortal Hippocrates to the present day. Twenty-three centuries ago, Hippocrates formulated the first principles of medical ethics. His science was crude. Through the 23 centuries intervening, medicine has passed from being wholly an art, mixed largely with fetishes and superstitions, to a highly complex science. Art, however, still plays a prominent rôle and will continue to do so as long as mind and matter exist. True it is that the art and science of medicine to-day bears no resemblance to the art of Hippocrates, but equally true it is that basically the ethics of medical practice are as unchanged to-day as the day the master wrote them, amplified by advancing civilization but in principle the same. Hippocrates recognized the incalculable value of a harmonious patient-physician relationship.

Medicine has always recognized the necessity for high ethical standards, and woe betide the day when we are no longer guided by these standards. We have realized that whatever accomplishments we have achieved, whatever service we have been to humanity has been born and nurtured by the inspiration of lofty ethics, unselfish in the extreme, with but one end in view—the mitigation of human suffering. But, as history again repeats itself, ignorance and misunderstanding have shown their fangs, and to-day we find ourselves defending these very principles that have stood the test of centuries and have proven their worth. In the last analysis, we are compelled to this defense because of efforts to tear us away from these very principles of ethics. Were it not for the promulgation of certain economic theories which threaten to leave the profession denuded of the protective coverings of unimpeachable ethics, we would not now find it necessary to study seriously such a subject as medical economics. If the world but grasped

a small part of the spiritual significance of medical ethics, it would rally to our defense and trample to dust those who would seek to destroy us. Herein lies the reason for modern trends in medical economics. True it is that social concepts are changing, long established economic values are being disturbed, political landmarks have been swept away, upheaval is everywhere, and spiritual values are momentarily ignored.

Nevertheless, much as we as physicians are loath to be dragged from our daily tour of medical service, we are faced with conditions that demand our most serious consideration. Not so many years ago, medical economics was confined to efforts to maintain some uniformity in fees, the suppression of fee-splitting and commercial rebates, the detection and elimination of chronic beats, and other similar activities. To-day the field of medical economics is much wider, and we find doctors of philosophy, social workers, sociologists, and economists taking a dynamic interest not in medical ethics but in medical economics. They would tell us how medical services should be distributed; to the patient they would dictate who the doctor should be, and to the doctor, whom he should treat. They would determine the value of medical services in terms of industrial or mercantile standards. We will not impugn their motives, but we do challenge their right because we question their competency to know; we sense their failure to realize the ethical integrity or spiritual value of our profession.

The medical profession may be largely at fault for its present plight; that is, if an all absorbing devotion to the task of healing the sick can be a fault. May it not be that we were too naïve in assuming that the world accepted us as we hoped they would? Whether this be true or not, we find ourselves facing a situation in which medical services are conceded to be vitally indispensable, but for some reason or other, be it economic, social, or political, changes in the method of payment for these services and demands for revolutionary readjustment of the mode of distribution are advanced on all sides. This trend in medical economics springs largely from organized forces without the profession and can only be met by organized forces within the profession.

There are other trends in the field of medical economics that arise from the profession itself. These trends are characterized chiefly by an

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

awakening to the fact that gradually the field of medicine has been encroached upon, and that our own economic status is becoming more and more insecure because of constantly mounting demands upon our services without just remuneration. These problems need not be detailed. You are only too familiar with them. It is interesting to note, however, that these conditions are not the result of any weakening in our basic ethical principles, but of a vicious exploitation, the tendencies of which we failed to visualize years ago. The aggravation of these conditions by our present universal economic difficulties has nevertheless resulted in bringing the boil to a head, as it were. Our problems are not new, nor is our position hopeless. Dr. Harry M. Hall, in November, 1929, at the Annual Secretarial Conference, made the following statement:

"Medicine certainly had moments in its other days reeking with sordid discouragement, shocking oppression, and insistent persecution. But like the Jewish race and its Bible, it managed in some way or other—milling, struggling, suffering, triumphing, bleeding, pleading, and dying often in martyrdom—to develop continuously the foundation on which it rests to-day. Its practitioners had to face vulgar and unspeakable quackery, absurd antics of sinister nondescripts, death for asserting the truth, crassness, idolatry, charms, amulets, absurd superstitions. If they succeeded, little reward followed; if they failed, torture and death. They pursued their profession, forced to mingle with toothless hags, itinerant barbers, withered soothsayers, and vehement fakirs. Had they a passion for anatomy, they must work in a cellar, fearful of detection. Had they a love for the truth and were men of distinction, they must needs face their king—and the axe and the block was the reward for defending the fact that the heart beat and the blood circulated. What courageous men they were! What a fine faith! It should be enough to make us ashamed of our timorous actions, our wavering ideals. We look back casually and commiserate with them. Ah, it is here we make our mistake. Allow for relativity in time and place, natural improvement of all civilization, the intervening years, discoveries, inventions, and the like, and it is rather doubtful that we have any room for commiseration."

Considerable time has been consumed to emphasize what may seem to have little bearing on the subject of recent tendencies in medical economics. There is a reason. One of the most insistent cries we hear loudly expressed from without the profession and occasionally from within is that we have no plan. We are accused

of a *laissez faire* policy. We are supposed to be snugly content with our lot, selfishly satisfied, taking no thought of the needs of suffering humanity. The refutation of this vicious condemnation could alone occupy hours. The fact is that the organized medical profession in America has given years of study to the economic phases of the distribution of medical service. Why, then, have we not solved the problem? Because, first and foremost, the problem is basically one of social economics, and not medical; because society has failed to acknowledge its debt, nor has it come to a realization that medical services must be included in any budgetary calculation of life's necessities. Secondly, in our efforts to arrive at solutions, we have started with the foundation stone of ethics and the spirit of the Hippocratic oath, knowing full well that no superstructure of plans for the economic adjustment of medical services can survive without this foundation.

To be more concrete, let us consider for a moment the special report of the Bureau of Medical Economics, as finally revised and unanimously approved by the American Medical Association last June. In response to a mandate from the House of Delegates at a special session called last February to crystallize beyond contravention the position of the American Medical Association, the Bureau was authorized to study more than 200 experimental plans now being tried or proposed throughout the country. The 10 points promulgated by the previous session at Cleveland were reaffirmed at the February meeting. With these 10 points as a measuring rod, the Bureau was asked to study existing and proposed plans and, if possible, devise some skeleton plan upon which to build. Its conclusion was that "there is no uniform universal plan possible." Realizing the stress of immediate needs and the pressure of demands from certain quarters for precipitate action, a very thoughtful attempt was made to direct organized thought and proposed action into safe channels.

The following quotation appears on page 27 of *Medical Service Plans*, a publication of the Bureau of Medical Economics.

"Since solutions of social questions and panaceas for economic evils are for the most part wishful thinking, which, when an attempt is made to apply them in practical life, give disappointing results, the question arises as to where progress is most easily possible and is likely to be most promising of results. That progress will be gradual—one step at a time. There is no other kind of sane progress—no sudden jumps,

and least of all in social changes. Institutions, traditions, and the human beings that are products of thousands of years of gradual evolution are stubbornly resistant to change. This is no less a truism than the one that says that the only constant thing is constant change. Another truism usually forgotten is that when going anywhere one must start from where one is. Whatever changes take place will consist primarily of new arrangements of things now existing. Finally, to this collection of neglected truisms can be added the fact that one cannot successfully transplant from another country institutions bred of different social heredity and developed in a wholly different environment."

The basic unit of the organized medical profession is the county society, and as such is the unit around which community plans must be built. The Bureau recognized this fact and wrote as follows (quoted from page 24 of *Medical Service Plans*):

"Regardless of the causative factors, which may vary in different communities, county medical societies must be prepared to recognize and deal with complications affecting the organization of medical care under the specifications of a county plan just as their members are trained to deal with complications which often occur to change the course of the diseases which they treat."

The Bureau then lists 10 dangers and complications as follows (quoted from page 25 of *Medical Service Plans*):

1. The adoption and operation of a medical plan where it is unnecessary.
2. The stimulus aroused by good plans among irresponsible organizers to develop and operate imitations and counterfeits.
3. The establishment in medical practice of dangerous patterns following the adoption of undesirable types of plan.
4. The compromise of medical societies in the corporate practice of medicine or in the operation of insurance companies as a result of an insufficient study of state statutes and case law.
5. Failure to conform to the Principles of Medical Ethics in the operation of a plan.
6. The almost inevitable transition of voluntary insurance plans into compulsory contributory sickness insurance systems operated by the state.
7. The difficulties involved in or the failure adequately to provide for complete control of medical affairs by the medical profession.
8. The "freezing" of medical fees at a point below that which is consistent with good medical service.
9. Failure to bear constantly in mind that a medical society plan is an experiment in the methods of distributing medical service and that it may have only a temporary usefulness, may need frequent or drastic modifications, or may need to be discarded entirely.

10. Medical society plans must not be considered or accepted as a substitute for the regular practice of medicine as applied to the majority of people. If it is believed such plans may be useful, they should be considered merely as supplementary facilities in the distribution of medical service. They should be used only so long and in such a manner as they serve efficiently to make more easily available to low-income groups a high quality of medical care.

This report is so terse and withal so logical in its entirety that quoted excerpts tend to be misleading. It is commended to every physician for his earnest study. So much for plans for medical service as they apply to the mode of distribution.

The fires of tribulation have a refining influence for those elements that are not consumed thereby. It is not until our strength is put to the test that we become aware of our weaknesses. There is a growing realization that weaknesses in our professional structure do exist, and herein lies the most important tendencies in the field of medical economics. Realizing more than ever before the necessity for professional solidarity and awakening to the fact that, as Herbert Spencer said, "Self-preservation is the first law of nature," the organized medical profession may find it necessary to emphasize more dynamically the necessity for a strict conformance to individual ethical standards. We would be naïve indeed if we failed to recognize the fact that there is a small percentage of those among us to whom ethics are but a nebulous spirit. There are those who are not motivated by quite the same spiritual concepts that the majority hold essential.

In order to make the position of the profession less vulnerable, it would seem advisable to strengthen our organization by the adoption of such disciplinary measures as would tend to keep from straying those whose tendencies are otherwise, or if necessary would permit us to purge our ranks of them. In fact, at the last session of the A. M. A. House of Delegates the Judicial Council was instructed to give thought to such possible needs.

There are indications that medical education must be reorganized in order to meet certain economic problems. It has been suggested by medical educators that the medical school can be of assistance in solving some of our problems by a readjustment and more careful selection of curricula to suit the basic needs of medical education, having in mind a division of the medical field into certain differential parts. This is with a view to maintaining for the medical profession its rightful heritage, that of the custodian of the health of the people, and possibly checking the

encroachment of lay workers into medical fields, lacking as they usually do the basic concepts of the physician.

So many phases of this subject remain untouched that I feel keenly my inadequacy in this presentation.

In conclusion, no matter what the tendencies in medical economics may be, we as an organized profession have but one plea to make to the public and that is to be permitted to render the highest type of medical service possible and to retain that trusteeship that is rightfully ours.

Organized medicine, through the activities of its various bureaus and committees (national, state, and county), has accomplished much, but more must be done. The profession must expect to identify itself actively with the study of all social problems for its own protection as well as that of society. This calls for a much broader field of service than in the past, which can be made possible only by a strongly knit organization backed by the moral as well as the financial support of every ethical practicing physician.

4940 Penn Street, Frankford.

BOARDING-OUT OF MENTAL PATIENTS*

WILLIAM C. SANDY, M.D.,† HARRISBURG, PA.

Boarding-out or so-called family care as an additional method for meeting the increasingly burdensome problem of the mentally ill has so far been little utilized in the United States. Economic difficulties and other circumstances have, however, resulted in quite a widespread discussion of boarding-out and in the consideration of legislative enactments in several states.

It is a startling and sometimes discouraging fact that the number of beds for mental patients in the United States has increased more rapidly than might be expected from the growth of population. This has been in spite of the marked progress made by psychiatry in the past 25 years, for psychiatry must be credited with decided progress, characterized by better diagnostic and treatment facilities, greater comfort and happiness for the patients, more widespread and more adequate general information about mental disorder, and greater confidence in psychiatry both on the part of the general public and the medical profession. Minimum standards as to adequate facilities and methods of treatment have been developed and are becoming more generally recognized. Mental clinics and social service have been developed, both factors in the prevention of mental illness and hospitalization. Most recently, the requirements for recognition as a specialist in psychiatry, comparable to those established for other specialties, have been clearly stated and adopted by the American Psychiatric Association and the American Board of Psychiatry and Neurology.

The increase in hospitalization out of proportion to the growth of population may to a con-

siderable degree be explained by the better facilities for treatment, the greater confidence in the hospitals by both patients and the general public. It does not necessarily represent what sensational writers sometimes call the alleged alarming increase in insanity.

This progress in psychiatry, however, has naturally and inevitably been accompanied by increasing expense to the taxpayer, largely brought about through housing and equipment improvements, better methods, and more adequate personnel in the hospitals. Furthermore, it is becoming more and more difficult, not only in Pennsylvania but also in other states, to secure the funds for what is regarded as the necessary hospital building program. Under the circumstances and in fairness to the taxpayers who pay the bill, all methods of meeting the problem of the care of mental patients should be carefully considered, especially those which are not accompanied by capital outlay. As one of the methods in which large capital expenditure may to some extent be relieved, boarding-out in the community or family care of selected cases has been given careful study.

Boarding-out of mental patients is by no means a new plan. In variously modified forms, it has been practiced in Gheel, Belgium, in Scotland, in Nuremberg, Germany, in Switzerland, and in Massachusetts. Laws authorizing boarding-out plans have been passed in Utah and in Pennsylvania during the 1935 legislative sessions.

At the famous Colony of Gheel, Belgium, established many years ago, there is a small central hospital for about 100 patients in charge of a director, the responsible head of the whole system. This hospital constitutes a reception and distribution center for the family-care sys-

* Read before the General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Thursday, Oct. 3, 1935.

† Director, Bureau of Mental Health, Pennsylvania Department of Welfare.

tem. If suitable for placing out in a private family the patient remains only a few days in the hospital. Patients may earn their maintenance more or less completely by employment on farms and gardens or at various trades. They may go about freely in the understanding and sympathetic community, returning to their caretakers' homes at night. If patients are unable to contribute to their own support by private means or work, they are maintained by the Belgium Government at a cost much less than in mental hospitals. The director is assisted by 5 psychiatrists and a number of nurses, who work under the supervision of the assistant physicians. In 1930 it was reported that some 3000 patients were cared for under these conditions.

Family care of mental patients has existed in Scotland since about 1857. The system in Scotland, however, appears to be under insufficient medical supervision and patients may even be placed out in families without having had a desirable period of close observation, diagnostic study, and intensive treatment.

In Switzerland the patients placed out in families are under the medical supervision of an assistant physician from the staff of the mental hospital responsible for these activities. The same is true in Nuremburg, Germany, where it is stated that some 4000 patients were living in private boarding homes although the hospital exercising the supervision accommodates only about 1000 patients.

In Massachusetts, although the act authorizing family care has been in existence for many years, comparatively few patients have been boarded out. There has apparently been a difference of opinion as to the advisability of such methods of care, although those directly responsible for the patients concerned appear to be convinced of the success of the system. In Massachusetts the responsibility for supervision rests both with the hospitals and the central department.

The Utah law, which became effective on May 14, 1935, makes the trustees and superintendent of the hospital responsible in every respect for the patients selected for family care.

In all plans for the treatment and care of mental patients, the primary consideration should always be the welfare of the patients. The main question should be how may recovery be most expeditiously promoted; how may the public welfare be best safeguarded; how also may the health, safety, and comfort of both patients and employees be assured—all within the narrow limitations of the approved budget of the funds provided by the legislature.

Any plan for family care should be applied only after certain minimum requirements have been met: (1) There must be adequate diagnostic study and intensive medical treatment of all cases; (2) patients must be carefully selected after an adequate period of hospitalization, eliminating those obviously unsuited for family care by reason of dangerous tendencies and those who are otherwise temperamentally unfit to be released from the hospitals; (3) the homes must be carefully selected; (4) there must be adequate supervision by both medical officers and social service workers; (5) there must be provisions for the prompt return to the hospital of those patients needing further treatment or segregation.

The objectives of family care should be clearly understood. It is not merely a system of extending the long-established furlough or parole facilities for recovered or sufficiently restored mental cases. The purpose of boarding-out should be twofold: (1) Therapeutic, an intermediate step towards complete rehabilitation of restored convalescent patients in providing a more natural environment of supervised home life for those patients capable of appreciating it; (2) economic, a method of increasing facilities for mental patients, some of whom have recovered sufficiently to live in a home and earn at least a portion of the cost of maintenance. In this way the necessity for further capital outlay will be avoided in many cases. Incidentally, also, worthy families in the community may be assisted financially, another relief project.

The Boarding-out Amendment of the Pennsylvania Mental Health Act of 1923, passed in the 1935 legislative session, embodies, it is believed, the desirable principles as outlined above. The amendment is the result of a study of boarding-out systems by a committee of psychiatrists and was prepared by a deputy attorney general. The amendment is as follows:

Section 627.—The superintendent and the board of trustees of any state mental hospital may, by contract or otherwise, arrange for the boarding-out of such committed mental patients who have not criminal, suicidal, or homicidal tendencies, who are not addicted to the use of alcohol or narcotics, and who in the opinion of such superintendent and board of trustees may be otherwise suitable. Such arrangements shall be made only with the approval of and subject to regulations prescribed by the Department of Welfare.

Such patients shall be deemed as remaining inmates of the state mental hospital and shall be considered on parole subject to return to the hospital should the condition of the patient or other circumstances in the opinion of the superintendent and the board of trustees make such return necessary.

Subject to the approval of the Department of Welfare, such patients may, if physically and mentally able, earn the cost of their maintenance or a portion thereof by engaging in suitable employment. Provided, however, that such patients, who are physically or mentally or for economic reasons unable to earn the full cost of their maintenance, shall be maintained in the manner now provided by law with regard to indigent patients committed to state mental hospitals.

The amendment will be slowly and carefully applied by the superintendents of the state mental hospitals under the rules and regulations of the Welfare Department. These rules and regulations have not yet been completely established but will include adequate investigation and supervision of the homes, and adequate supervision of the carefully selected patients. It is expected that usually not more than 2 patients will be placed in any one home. Patients will not be boarded in their own homes, it being recognized that this environment is often a factor in the development of the psychosis.

Finally, it must be emphasized that boarding-out or family care is not to eliminate the necessity for thorough diagnostic study and treatment of all mental cases. Patients are to be placed in homes only after an adequate period of observation and treatment in a fully equipped and well-conducted hospital.

ABSTRACT OF DISCUSSION

CHARLES H. HENNINGER (Pittsburgh): Although this is not a new method of caring for the mentally ill, it seems that necessity demands that the boarding-out of patients must be included in the program for the future. Some of the benefits that can reasonably be expected are: Relief of over-crowding in state and county institutions; economy to the state by reducing the overhead expenses of construction and maintenance of new buildings; the addition of incomes for families or communities qualified and willing to care for patients under the supervision of the Welfare Department and the state institutions; the benefit derived by the patients from giving them a home environment, greater freedom of action, and encouragement.

While many of the patients so cared for would not diminish the current expense to any great amount, in some cases the expense of home care to the state would be diminished by the patient's earning capacity; but do not forget that patients who are able and willing to work have contributed in no small degree in keeping down the per capita cost in institutions as at present conducted, and the work thus accomplished has been in the majority of cases beneficial to the patients themselves. As yet we have not determined the number of patients in institutions who are suitable for home care, but there is no doubt that a large number could be selected. It is obvious that the selection of the patients should be carefully made before placing them in homes, and if they should show any antisocial tendencies they should be returned to the institutions immediately.

The community family care seems best because it lends itself more readily to the supervision that this plan demands, although the individual family care has

been successful in many cases, particularly if special school classes are available. Two, seldom more, may be cared for by a family under favorable conditions.

Next to the importance of selection of patients is the selection of suitable homes, but this problem has been solved by those who have successfully carried out this plan. It has been found that the suicidal, noisy, violent, destructive, erotic, epileptic (having frequent attacks), and the acute cases which require constant medical and nursing care are not suitable for this method. Exploitation of patients must be prevented, and wherever this situation develops the patients should be removed.

The care of patients in their own homes cannot be recommended unless the economic condition is the only problem, and this method should be limited.

The number of the mentally defective group available for home care would be increased by selective sterilization.

Under the present economic conditions the method of home care should be used. If it is found of practical value associated with institutional care, it should be adopted as a permanent program.

The Hungarian system of training nurses and attendants in institutions, with the view of assuming the responsibilities of family care of patients later in life, seems worthy of serious consideration.

Many patients now in institutions would be greatly benefited by additional personal attention, but this could only be brought about by increasing the medical and nursing personnel.

There are in Pennsylvania a large number of institutions that are making excellent progress in boarding-out patients or sending patients out on parole, with practically the same result as this system will provide. With the coöperation and supervision of the various institutions of the state, this method can be added to the present system with safety. For many years I have advocated adequate institutional care, but I believe that necessity demands that we try something more.

HORACE V. PIKE (Danville): Probably those of us who are officially connected with state hospitals for the mentally ill appreciate more than some others just exactly what this matter means to the taxpayer, to the hospital itself, and to a certain group of mental patients. It is one thing for a community to send a mental patient to a state hospital for treatment; it is one thing for the medical staff of the hospital to bend every effort possible to bring that patient back to where he can assume a place in the community, either restored or perhaps carrying some of the residuals of his disease the same as one with a physical condition might carry his. But it is another thing to have the community accept the mental patient, for a great many reasons. There are only certain places where a patient may go. He may go back to his home or to the home of some friend or relative. If his friends or relatives fail in their responsibility there is nothing left but the county home—a poor place for anyone.

The question of providing in the community an adequate home environment for the individual who is capable of leaving the hospital means a great deal. At Danville the plan Dr. Sandy has presented to you has been found to be very practical. It has been carried out for about 2½ years without the state aid that the legislative act will now provide. Mental patients have been placed in boarding homes after very careful consideration on the part of the medical staff, for every patient who leaves the hospital must be so considered.

Boarding homes have been found in the community among nurses and other responsible persons where the individual can get back into normal life.

The question of finances has been troublesome. In meeting that problem the social service department has been fairly successful by appealing to relatives or by making financial arrangements with the overseers of the poor or the county commissioners. During the past 2½ years 82 patients have been placed in this way. At present there are 39 patients in boarding homes. These

patients are cared for at the rate of approximately \$18 per month. The overseers provide \$3 per week, plus \$5 per month for clothing, other incidentals, *etc.*

This plan is working satisfactorily. The patients appreciate what is being done for them. The homes are carefully supervised and the patients kept under observation. They report every month at the mental health clinic for check-up by the psychiatrist, and in many instances better results are obtained in this way than by sending them back to their relatives.

PHLYCTENULAR DISEASE AND VITAMIN DEFICIENCY*

LEONARD G. REDDING, M.D., SCRANTON, PA.

The purpose of this paper is to suggest that phlyctenular disease is not a disease entity but a local manifestation of a general condition. This is a vitamin deficiency and most likely lack of vitamin A.

Most textbooks and writers until very recently agree that it is one of the most frequent of all eye diseases and the one most likely to show recurrences. There is not, however, the same agreement as to the etiology. The synonyms alone show that. It has been called conjunctivitis lymphatica, scrofulosa, phlyctenulosa pustulosa, exanthematica, herpes conjunctivae, and conjunctivitis eczematosa.

Many different theories as to the causes have been expounded throughout the years by numerous authors. That tuberculosis is the underlying cause is the most generally accepted theory and the one that has the largest number of adherents. There has been much ingenious rationalization by many writers to defend this theory, and just as many have tried to disprove it.

The writer has been interested in this condition since the memorable meeting of the American Medical Association in New York City in 1917, when Dr. William Zentmayer presided over the Section on Ophthalmology. At this meeting Goldenburg of Chicago read his paper "The Pathogenesis of Ophthalmia Eczematosa." In this he gave as his belief that the cause was the excessive use of carbohydrates in the diet or faulty metabolism, and he suggested a low carbohydrate diet as the treatment. This seemed at that time and until a few years ago as the most likely cause. Three years ago the writer observed that he was not seeing any cases of phlyctenular disease in his office or dispensary practice. This observation was confirmed by several colleagues. Consequently, it was de-

cided to try to obtain statistics to determine the reason for this decrease. Statistics were gathered from the following institutions: Wills Hospital, New York Eye and Ear Hospital, University of Pittsburgh and Massachusetts General Hospital (Charts 1 to 4). In all of the charts shown the abscissae denote the number of cases per year, and the ordinates denote the years 1912 to 1932.

As is seen from these charts there has been a marked decrease in the past 10 years, and in the past few years there have been very few cases in any of these hospitals.

In trying to determine the reason for this decrease, many possible causes were considered and rejected. With the nutritional cause in mind it seemed that the only possible factor that could affect the entire populace over such a wide area at about the same time was that of feeding. It followed that the particular change in feeding had been the use of the vitamins. This was brought about first by their discovery, then by the education of the physician, and through him the public. It was about this time that the almost universal use of cod liver oil and orange juice in the dietary of children was started. Finally, there was a demand upon the merchant for these articles and, as a further result, the increased use of refrigeration so that practically all vitamin-containing foods could be obtained cheaply the whole year around. In addition, canners were obliged to learn how to preserve the vitamin content of their products.

The following letter was received in answer to a letter sent to one of the largest of the chain stores.

Upon receipt of your letter, I endeavored to develop the information which would answer your question, namely, the approximate year when green or fresh fruits and vegetables became important in the consumer's diet the year around, that is, when they were being handled in considerable volume in the principal markets of the country.

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.



CHART 1.—Wills Hospital.

To confine the answer to one specific year, I would say 1923. A marked jump in tonnage of the commodities which were formerly seasonal but became somewhat nonseasonal, due to production in semitropical climates, occurred during the period from 1922 to 1924 inclusive. Among the commodities which might be mentioned in this connection and the year in which a marked advance was recorded are:

Spinach	1923
Tomatoes	1922
Beans	1923
Celery	1923-24
Cucumbers	1921
(also again in 1925)	
Lettuce	1923
Green peas	1924
Strawberries	1922
Imports of fresh fruits and vegetables	1924

It may be interesting to note that during the period from 1918 to 1922 the increase in consumption was quite marked in such commodities as spinach, lettuce, tomatoes, and celery. Despite the increase during this period, the consumption through the cold weather months was limited to a comparatively small part of the population. It was at the beginning of 1923 that the volume began to attain large proportions; about this time or a year later the chain stores began adding these commodities in a big way and introducing them at prices appealing to consumers, who began to buy and consume these products on a larger scale than at any previous time.

All the above statistics were from the North. The writer met with little success in obtaining figures from the South, but from those received it seems safe to say that they have always had less than the northern cities.

Thanks to Professor F. Terrien of Paris, figures were obtained from his clinic in Hotel Dieu (Chart 5).

Statistics were also received from the University of Vienna (Chart 6).

As will be seen, instead of a decrease there was an increase. This was to be expected because it is well known that Europe has not kept apace with America in the use of refrigeration or the year-round use of vitamin-containing foods.

Furthermore, Aland¹ states that, "Richard Gutzeit noted that since the World War the number and severity of cases of phlyctenular disease had increased in Germany. He considers it as due to malnutrition."

Fuchs² describes the clinical picture of phlyctenular disease as follows: "The enormous majority of children affected with phlyctenular conjunctivitis belong to the poorer classes. Such children receive insufficient and unsuitable nourishment, live in damp, poorly ventilated dwellings, and are kept constantly dirty. It has been found frequently as a post-war condition in the undernourished French peasant children (Rutherford). Other children affected are those who, though once healthy, have become run down as a result of other diseases (scarlet fever, measles, typhoid fever, whooping cough, etc.) Such children as these look either pale or thin, or bloated and spongy looking. The glands at the lower jaw, in the neck, and in the front of the ear are swollen. Partly as a result of the suppuration of these glands and partly as a breaking down of the scrofulous infiltrations in the skin, ulcers and fistulous passages are produced, which require months and years for their cure, and leave characteristic and disfiguring scars behind."

Compare this with the clinical picture of the rat when fed on a vitamin-A-free diet.

Mendel,³ quoting the description and sequences in the rat of symptoms in A-avitaminosis as given by Gudjonsson, first describes the early stages and continues as follows: "Then

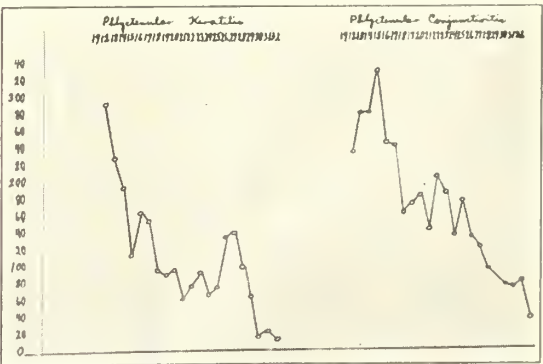


CHART 2.—New York Eye and Ear Hospital.

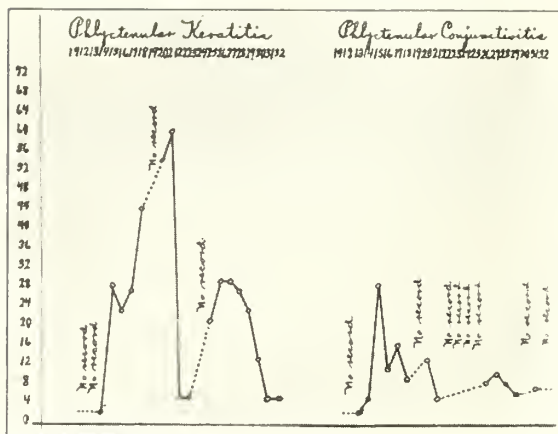


CHART 3.—University of Pittsburgh.

comes the clinical manifestations of xerophthalmia. Often this lesion progresses at a surprising rate. One day, perhaps, there may be noticed a little bit of sanguinolent secretion in the inner canthus, and it looks as if there are fewer cilia in the eyelashes (the cilia are sticking together). The next day one may find copious secretion, serous, purulent, or sanguinolent; the eyes are almost shut, and the cornea is beginning to become opaque. The conjunctiva is injected and inflamed. In 2 or 3 days there may have developed a suppurative panophthalmia. The eyelids are swollen and almost glued together with purulent matter. By this time the rat has ceased to gain weight and has perhaps begun to lose weight. Not infrequently, rhinitis comes on. There is a profuse discharge from the nose, and the respiration is accompanied by râles; the nasal secretion is blood-tinged. The sense of smell, which seems particularly well developed in the normal rat, now appears to be less acute, for these animals have some difficulty in finding their food; but this may perhaps also be due to their loss of vision.

"By this time the lymph glands of the neck are enlarged and can be made out on palpation. These inflamed lymph glands, in which abscess formation often takes place, may become as large as peas or larger. The abscesses do not infrequently perforate, and they rarely heal, unless the rat is supplied with vitamin A, but persist as fistulas."

Regarding the pathologic studies in phlyctenular disease, Collins and Mayou⁴ say, "In the early stages a phlyctenule consists of an exudation of leukocytes in the deeper layers of the conjunctiva, in the center of which is found an area of necrosis. The leukocytes towards the center are principally polymorphonuclear, while those around are chiefly of the mononuclear

type. The blood vessels in the neighborhood are dilated, and the endothelium is proliferating; in fact, the condition is a minute abscess in the deep layers of the conjunctiva. Resolution or rupture of the phlyctenule may take place. . . .

"At this stage the polymorphonuclear leukocytes have increased enormously in number, infiltrating the walls of the recently evacuated phlyctenule. The vessels have become greatly dilated, their endothelium has proliferated, and a large number of plasma and mast cells make their appearance."

Quoting Aland¹ again, "Parsons states that Iwanoff in 1869 investigated the pathology of phlyctenular disease and found infiltrating cells, chiefly polymorphonuclear leukocytes, under Bowman's membrane."

Compare this with the pathologic picture in a rat fed on a vitamin-A-free diet, as described by Wolbach and Howe⁵: "In late stages the basal cells of the conjunctival epithelium show slight, irregular downgrowth, and there is an increase of capillaries in the underlying connective tissue. At this stage accumulations of mononuclear cells, lymphocytes, and endothelial leukocytes are common. Polymorphonuclear leukocytes invade degenerating mucous cells after these have become completely imbedded by the cells of the keratinizing epithelium, but actual proof of infection occurred but once in the series. . . .

"The substantia propria of the cornea, after keratinization is established, becomes edematous and vascularized by ingrowth of capillaries from the sclera. This response we believe to be due to the greater physiologic demands from the

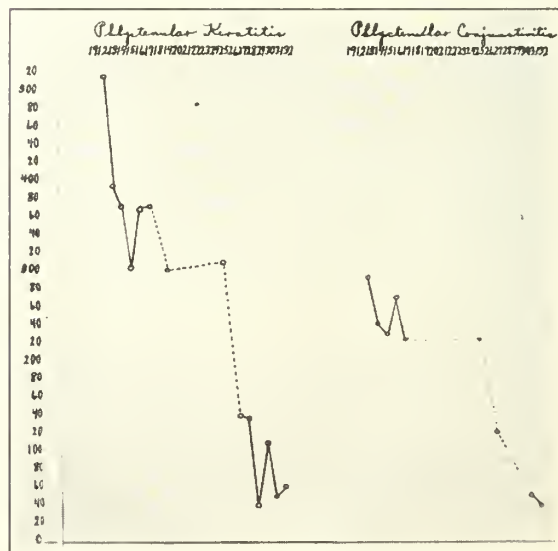


CHART 4.—Massachusetts General Hospital.

more active and changed epithelium. In very late stages of the deficiency, wandering cells of all types including polymorphonuclear leukocytes appear in the cornea."

Lasky,⁶ quoting Glover, says, "After a careful review of 1000 cases of pulmonary tuberculosis, including 600 children, only 2 patients with phlyctenular disease were found, and both of these were suffering from rickets."

The modus operandi is very well described by Eusterman and Wilbur,⁷ as follows: "Vitamin A deficiency disease may result from reduction of adequate intake of this vitamin as the available food supply may be poor in it; from deficient absorption and storage as the result of intestinal or hepatic derangement or disease; or from the increased demand for and consumption of the vitamin; for example, during periods of rapid growth or of disease, especially severe infectious diseases, when the basal metabolic function may be greatly enhanced. These features may explain the development of avitaminosis in the presence of an apparently adequate supply of the vitamin."

This may explain the occurrence of phlyctenular disease following measles epidemics in the past and which we no longer see as the children are now better fed during illnesses.

As to treatment, little need be said except to recommend cod liver oil and other vitamin-containing food. Since arriving at this concept of the disease, the writer has had the opportunity to treat but few cases, but in those that were treated quicker results were obtained by tablespoonful doses rather than by teaspoonful doses of cod liver oil.

SUMMARY AND CONCLUSIONS

1. Statistics show that there has been a decrease in the United States in the number of cases of phlyctenular disease, while there has been an increase in the number of cases in Europe. This, the writer believes, is due to the use in the one case and the non-use in the other of vitamin-containing foods the year round.

2. The clinical picture of phlyctenular disease in humans and that of rats fed on a vitamin-A-free diet is similar.

3. The microscopic findings in phlyctenular disease in humans and that of rats fed on a vitamin-A-free diet are quite similar.

4. The author believes that vitamin A deficiency is the cause of phlyctenular disease.

5. The dose of cod liver oil should be larger than usually given.

Scranton Life Building.

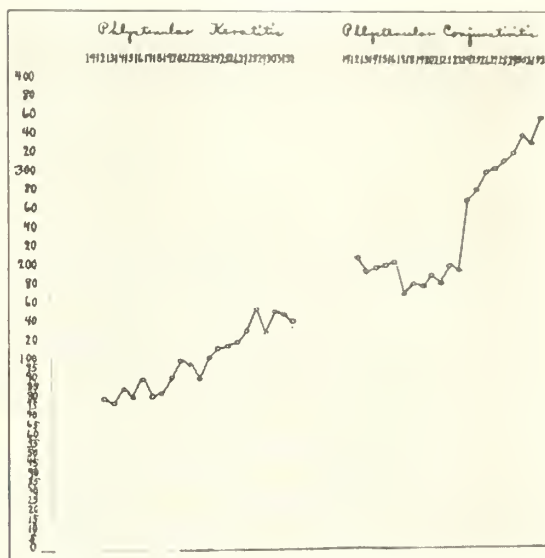


CHART 5.—Hotel Dieu (Paris).

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ABSTRACT OF DISCUSSION

WILLIAM ZENTMAYER (Philadelphia): Dr. Redding has taken the diminishing incidence of phlyctenular disease and correlated it with the increasing incidence of vitamin A consumption, and concludes that the former is the result of the latter. His conclusion is based on inference and not upon clinical or experimental evidence. No one with a large clinical experience extending over a long period of years can help but be impressed by the rarity of phlyctenular disease to-day as compared with its great frequency in the latter part of the past century, and Dr. Redding has given statistical proof of this decline of the disease; but we may not all agree upon the reason for this. He has stated that tuberculosis is most generally accepted as the cause of the condition. He has not confuted this except by quoting Glover's experience.

The literature upon the relation of phlyctenules to tuberculosis is too extensive to review. One of the most recent articles concerning tuberculin allergy and ocular phlyctenulosis is by Vannas (*Kl. Monatsbl. f. Augenh.*, Jan., 1935). Intracutaneous, cutaneous, and tuberculin tests were made upon 42,722 Finnish soldiers. The test was positive in 88.4 per cent. Phlyctenulosis was found in 165 and predominated in those with allergy toward tuberculosis. Vannas doubts that actual phlyctenulosis can be produced by any cause other than tuberculosis, with a few exceptions theoretically admitted. He states that most probably ocular phlyctenulosis is not only an initial factor of tuberculous infection of the body, but a development of the postprimary and secondary phases of tuberculosis.

It can be stated in the words of Schieck, quoted from A. Woods, that phlyctenules are a definite immunity

phenomenon—an allergic reaction of the conjunctiva and cornea—which may be due to any protein, but in the greater number of instances is due to tuberculo-protein. Woods considers the evidence of phlyctenules being an allergic reaction of the sensitized surface of the cornea and the conjunctiva to tuberculosis as being conclusive.

In 1924 Belgrad, in an exhaustive study of the effects of vitamin A deficiency in the diet of children and



CHART 6.—University of Vienna.

adults in Denmark, reported 434 cases of keratomalacia in children and 19 cases in adults, and 148 cases of xerosis without keratomalacia.

Up until the time when the evidence that tuberculosis was the cause of phlyctenules seemed convincing, my own clinical experience would have led me to the same

conclusion as Goldenburg, that phlyctenular conjunctivitis was due to faulty carbohydrate metabolism. This belief rested upon the remarkable response of the local condition to the withdrawal of all sweets and other carbohydrates.

It seems to me that the comparison which Dr. Redding invites, between the clinical manifestations of phlyctenular disease as it occurs in children and the change which takes place in rats on a vitamin-A-free diet, when the eye manifestations are considered, does not strengthen his case. Surely opaque cornea and panophthalmitis do not belong to the symptomatology of phlyctenular disease. Moreover, it is not likely that the food given children is ever entirely vitamin-A-free.

It is possible, however, to compare the changes in the conjunctiva and cornea in humans whose diet is deficient in vitamin A with the changes in the same tissues in phlyctenular disease. Pillat in several papers has described the changes in the former condition as met with in the Chinese. In the adult the diagnosis is xerosis of the conjunctiva and of the cornea, with pigmentation of the conjunctiva. The latter sign is absent in children as death usually supervenes before its appearance. The pigment appears among the pigmented races (Chinese).

Although I do not believe that phlyctenular disease can be attributed directly to the lack of vitamin A, I do believe that the decrease in the disease is due to the part played by improved sanitation, hygiene, and a well-balanced diet (which means a constant sufficient increment of vitamins) in building up the organism against tuberculous infection. Dr. Redding does well in calling attention to the importance of vitamins in combating phlyctenulosis.

It would seem, therefore, thoroughly established that the ocular changes due to vitamin A deficiency in diet are keratomalacia in children and xerosis in adults. The weight of the evidence points to tuberculosis being the cause of phlyctenules.

ALLERGIC MIGRAINE*†

LOUIS TUFT, M.D., PHILADELPHIA

If one were to seek out the single human complaint which has appeared at all times and among all peoples, there is little doubt but that headache would attain this unenviable distinction. Since earliest medical history there has been separated out of the heterogeneous group of headaches a particular type, to which Galen first applied the term hemicrania and which eventually became translated by the French into *mégrim* or, as it is best known now, *migraine*. To-day this term embraces a symptom-complex composed of more or less severe recurring headache, accompanied by various sensory disturbances of the cerebral cortex and by either nausea or

vomiting or both. It is the presence of the latter symptom which is particularly responsible for the use of the term "sick" or "bilious" headache by the laity.

Little difficulty should be experienced in differentiating ordinary migraine from other types of headaches. The tendency for its periodic occurrence, particularly in the female, the characteristic limitation to one side of the head, the presence of a type of pain of such severity and duration in many instances that it is not relieved by the ordinary headache remedies, and evidences of cortical irritation manifested by vertigo and particularly by such visual disturbances as scintillating scotomata, photophobia, or transient hemianopsia, all serve to differentiate migraine from other headaches. The existence

* Read before the Southeast Branch of the Philadelphia County Medical Society, Mar. 7, 1935.

† From the Department of Allergy and Applied Immunology, Temple University School of Medicine.

of a positive family history of either migraine or atopic disorders provides strong confirmatory evidence.

Great diversity of opinion exists as to the etiology and basic mechanism of migraine. Numerous theories have been proposed in an effort to explain this symptom-complex. The attacks have been attributed to reflexes from disturbances of the eyes, ears, or pelvis; to dysfunction of such endocrines as the pituitary gland or the ovary; to disorders of metabolism in the nature of hepatic dysfunction leading to the retention of toxic chemical substances; to duodenal ileus; to gastro-intestinal toxemia arising from dietetic errors or colonic dysfunction; and finally to cerebral edema, hyperemia, or angiospasm. Recently it has been suggested that many if not most cases of migraine are explainable upon an allergic basis.

It is not the purpose of this paper to review in critical fashion these various theories of etiology. My experience with these patients indicates that the basic mechanism in a large percentage is allergic. In spite of the fact that considerable evidence has been brought forward to support this viewpoint, there exists a distinct unfamiliarity with its claims and to considerable extent a profound skepticism as to its validity or importance. For this reason it is worth while to review and discuss certain aspects of the subject.

Considerable evidence has been brought forward to support the idea of an allergic basis for migraine. For many years physicians have noted by study of the personal or family history that a close relationship exists between migraine and asthma, eczema, hay fever, or urticaria; some writers even observed that these attacks would occasionally follow the ingestion of certain particular foods. Within the past decade numerous publications have appeared which have corroborated in the main these older ideas. Thus it has been definitely demonstrated that the factor of heredity in migraine is as strong as or even stronger than in the so-called atopic disorders, namely, asthma, hay fever, and eczema; secondly, that the tendency to migraine seems to be transmitted chiefly through the female as a Mendelian dominant characteristic but not as a sex-linked character; finally, that migraine is interchangeably associated in its hereditary transmission with asthma, hay fever, and eczema. Other studies have shown the definite association of migraine attacks with allergy to certain foods, as proven both by specific skin reactions and by clinical trial. Vaughan in 1927 was the first to point this out—in an allergic study of 33 cases, 10 were partially or wholly relieved by the elimi-

nation of foods to which positive skin reactions occurred, and in some of these an attack of headache could be produced by the ingestion of the specific food. These results have been corroborated in similar studies reported by Rowe, Balyeat, Eyerman, and others.

A review of the history of a large number of patients with various allergic diseases, especially asthma, it was of interest to note, disclosed a very high frequency with which bilious headaches of the migraine type had either coëxisted or preceded the onset of the allergic condition for which the patient presented himself. Asthmatic patients will, upon detailed inquiry, frequently give a history of bilious headaches during childhood or about the time of puberty in the female. With the onset of the asthmatic syndrome, this so dominates the picture that it seems to overshadow the migraine attacks, which become either greatly diminished in intensity or may entirely disappear. This tendency to alternation of various allergic manifestations such as eczema, migraine, hay fever, and asthma in the same individual is quite characteristic of allergic patients and illustrates the truthfulness of the adage "once allergic, always allergic." The frequent occurrence of migraine in allergic patients is convincing evidence that allergy must play an important rôle in its basic mechanism.

In explaining the mechanism of the attack itself, the proponents of the allergic hypothesis state that there exists in the cerebral cortex of these individuals by virtue of hereditary predisposition a localized group of sensitive cells or shock tissue. Following digestion and absorption, the allergenic substance to which the patient is sensitive circulates in the blood stream and comes into contact with the sensitized areas of the brain. The explosive allergic reaction which follows then manifests itself as an attack of migraine. That there is localization and specificity of cellular sensitization is evidenced by the fact that one patient may become specifically sensitive to wheat and on ingestion develop symptoms referable to the bronchial tree, namely, asthma; another, on the ingestion of the same food, may develop urticaria or eczema; still another may have evidence of irritation of localized areas of the brain.

Once the cellular sensitization has occurred in the cerebral cortex, this shock tissue, as Coca calls it, is then susceptible not only to the specific factors, but attacks may also be produced by various nonspecific influences such as emotional or psychic stresses and strains, undue fatigue, and in women menstruation.

These influences are believed to operate in migraine in the same nonspecific manner as they do in asthma, in which any of these factors may induce a paroxysm in an individual specifically sensitive to certain allergens. The frequent occurrence of attacks at the time of puberty in the female and particularly prior to or at the time of menstruation and the favorable influence of pregnancy has naturally prompted the belief that the basic mechanism of migraine is in some way linked with endocrine dysfunction, particularly of the ovaries or the pituitary gland. The recent finding by Riley and his coworkers of antipituitary hormone or prolactin in the urine just prior to the onset of the migraine attack would seem to strengthen the assumption of the rôle of the pituitary. Time does not permit of a detailed discussion of the endocrine theory. Suffice it to say that it would seem to bear a similar relationship in migraine as in asthma, and in the state of our present knowledge this is as yet too inexact to warrant any definite conclusions. It is interesting to note that in patients with definite organic lesions of the pituitary gland or the ovaries, unilateral headaches of the migraine type have not been observed. It is not unlikely, therefore, that menstruation may act in a nonspecific manner in migraine patients in much the same fashion as it does in asthma.

Further proof of the nonspecific character of these influences lies in the fact that following the removal of the specific allergen and the relief of attacks, these agents, either psychic, physical, or menstrual, no longer produce symptoms. If they were primary in etiology, it must be assumed that they would still continue to produce attacks even though the specific allergen were removed.

As with other allergic conditions the diagnosis of migraine resolves itself into a determination of the etiologic factors. This is accomplished by means of history, skin tests, and therapeutic trial. In most instances the history provides little information of etiologic value. Very few patients can correlate with any certainty the occurrence of an attack with the ingestion of any particular food. It must be remembered that in sensitive cases the migrainous episode often may not come for many hours after the specific food is taken, even as long as 1 to 5 days in the opinion of Balyeat. It is only after the specific causative food has been determined that such correlation may be obtained in retrospect. Furthermore, each ingestion of the specific food is not always followed by an attack, and the effect may in some instances be cumulative. It is not altogether unlikely that

before producing its effects upon the cerebral cortex, the food allergen may be changed in some way during the process of digestion and absorption so as to render it more prone to induce an attack. If this change does not occur, then the ingestion of the food may not be followed by any symptoms.

Skin tests properly carried out and correctly interpreted may be of great value in many cases. Too often the possibility of food allergy as a factor is dismissed merely because of the fact that the skin tests were reported negative. Skin-test reactions to foods, in contrast to other types of allergens, may be either very slight or even negative in cases in which a definite clinical reaction to these foods is obtained. In performing skin tests in these cases, therefore, recourse to the most sensitive technic is essential. Hence, the use of the intradermal method of testing, employing the food extracts in both dilute and more concentrated form, is greatly to be preferred to the scratch technic, as with the latter important allergens may give negative reactions and thus be overlooked. Correct interpretation of the reactions is extremely important; even slight or doubtfully positive reactions or delayed reactions should be considered of importance until proven otherwise by adequate clinical trial. The use of the scratch technic and the failure to evaluate properly the importance of these slight reactions are largely responsible for the negative results obtained with migraine patients by either the allergist or the general practitioner.

In some patients even with the use of the most sensitive technic an important etiologic factor may be overlooked by virtue of a negative reaction. This may be recognized by the failure to obtain relief after the patient has been on a diet excluding all test positive elements. In these instances the specific excitant may sometimes be determined by means of clinical or therapeutic trial. These patients should be put on a basic diet fashioned after the elimination diets suggested by Rowe but excluding from it those foods to which the patient shows positive reactions. To this basic diet are gradually added the foods giving negative reactions and to which it is known from experience that patients are least apt to be sensitive. If migraine occurs after the addition of any of these foods, these may then be suspected as possible etiologic factors. The value of this method of approach is illustrated in the following case report:

Mrs. S., age 26, was referred in April, 1932, because of migraine of 5 years' duration and incipient asthma of 6 months' duration. The migraine attacks occurred

every 2 weeks, lasted 1 to 2 days unless relieved by large doses of aspirin and bed rest, and consisted of severe unilateral headache, photophobia, blurred vision, nausea, and occasionally vomiting. Personal history except for occasional sneezing attacks in the fall was otherwise negative. Family history revealed the presence of migraine and late hay fever in a sister. Complete skin tests by the intradermal method revealed the following:

Moderately positive reactions to halibut, herring, shad, crabmeat, garlic, spinach, banana, lima bean, green pea, and turnip.

Slightly positive to beef and pork.

Doubtful to cabbage, codfish, barley, coffee, and onion.

Complete exclusion of the test positive foods from the diet was followed by distinct improvement as evidenced by a lessening in the intensity, frequency, and duration of the attacks, but complete cessation did not occur. Accordingly in December, 1932, the patient was placed upon a basic elimination diet excluding the test positive elements; later other foods giving negative reactions were gradually added. Improvement was striking, the patient being completely free of attacks for periods varying from 3 to 6 months. When wheat was added to the diet, attacks recurred on several occasions, and even though the skin reaction was repeatedly negative, this was completely excluded from the diet. At present the patient has only occasional mild attacks, and in most instances these occur after dietary indiscretion or occasionally at the menstrual period. During the 6-month period of freedom from symptoms, menstruation no longer provoked attacks.

The treatment of these patients depends essentially upon the discovery of the etiologic factors, either through skin tests or therapeutic trial or both. If this has been accomplished, the elimination of these factors should be followed by relief of symptoms. It is important to remember that such elimination must be complete; otherwise, little benefit will result. A small amount of offending allergen may provoke as many symptoms as a large amount. Thus to remove wheat or cereals from the diet of a wheat-sensitive patient and at the same time permit him to take gravy or soups thickened with wheat flour is obviously defeating the purpose of the dietary restriction. Attention to such seemingly unimportant details is often the keynote of success in these patients.

In some patients the use of some type of non-specific desensitization, either by the use of peptone, histamine, milk, or typhoid vaccine, may be of additional value in hastening improvement or in those instances in which attacks are provoked by nonspecific influences.

For the relief of the acute attack a great many drugs, including various analgesics, sedatives, and vasodilators, have been employed with varied results. Large doses are frequently necessary, and even these may not be of any benefit. In some patients the injection of adrenalin has

relieved the attack, a fact which strengthens the assumption that it is allergic in character. Recently the use of ergotamine tartrate or gynergen has been favorably advocated. My experience with the drug is too limited as yet to warrant any definite conclusions.

In addition to these special measures, anything which will improve the general condition of the patient either physically or mentally is naturally advisable. Correction of refractive errors or of gastro-intestinal disturbances, the reduction or elimination of psychic or emotional upsets, and removal of definitely infected foci should be carried out only because they will improve the patient's general health and thus reduce the tendency for attacks to occur and not because of any specific etiologic relationship to the migraine itself. Too often the patient is unnecessarily subjected to these procedures, many of which are of a surgical character, before any attempt is made to determine other possible etiologic factors. Two of my patients, upon the advice of their physician, had cholecystectomies performed without any symptomatic relief whatsoever. Both of these proved to be allergic and might have been spared these operations if they had been studied from this viewpoint at the beginning. Unfortunately the allergist sees these patients after they have run the gamut of varied types of investigation and treatment, including that given by the various cults, usually without any benefit being derived. This is well exemplified in the following case report:

Mrs. O., age 27, housewife, was referred in May, 1933, with a history of typical attacks of migraine of 11 years' duration. These attacks were extremely severe, often incapacitating, and lasted from 24 hours to 4 or 5 days. They recurred so frequently that the patient was seldom free longer than 1 or 2 days. Except for an attack of urticaria at age 13 and a history of similar attacks of migraine in the mother, sister, 2 brothers, 2 maternal aunts, and the maternal grandfather, the history was unimportant. Prior to my seeing her, the patient had been subjected to a host of investigative procedures and treatment for these attacks. In addition to the constant use of numerous types of drugs given by various physicians for symptomatic relief, she had received the following specific measures listed in chronologic order: Refraction of the eyes, a systematic course of gallbladder drainages and colonic irrigation from 1 to 3 times a week for a period of a year, 20 chiropractic treatments, tonsillectomy and removal of 2 wisdom teeth, submucous resection, spinal puncture, encephalogram, 25 electrotherapeutic treatments, and finally a long course of hypodermic injections of ovarian hormone. All of these failed completely to provide any relief of symptoms.

Complete allergic study of this patient in the manner just outlined revealed a large number of positive skin

reactions, with distinct sensitivity clinically to some of the meats and fish and to milk and wheat. Following the complete exclusion of these foods from the diet together with nonspecific desensitization, marked improvement occurred and has persisted to the present time. During the past 12 months dietary exclusion alone has been used. Although attacks still occasionally occur, they seldom occur oftener than once or twice a month, are rarely severe enough to require medication for relief, and usually follow either some dietary indiscretion or emotional upset, or occur during the menstrual period. It seems unnecessary to emphasize the amount of discomfort and expense which this patient might have been spared if allergic studies had been done at the beginning instead of at the end.

All of us are interested in the results obtained in these patients when studied and treated according to the methods outlined. Experience

with a fairly adequate group has been sufficient to overcome an early skepticism and to convince me that thorough allergic investigation and treatment is not only justifiable but should be employed in every case before other measures of a more radical nature are attempted. Allergic management is not a panacea for all patients with migraine. A certain percentage will fail to show any evidence of sensitization or fail to obtain any relief whatsoever, but in the majority of patients with the typical picture of migraine sufficient relief of symptoms will be obtained to warrant the routine use of this method of study and treatment in every patient with migraine headache.

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THE STATE DEPARTMENT OF HEALTH AND THE CHILD*

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It is my purpose in this paper to present briefly an outline of what the Department of Health of Pennsylvania is doing for the child. The department's mission is primarily prevention and sanitation, and while the child is in some measure affected by all of its activities, it is especially benefited by the work of certain bureaus and divisions.

TUBERCULOSIS

Tuberculosis is of the utmost importance. There were 4517 deaths from pulmonary tuberculosis in 1934. It is estimated that there are 45,000 active cases in Pennsylvania, and that 90,000 children and 45,000 adults are in contact with these active cases.

The decline in tuberculosis from 129.6 per 100,000 in 1906 to 46 in 1934, with this disease ranking seventh as a cause of death to-day instead of first, indicates the marvelous progress made in the fight against it. The unfavorable side of the picture is that tuberculosis still kills more of our youth of high school and college age than any other disease. Within this same school-age group, 3 girls die for every 2 boys. The explanation of this excessive mortality lies largely in the failure to recognize the disease in its latency in the preceding 10-year period. A study made by the department of 2500 school children in rural and urban areas revealed from 1 to 4 per cent with active tuberculosis in need

of institutional treatment and from 2 to 8 per cent either in need of such care or limitation of exercise and improved hygiene while continuing in school.

During the past biennium 1195 children, ranging in age from 6 to 16 years, were admitted to Mont Alto Sanatorium, and 843 to Cresson, a total of 2038, and there are at the present time approximately 375 on the waiting list. There are 448 beds available for children at these 2 institutions.

The 85 state tuberculosis clinics are responsible for the examination, diagnosis, and selection of these children for the sanatoria, and the majority are contact cases. Unfortunately, owing to unavoidable lack of roentgen-ray facilities for the necessary examination, only a few clinics use the Mantoux test to determine infected children, since the roentgen-ray determination of localized infection in well-calcified hilum glands or the activity of the disease is all important.

During the past 5 years 3000 children have passed through the preventorium at Mont Alto. Of these, 1569 or 53 per cent gave definite history of contact with tuberculosis cases in the home; 69 per cent were positive to the Mantoux test. Of the 1364 noncontact children, only 47 per cent were positive to the Mantoux test. Roentgen-ray examination of the contact children revealed 139 cases of active childhood type tuberculosis; there were 70 such cases among children with no history of contact.

In addition to the sanatorium and preventorium treatment, it has been the department's

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† Secretary of Health, State of Pennsylvania.

policy to sponsor the examination of school children, especially those of high school age, with the use of the Mantoux test and roentgen ray. During the past 5 years nearly 3000 such children have been examined as a part of the outpatient work of Mont Alto Sanatorium.

The present clinic system will probably find not more than 15 per cent of the active cases of tuberculosis and their contacts regardless of how efficiently it is operated. If this system could be supplemented by a general examination of all school children from the seventh grade through high school, using the Mantoux test and making roentgen-ray examinations of all positive reactors, practically all of the infected contacts and practically all of the tuberculous and pretuberculous children in our state would be known, and proper supervision and treatment could be instituted. The results would be evidenced by a marked drop in the tuberculous death rates in the ages from 15 to 25, the ages of education, employment, marriage, and home building, when civic usefulness is the greatest.

ORTHOPEDIC WORK

Orthopedic surgical work is principally carried on at the Hospital for Crippled Children at Elizabethtown, which was opened on Mar. 24, 1930. This hospital has 125 beds and up to the present time has treated 747 children between the ages of 6 weeks and 16 years.

Tuberculous Diseases.—A total of 116 children have been treated for tuberculous diseases of the bones and joints, the majority with deformities, many with multiple lesions. Thirty of these patients had discharging wounds, and 7 had amyloid disease of the kidneys. Conservative measures are used in treatment, with bed rest and immobilization to arrest the active progress of the disease; surgical intervention is utilized when necessary to consolidate the results thus obtained. In the present state of enlightenment, a solidly ankylosed joint which has been partly destroyed by tuberculosis offers the patient the best assurance against a recurrence of activity in later years. Of these 116 patients, 76 have been discharged—71 definitely improved.

Osteomyelitis.—Eighty-five patients have been treated for osteomyelitis. The average duration of the disease prior to admission was $2\frac{1}{2}$ years, and most of these children were in poor condition due to continued suppuration.

Anterior Poliomyelitis.—Not including the patients treated at the Water Gymnastic Unit at Mont Alto, 164 poliomyelitis patients with pa-

ralysis have been treated at the hospital. No acute cases are treated. Practically all of the patients were disabled by residual paralysis of several years' duration, with atrophy and wasting of the musculature. Many of these deformities might have been prevented, and even those considered nonpreventable might have been partly controlled and impeded from developing into more serious distortions. The majority of the paralyses are permanent because of the length of time following the original acute attack, but the correction of deformities, the stabilization of joints, the strengthening of weakened muscles by physical therapy, physical reëducation, and the provision of suitable appliances have resulted in improvement in a large number of cases.

Structural Scoliosis.—Ninety-two cases of structural scoliosis have been treated, 60 per cent of them due to poliomyelitis.

Congenital Deformities.—A total of 110 children with congenital deformities, including club feet, congenital dislocations of the hips, spinal curvatures, progressive muscular dystrophies, etc., have been treated.

Outpatient Clinics.—An outpatient clinic is held at the Hospital for Crippled Children every Wednesday for discharged patients and children under supervision from near-by counties.

Extension Clinics.—Extension or follow-up clinics are held by the chief surgeon of the Hospital for Crippled Children in New Castle, Indiana, Johnstown, Greensburg, Sunbury, and Mont Alto for the purpose of noting the progress of discharged patients and examining new patients and those that require only orthopedic supervision. More than 50 children have been examined at one of these clinics in a day.

Orthopedic Unit.—In addition to the clinics held by the chief surgeon of the hospital, the department under its Orthopedic Unit during the last biennium had 3 state-paid orthopedic surgeons who conducted clinics in certain districts. In other districts clinics were conducted by orthopedic surgeons paid from local funds and county allocations from the State Orthopedic Fund. In the past fiscal year 4568 children were examined and treated in these clinics, and 186 operations were performed.

The allocation to the Orthopedic Unit for the biennium of June 1, 1935, to May 31, 1937, is \$52,000. Allocations are made from this fund to each county on the basis of local activity in crippled children's work. In the majority of the counties the money is released to the local society for crippled children and supplements

funds raised by local organizations. It is used to provide orthopedic appliances, roentgen-ray examinations, casts, physical therapy, and repairs to braces for indigent children from infancy to age 18. The department's policy this year includes 6 state-paid orthopedic surgeons working in 6 definite districts.

The Orthopedic Fund is administered through the Bureau of Public Health Nursing, which designates a state nurse in each county as the orthopedic agent of the Department. It is her duty to investigate the family's financial resources in each case, determine eligibility, approve all bills, and submit them to Harrisburg for payment.

It is also the duty of the orthopedic agent to see that crippled children found in routine work or brought to her attention through other sources are examined by an orthopedic surgeon. If they are found to be cases requiring admission to the Hospital for Crippled Children, an application is submitted by the county medical director and the child placed on the waiting list. Unfortunately the turnover is slow and will be until the hospital is enlarged in accordance with the original plan. After the patient is discharged from the hospital, the orthopedic agent follows up the case and reports on the child's progress.

Water Gymnastic Unit.—One of the most spectacular departmental activities involves the work of the Water Gymnastic Unit for recent poliomyelitis cases. This work is carried on at the Mont Alto Children's Hospital, situated one mile from the tuberculosis sanatorium. The swimming pool in this building is used, and competent physical therapists are at work. The restoration of muscle power in many of these poliomyelitis cases has been remarkable.

PRENATAL AND CHILD TREATMENT OF SYPHILIS

The State Department of Health works on the theory that the best way to treat syphilis in the child is to provide adequate treatment for the indigent pregnant mother during each pregnancy, with emphasis on the desirability of starting treatment prior to the fifth month. Here truly an ounce of prevention is worth a pound of cure. Of the syphilitic patients under treatment in the 64 state and coöperating clinics, approximately 10 per cent are children suffering with hereditary syphilis. The nurses of the Department were given special instruction at the Instruction Camp at Mont Alto this summer in the ways and means of hunting out syphilitic and gonorrheal infections, with special emphasis

placed on pregnancy in cases in which private treatment is not forthcoming.

The department furnishes free laboratory services, through its laboratory in Philadelphia, and medication to private physicians for the treatment of indigent mothers and babies who are unable to take advantage of a public clinic. It also is in close coöperation with the State Council for the Blind in its work for prevention and treatment of gonococcal and syphilitic infections.

Silver nitrate is furnished free to all physicians for use in the eyes of newborn babies.

PRESCHOOL DIVISION

The Preschool Division aims to improve the physical condition of infants and young children. A total of 517 health centers are conducted under various auspices, the department being directly responsible in 184 of them. To the remainder the department bears a coöperative relation, supplying literature and record forms, and organizing and supervisory help when wanted.

Health centers are confined to educational and preventive work. Children with defects needing correction are referred to family physicians or to clinics, as the centers are not dispensaries for the treatment of ailing children.

May Day Program for Preschool Work.—Antidiphtheria and early vaccination campaigns brought the total number of children reached in 1933 and 1934 to approximately 100,000. The figures for 1935 are not available at present.

When the health car of the department is sent out for 3 months in the summer into the rural districts, it is sent only into the counties where the county medical societies have requested it and with their full endorsement.

In this work, as in every other department activity in the interest of a better child health, the state nurse plays an important part.

PRENATAL WORK

The department has 6 prenatal clinics at the present time. Maternal welfare is further carried on in 25 counties, where there is direct supervision and instruction of approximately 800 midwives. The infant mortality rate shows a gratifying decrease from 167 per 1000 live births in 1906 to 54 in 1934, but the reduction in maternal mortality from 6.9 per 1000 births in 1906 to 5.5 in 1934 is not so gratifying.

SCHOOL MEDICAL INSPECTION

We have not been able to examine all of the 725,000 children in the fourth-class school dis-

tricts since 1922. This year the examinations will be limited to first and second grade children in the schools that are farthest back in these examinations. All serious cases of malnutrition, symptoms of tuberculosis, and other serious defects are followed up by the nurse, the reports from last year showing that 2006 pupils received medical care; 24,203, dental care; 4958, ocular care; 3024 were provided with glasses; 12,071 had tonsil operations; and 642 had adenoids removed.

The vitamin law passed by the last session of the State Legislature makes it possible for the department to study the benefits to be derived from administering vitamin products to those school children who are in need of them.

The mother's notification certificates issued to the mother of each newborn baby are accepted by school authorities as proof of age, making unnecessary the presentation of a certified copy of a birth record for entrance to school.

Directly and indirectly 2 or 3 of our bureaus have made and will continue to make childhood's years progressively safer from death and damage entailed by the communicable diseases, incidentally reducing, through the escape from the causative diseases of children, the number of middle-aged or older victims of chronic heart and kidney diseases.

Milk control, emphasizing safety, has its definite bearing on the occurrence of surgical tuberculosis in children—recognized as due in large part to infection with bovine tubercle bacillus—and has no doubt contributed in large measure to the decline in our death rate from all forms of tuberculosis from 151 per 100,000 in 1906 to 51 in 1934. Milk control also has its recognized place in the limitation of other diseases, notably septic sore throat, scarlet fever, diphtheria, and typhoid fever. Probably as much as anything else, safe milk has contributed to the declining death rate of infants and small children from enteritis, which has decreased from 137.2 per 100,000 in 1906 to 8.8 in 1934.

Childhood shares with adult life the relative freedom from typhoid fever now enjoyed by the residents of this state through department supervision of all public water supplies and sewage disposal plants, and its efforts to eradicate intestinal infections among rural elements of our population through a consistent and persistent program of rural sanitary improvement.

The department's policies, seconded by the efforts of municipalities in carrying out the provisions of identical law and regulations and in a general way by identical procedures, have in-

fluenced the incidence of the communicable infections of childhood to a very marked degree.

Between 1906 and 1914 its free diphtheria antitoxin lowered the death rate from diphtheria from 34.1 per 100,000 to 23.7. With variations of only a point or two, this mortality remained constant year after year until the introduction of state-wide active immunization with toxin-antitoxin in 1921. From then on the decline has been steady, from 22.4 to 2.3 in 1934. The complete elimination of diphtheria is by no means an impossibility. Department toxoid is available for use by any member of the profession who will use it. Our sincere regret over a period of years has been that organized medicine, collectively and individually apparently, has not sensed its obligation, unless it be very recently and then only in part, in the field of preventive medicine and more particularly in this matter of diphtheria prevention.

Free tetanus antitoxin in preventive doses has reduced the mortality from this infection from 2.0 per 100,000 in 1906 to 0.6 in 1934.

Smallpox, once as common a disease of childhood as chickenpox now is, is of relative rarity in those of any age in Pennsylvania at the present time, and among children even a greater rarity. There have been no cases of smallpox in Pennsylvania in the past 4 years. A vigilantly enforced school child vaccination law dating from 1895 is to be very largely credited with removing this menace from our children.

In the other common infections of childhood, however, those which are propagated by contact and against which there is no present effective method of mass immunization, the progress of control is of necessity slower, depending, as it must, upon an increasingly intelligent parenthood and a whole-hearted cooperation among parents, the profession, and constituted health authorities. Without a very general acceptance of the fact that during early childhood measles and whooping cough particularly are serious conditions, and an inclination on the part of the laity and the profession to be constantly alert not only to these dangers but to the practice of measures which may offer something, no matter how little, towards the protection of children, especially the very young, from the so-called minor diseases, the health officer, lone-handed as he sometimes is, can be expected to make no headway against them.

There seems to be little doubt of the protective qualities of parental blood administered within the fifth day after exposure in the warding off of measles. Its use for the protection of

the infant and toddler in a household where a case of measles has occurred appears to be an eminently justifiable measure looking at least to the postponement of the disease until the child

reaches an age when fatal complications are not so common. The responsibility here is definitely that of the practitioner.

State Department of Health.

STRICTURE OF THE MALE URETHRA*

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Strictures of the male urethra seem to be a time-worn subject to discuss, but due to the fact that they still appear and constitute a considerable part of every urologist's practice, it was deemed advisable to consider again the principles and accepted measures of treatment.

A stricture is a narrowing of the lumen of the urethra at one or more points which have been the site of some former infection or trauma. It is very seldom that the entire length of the urethra is strictured. Such a stricture is practically always caused by the injection of a strong cauterizing chemical which produces a slough of the urethra in its entirety. The strictured area is the replacement of the normal epithelial cells by fibrous tissue cells, which extend into the sub-mucous layer in the normal process of healing of tissue; this occurs in any part of the body attacked by infection or trauma, and the long fibrous tissue cells contract to form what we call scar tissue, which process in the urethra encircling the channel produces the stricture.

We cannot say that any urethra which does not permit easy passage of a No. 24 F sound is a strictured urethra because many normal urethras do not have a channel of this caliber. No 2 urethras are exactly the same as to lumen, normal narrowed areas, or length, so no definite measuring stick is to be relied upon, and only by careful and conscientious examination may it be determined whether there is a stricture or some other condition producing the difficulty in urination.

There are really only 2 types of strictures as to their etiology: (1) The result of inflammation, which is practically always gonorrheal, and (2) the process of healing following trauma. There may be a narrowing of the lumen from a pinpoint meatus or a diminution in the stream from congenital bands in the posterior urethra, but these are really malformations; also the lumen in the acute inflammatory stage may be narrowed considerably, but this is due to the edema and congestion which subsides as the acuteness of the process abates.

Strictures may occur in any portion of the urethra and may be multiple in number, but those resulting from gonorrhea usually involve only the anterior urethra, while it is more common to find the traumatic stricture in the posterior urethra, due to the fact that the relation of the surrounding tissues predisposes the posterior urethra to rupture in the presence of trauma.

If the stricture is a sequela of the acute inflammatory condition occurring in gonorrhea, then it must be the result of unsatisfactory methods in the treatment of the acute urethritis. Some urologists maintain that it is due to the fact that the various pockets of the urethra are not sufficiently cleansed by the irrigations and that as a result the harboring of the organisms permits the infection to be maintained at these points and to become the site of a chronic irritative condition which is conducive to the formation of scar tissue. It seems more feasible, however, that it is due rather to the overdilatation of the weakened diseased channel permitting of small ruptures in the lining mucous membrane and the deposition of infective material beneath the normal protective layer of epithelium, and due also to poor drainage. These ruptures are healed by replacement with fibrous tissue, which in the course of time—perhaps weeks or months—goes on to contracture and formation of the stricture. Therefore, in the prevention of strictures, extreme care and gentleness must be used in the distention of the acute gonorrheal urethra.

Fortunately not all strictures have progressed to the caliber which produces retention when the patient seeks relief, and the diagnosis usually can be made from the characteristic history of difficulty and burning on urination and the diminution in the size of the stream. However, when the stage of acute retention has occurred, immediate relief is sought and the urologist is called upon to begin his treatment. It is always advisable to anesthetize the urethra by the use of whatever local anesthesia has been found to be satisfactory in your practice. This procedure aids in the relaxation of the urethra and the

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

strictured area. If time permits, a small dose of narcotic is to be desired, as the instrumentation and investigation of the urethra is a painful procedure. Naturally, asepsis is necessary. In passing instruments of any kind into the urethra some lubrication is essential. In cases of stricture sterile vaseline has an advantage over other forms of lubrication. The whale-bone filiform is usually the instrument of choice in acute retention. If unable to pass the strictures gently with one, we have found that by admitting 4 or 5 to the obstruction and by gently manipulating them to and fro, one by one, they seem to press the one to be passed into the lumen of the stricture. Perhaps 2 or 3 may be passed to the bladder, and you may be fortunate enough to reach the bladder with a No. 6 olivary tipped bougie. The patient will then be able to void and be relieved of the acute distress; also the acute edema of the stricture occurring at the time of retention will subside. At a later date treatment of the stricture should be resumed. The passing of filiforms and bougies requires the utmost of gentleness, care, and patience. In some instances 30 minutes or longer will be required before successful passage is attained. The operator who does not take the proper time will report a high incidence of cystotomies and external urethrotomies, a very large percentage of which could be treated more easily and less dangerously with patience and care. In acute retention, be satisfied with a filiform or small bougie at the first treatment, rather than attempting to use the Le Fort catheter or a sound of any size, as less damage results. Naturally, in a very small percentage of cases cystotomy and external urethrotomy may have to be done, but this should be a last resort. It is with traumatic strictures that the greatest difficulty is encountered, due to the more extensive and deeper scar tissue and to the fact that they are less distensible. Attempt to increase the size of bougies and sounds gradually, never passing them more often than once a week. Many cases will respond better at 10-day or 2-week intervals. When an instrument is passed through the scar tissue, hyperemia and congestion must result. In its subsidence this produces the absorption of the scar tissue, and no effort should be made to re-pass the instrument until this acute process has subsided. The passing of an instrument only stimulates the hyperemia. As the absorption of the scar tissue is the factor to be attained, gentle massage of the strictured area over the instrument at each sitting is to be recommended. It requires 6 months or longer to arrive finally at a point satisfactory to the phy-

sician and the patient, and that depends on the size of the urethra prior to the formation of the stricture. As mentioned previously, no definite measuring stick such as a No. 24 F sound can be used since no 2 urethras are similar. Judgment must be used in the decision to discontinue treatment, and examination with the cysto-urethroscope is certainly advised to determine the residual scar tissue.

In filiform strictures with acute retention, once the filiform is passed and left in place a few hours or a day or two, the patient can urinate and be fairly comfortable, and the stricture is more easily navigated, undoubtedly due to the subsidence of the edema. This observation prompted us to use soft rubber catheters in strictures of resilient character, and we have used them with a moderate degree of success in several cases during the past few years. In the case of a stricture of small caliber which does not respond to dilatation above a No. 10 or 12 F sound, the usual No. 10 or 12 2-eyed Eynard catheter is passed through the urethra and fixed in place as a retention catheter, and a glass plug is inserted to be used by the patient as he desires to void. This arrangement permits the individual to go about his usual occupation with only a moderate degree of inconvenience. At the end of one week, when it is advisable to change the catheters, it is very easy to pass a slightly larger catheter. If it is not advisable to increase the size at this first change, a catheter of the original caliber may be used another week before the increase in size is made. The size is gradually increased up to a No. 22. It is gratifying to see apparently rigid strictures gradually melt under this method of treatment and also to realize that the patient is comfortable and able to move about and keep his employment intact. There is very little complaint about the inconvenience of the catheter. If you have never used this method, it is suggested that it be given a trial. We believe that you will be satisfied with the results.

The complications which are seen in connection with strictures are not many and are all the result of the obstruction to the urinary stream. The most common is the periurethral abscess resulting from a minute rupture of the mucous membrane, with deposition of infection in the tissues about the urethra, that goes on to abscess formation and pointing on the skin surface to rupture and drain or to be incised. A very large percentage of these will heal spontaneously after free drainage is instituted and the original cause treated. However, if epithelization of the tract from the urethra outward takes place, a stub-

born fistula is formed, which only surgical removal of the fistulous tract can remedy. Perhaps the most important complication is that of urinary extravasation following a rather large rupture of the dilated urethra back of an almost completely obstructive stricture. The condition of a patient with such a complication becomes critical at once, and usually by the time he is seen by the urologist the extravasation has broken through the fascial boundaries to involve the scrotum, the penis, the perineum, and the abdominal tissues. Immediate operation is the only recourse, and all infiltrated areas must be opened wide. Multiple incisions must be made, as many as 25 or more, depending upon the extensiveness of the extravasation. Get free drainage with communication from incision to incision and forget about the stricture, allowing the urine to flow out of one of the incisions. Treat the toxemia of the patient until the seriousness of the infection has subsided, which usually occurs in a few days provided too much gangrene does not supervene. When the patient has been restored to a moderate degree of health and the infection has subsided, then do a cystotomy and external urethrotomy and repair the urethra, rather than attempt such at the first operation in the face of infection, when the mortality risk is too high. There is really no sensible argument about incising a bladder or attempting to do an external urethrotomy in the presence of urinary extravasation, which is a very critical condition itself.

Another complication seen quite commonly is upper urinary tract infection, the same as is seen in other types of lower tract obstruction, with all the component factors of pyelitis, pyelonephrosis, nephrolithiasis, diverticula of the bladder, uremia, *etc.* The stricture produces these complications by its ability to hinder the free flow of the urinary stream and by the secondary invasion of the urinary tract by organisms producing the infection. Naturally the treatment depends largely on the extent of the complications, but the alleviation of the stricture will produce a marked improvement, even cure, in some cases of cystitis, pyelitis, or pyelonephrosis. Small stones can be passed once the urethra is dilated to a caliber of sufficient size. Therefore, it seems advisable to treat the stricture first, and when improvement has progressed to an apparently stationary condition, some form of operative procedure may be necessary to improve the health of the patient further, such as pyeloplasty, lithotripsy, or removal of bladder diverticula, depending again on the individual patient and the complications.

The last condition is not a complication of a stricture but really a complication of the treatment; it is called catheter fever for want of a better name. This may occur following instrumentation of the urethra, and some ascribe it as due to opening of the channels of the blood vascular or lymph systems of the posterior urethra to infection, but why does it occur in one individual and not in another? Why does it occur at one time in the same individual and not at another time? Its occurrence cannot be prognosticated with any degree of accuracy in the pathologic or nonpathologic urethra. Therefore, until more is known of the relationship of the sympathetic and parasympathetic nervous systems to the posterior urethra and to infection of this channel, we must continue to call it catheter fever and admit that we do not know the causative factors involved.

SUMMARY

1. Gentleness in distention of the urethra in cases of acute urethritis will prevent the formation of many strictures.
2. A stricture should not be instrumented at shorter intervals than once a week.
3. The use of soft rubber retention catheters is helpful in some types of strictures.
4. The paramount consideration at the time of extravasation of urine should be directed to the toxemia; the stricture should be treated at a later date.
5. A urethra which is the site of a stricture may require medical attention throughout the life of the patient.

R. D. 2.

ABSTRACT OF DISCUSSION

RALPH P. BEATTY (Uniontown): Dr. Whitehill's paper is very timely, as a discussion of strictures always seems to be in season. Personally, I am not seeing as many of the dense strictures, the ones causing retention, as formerly. This is due to the better understanding of the pathology, treatment, complications, and sequelae of gonorrhea on the part of the medical profession at large.

Dr. Pelouze has emphasized again and again in his masterly book the danger of high pressure injection and irrigation of the inflamed urethra. Such procedures certainly lay a foundation for subsequent stricture formation more than a natural reaction to the infection in the urethra. This was well brought out in the paper.

For anesthetizing the urethra, a 1-500 solution of nupercaine in normal saline injected with a hand syringe, after which a meatus clamp is applied and 15 minutes allowed to elapse, works satisfactorily. Also, the injection of warm glycerine or olive oil along the urethra will enable one to pass a filiform through a

dense stricture with greater ease. For lubrication purposes, I have been using for some time a thin preparation of mucilage of Chondrus, commonly known as Irish moss. This is made and sterilized by a local druggist, formerly an instructor in the School of Pharmacy at the University of Pittsburgh. This has proven very satisfactory.

Occasionally, a No. 6 ureteral catheter, preferably olive tipped, will pass into the bladder and permit the slow decompression of an overdistention, giving quick relief to the patient.

I heartily agree with Dr. Whitehill that the interval between dilatations with dense, resistant strictures should be from 7 to 10 days.

I have never tried the inlying small catheter in resistant strictures but I shall do so, for occasionally a patient develops an acute retention after an early dilatation. This may persist for several days, requiring

repeated catheterizations. In this type of case, the inlying catheter would solve the problem.

The necessity of early and wide incision and drainage in a desperately ill patient who comes into the hospital with an extensive urinary extravasation cannot be stressed too strongly. It is well that Dr. Whitehill emphasized this point. In most of these I have done a suprapubic drainage at the same session. The 2-stage method certainly minimizes shock.

Regarding catheter fever: I have made it a practice in recent years to give stricture patients, particularly during the early stages of dilatation and always when even the slightest bleeding accompanies the dilatation, quinine sulphate, 2 grains to be taken every 2 hours for 10 doses, starting immediately after the treatment. I got the idea from an article printed in *The Lancet* in 1925 and have used it ever since. I believe that I have had less urethral fever reactions since its use.

DIAGNOSIS AND TREATMENT OF PELLAGRA*

GEORGE J. BUSMAN, M.D., PITTSBURGH

In the early twentieth century a new disease appeared in the South. This disease was similar to endemic pellagra in Italy, Rumania, Egypt, and other sections of southern Europe and was finally identified as pellagra. The disease spread rapidly affecting the poorer population, inmates of institutions and asylums, and through observation and study by the United States Public Health Service was attributed to some definite dietary dysfunction. It was a disease common to the months of March to August and was seldom seen during the rest of the year. Goldberger, Wheeler, and others later after careful study were in accord with the proposed theory that the disease belongs in the group avitaminoses. The exact mechanism as to causation of cutaneous, visceral, and central nervous system lesions, however, is still unexplained.

It is still generally accepted as a vitamin B₂ (G) deficiency. However, investigators such as McLester argue that there are 2 possible causes: (1) A multiple food deficiency which may be the result simply of a grossly deficient diet, or some physiologic defect which prevents the proper utilization of foods, or possibly a combination of the two; (2) that directly or indirectly an infective agent is concerned, itself possibly secondary to the dietary deficiency. While this explanation may hold true for endemic pellagra in the South, of late years we are encountering frequent cases in the North, some of which apparently occur in individuals on normally balanced diets.

In 1926 there were only 44 cases on record in the various hospitals of Pennsylvania, 3 of which had been reported from the Mercy Hospital, Pittsburgh. Since then numerous cases from northern states have been reported, many of which occurred in habitual alcoholic addicts, so-called pseudo-alcoholic pellagra. Alcoholic pellagra is clinically identical with endemic pellagra of the South. Usually patients with pellagra caused by excessive alcoholic intake eat very little, or at best their diet is not balanced. Possibly alcoholic pellagra may result from gastro-intestinal disturbances, particularly anorexia, vomiting, and diarrhea.

In 1916 Rolph reported a case of pellagra associated with gastric carcinoma. Since then many such cases have been reported associated with various types of gastro-intestinal pathologic involvement. Eusterman and O'Leary reported a series of 16 such cases. Strauss in a recent article gave references to reported series of 15 cases of pellagra secondary to cancer of the stomach usually with an associated pyloric obstruction, 3 cases secondary to pyloric obstruction from peptic ulcer, cancer of the terminal ileum in 3, rectal stricture in 16, ulcerative colitis in 5, gastro-enterostomy in 5, jejunostomy in 2, gastric syphilis in 2, esophageal stricture, duodenal ulcer, jejunal stenosis, iliac stenosis, dilatation of the colon, cloaca, amebic dysentery, and rectovaginal fistula one each. Strauss, further reported his own observation on numerous patients, many of whom presenting gastro-intestinal lesions were unable to partake of an adequate diet. In at least 10 instances, however, the diet was entirely adequate for the prevention

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of pellagra in an individual with a normal gastro-intestinal tract. With these various possible etiologic causes, pellagra must be considered a disease secondary to some dysfunction of the gastro-intestinal tract.

Although the causative factor is still very much open to discussion, the clinical manifestations of pellagra assume a very definite syndrome. It is a disease which, due to its variable symptoms, is a common problem to the internist, the neurologist, and the dermatologist. The disease manifests itself by 4 sets of rather classic symptoms: Cutaneous, digestive, nervous, and mental. The cutaneous picture in acute cases expresses itself as a sunburn type of dermatitis appearing chiefly on exposed surfaces. The face, neck, dorsum of the hands and fingers, and forearms are most commonly involved. A collar-like band around the neck and a similar band around the wrist are notable diagnostic features. The acute dermatitis is bright red, which becomes darker inversely to the acuteness. Bullae may be present. In later stages the dermatitis is that of a chronic eczema with pigmentation, crusting, scaling, fissure formation, and occasionally verrucous lesions.

The digestive tract is attacked through its entire length, but the mouth, stomach, and colon are most seriously involved. Stomatitis, soreness of the tongue and mouth, ulceration, and salivation are commonly seen. The tongue is almost always glazed with atrophy of the papillae. The lips and buccal mucosa are red and thickened. Epigastric pains, mild or severe, anorexia, dyspepsia, and diarrhea are almost constant, and achlorhydria is very common. Pathologically the entire alimentary canal mucosa is extremely thin and atrophied, while in severe cases ulcerations are sometimes observed.

The nervous symptoms in the subacute stage consist chiefly of sensory changes. There are paresthesia, tingling, and numbness especially of the feet and hands. At times the burning is intense. Objective sensation is retained although areas affected by the dermatitis are often much less sensitive to external stimuli. Early reflex changes are exaggerated. In late subacute and chronic stages mental changes develop. There are tremor, weakness or stiffness, ataxia, and actual cramps. Later muscular wasting, with weak or lost reflexes, develops, which may become so severe as to cause complete disability. In terminal phases trophic ulcers and terminal convulsions occur. The cranial nerves are usually spared, but diplopia, defective accommodation, and facial paralysis have been recorded.

Mentally these patients when seen early ex-

hibit signs of irritation. They appear anxious, worried, and excited. Later they become dull with impaired memory. In the late acute cases hallucinations, melancholia, insomnia, suicidal and maniacal tendencies are observed. In terminal phases coma and convulsions supervene.

The classic triad of dermatitis, dementia, and diarrhea is seldom seen in this section except in late cases. The presenting symptom is usually a dyspepsia with a moderate stomatitis associated with a mild picture of pellagrinous dermatitis. Diarrhea is as often absent as present, and the central nervous system symptoms are often lacking or of a very mild degree.

TREATMENT

In treating pellagra, one must first determine whether it is endemic, alcoholic, or secondary to some organic gastro-intestinal lesion. In regions where pellagra is endemic, treatment is chiefly a public health problem, and much has been accomplished in preventive and curative dietary treatment in these areas.

The treatment of alcoholic pellagra is chiefly a social problem. This type of patient usually requires hospitalization, control of alcoholic intake, and often the resumption of a normal dietary is adequate treatment for the acute phase of the disease. Treatment of mental symptoms may require restraint and sedatives. It is essential to impress patients as to the probability of recurrence should they resume their alcoholic routine.

The treatment of organic lesions of the gastro-intestinal tract is primarily the removal of such a source of mechanical obstruction. Surgical intervention is of considerable risk because of the associated malnutrition, dehydration, and alkalemia. An attempt to eliminate the pellagrinous symptoms by readjustment of diet should be made before surgical treatment. After operation one must guard against toxemia and dementia, which often occur in from 3 to 7 days even in mild cases. In some cases reported the removal of obstruction alone was largely responsible for the improvement of pellagrinous manifestations.

Treatment in all cases consists in establishing, if possible, a diet rich in vitamins, such as rare meats, liver, salmon, cod liver oil together with an abundance of citrous fruits, eggs, milk, cream, vegetables, and yeast. Iron and arsenic are recommended by some authorities although their use is of questionable value. Local treatment to oral and skin lesions as well as the treatment of diarrhea and dementia are symptomatic. The patient should be kept ambulatory

as much as possible as complicating pneumonia is frequent.

ANALYSIS OF CASES

Twenty-seven cases of pellagra were observed by me in the last 10 years. The age ranged from 26 to 63 with an average age of 41 years. Eighteen were males and 9 females. Sixteen were married and 11 single. There was a history of excessive alcoholism in 10, moderate alcoholism in 2, and no history of alcoholic ingestion in 15. Eleven of this series of patients gave no history of an abnormal or deficient dietary intake. None of them gave a history of, nor did clinical findings disclose, any visceral obstruction. Only 5 were definitely emaciated as the result of chronic malnutrition.

Regarding clinical manifestations, gastro-intestinal symptoms were present in 26. Swelling and tenderness of the mouth, pain, dyspepsia, and abdominal distress were common symptoms of these 26 patients and often the presenting symptom. Diarrhea was present during the course of observation in 22 but not always at the time of first examination. Neurologic findings of the acute type such as anxiety, peripheral neuritis, and exaggerated reflexes were evident in 25 instances. Later central nervous system symptoms and signs such as loss of reflexes, ataxia, tremor, pain, and trophic ulcers were present in 11 cases. Mental changes from mild melancholia to delirium and maniacal tendencies, bulbar palsy, and convulsions were present in 8. A dermatitis was noted in 23 patients and absent in 4. All presented an involvement of the face and hands, and several presented more generalized lesions. Of this series 5 patients died. One was apparently convalescent and later died in another hospital due to acute alcoholism. Three died of a terminal toxemia apparently due primarily to pellagra. One died of associated pneumonia. Seven were known to have relapses or were seen in relapse. Gastric analysis was done on 23, of which 21 showed an achylia. Twenty were treated as hospital patients and 7 ambulatory. In the early patients of this series treatment consisted primarily of arsenic, iron, and a diet rich in "red" meats, fruits, and green vegetables. The similarity of the neurologic findings to those of pernicious anemia led me to add intensive liver therapy such that the routine treatment consisted of forced liver feedings, or liver extract by ingestion or injection, Fowler's solution in ascending doses, and a diet consisting of large quantities of yeast, preferably brewer's yeast, orange juice, beef, milk, eggs, and fresh vegetables. Hydrochloric acid was

given empirically. Symptomatic treatment was added for control of the diarrhea and mental symptoms as well as local treatment to the mouth and dermatitis.

637 Union Trust Building.

ABSTRACT OF DISCUSSION

STANLEY CRAWFORD (Pittsburgh): Pellagra is a neurochemical syndrome affecting primarily tissues of ectodermic origin producing a hyperkeratotic and hyperchromic (photosensitive) dermatitis; stomatitis, gingivitis, and atrophic ulcerative glossitis; an atonic gastro-enteritis with atrophy of the muscular layers plus ulcerative and cicatricial changes; degenerative and fibrotic changes in the liver, and degenerations in both motor and sensory portions of the central nervous system and in the peripheral nerves and sympathetic ganglia. Lassitude, anorexia, emaciation, anemia, diarrhea, achlorhydria, and terminal dementia are prominent features.

The etiologic factors in pellagra are as yet undetermined but appear to be a lack of certain chemical elements obtainable in nourishing food. Experimentally it appears to be due to an absence from the diet of the antineuritic vitamin B and the so-called pellagra-preventive or antipellagic vitamin G (formerly B₂). Some workers consider other elements of the vitamin B complex as factors in the production of certain symptoms. There seems to be a much reduced food assimilability, a state which may be dependent upon an impaired neurogenic mechanism in the gastro-intestinal tract, so that all of the food value, even when ingested therapeutically, is not utilized. The somatic nervous impairment probably accounts for the hyperpigmentation and photosensitiveness of the skin. At least these symptoms are overcome by antineuritic and antipellagic vitamin administration. No one has proven or disproven the presence of a specific toxin in pellagra, which some consider the cause of the degeneration of the liver, red blood cells, and nerve elements in the central, peripheral, and sympathetic systems.

Pellagra in the northern states is sporadic and often induced by the voluntary avoidance of food from whim or self-induced reducing diet, or from prolonged alcohol debauchery in which alcoholic beverage supplants food intake for weeks at a time. There are probably 1000 pellagrins in the northern states. Pellagra in the southern states is usually due to involuntarily restricted diets of low nutritional value and seems to occur in territorial zones or belts as though a specific intoxication or infection were a factor. There are probably 75,000 pellagrins in the southern states. The symptoms of the alcoholic pellagra syndrome are sufficiently similar to those of classic pellagra as to consider them identical. The mortality of pellagra varies from 10 per cent to 60 per cent in different sections of the country, depending upon the distribution of yeast and antipellagic food through federal or state aid.

There is no known specific treatment of pellagra, but food of high nourishment and caloric value and containing a rich supply of vitamins B and G, such as fresh brewer's yeast, wheat germ, milk, egg-white, beef, tomatoes, and greens, is of distinct value. Spies, of Cleveland, has recently proven the value of liver extract and ventriculin in bringing about a more rapid disappearance of symptoms and greatly reducing the mortality (from 54 per cent in the first series of cases

which did not receive liver extract to 6 per cent in those so treated). The high cost of these substances is disadvantageous.

When anorexia is present, it is often very difficult to get the patients to take food. They have apparently lost their sense of taste, and also because of vomiting and diarrhea they fear the ingestion of food. Even though food in small quantities is taken frequently the assimilation seems so poor as to be almost in vain at

times, but persistent feeding and rest does much to overcome this feature except in extreme cases. Symptoms which result from degenerative nerve changes are very troublesome. Deficient assimilation may be due to faulty nervous mechanism. The dermatitis, stomatitis, vomiting, diarrhea, anemia, and nervous symptoms gradually subside with increased ingestion and assimilation of antipellagic food and the administration of yeast, wheat germ, and liver extract.

THE PHILADELPHIA MATERNAL MORTALITY REPORT*

A Discussion of the Hospital Problems

CLIFFORD B. LULL, M.D., PHILADELPHIA

That the problem of hospital obstetrics in Philadelphia is an important one can be most easily visualized when it is considered that during the years 1931-32-33, 65,626 or 69.2 per cent of all live births occurred in hospitals. During the past decade this has shown a steady increase and, contrary to the opinion of our New York colleagues, is a proper one. In spite of the fact that in this survey only 55 deaths followed 29,154 home deliveries, a rate of 1.88 per 1000 live births, and 320 deaths followed 65,626 live births in hospitals, a rate of 4.87 per 1000 live births, hospitalization, when possible, is the proper plan. Quoting this report, "If the hospital deliveries could be separated into planned or booked cases and emergency cases, a more impartial division of rates could be obtained." Nevertheless hospitals must continue to submit to unfair criticism, namely, that the major portion of maternal deaths occur in institutions, regardless of the fact that many are emergency cases. This unfair criticism would unquestionably be reduced if the statistics would show definitely whether the admission was a planned one or an emergency. Those who are connected with an active obstetric service can recall fatal cases which the service had to accept in spite of the fact that the patient was moribund on admission. As an example, recently a patient was taken to a Philadelphia hospital by a physician and placed in a chair in a dispensary waiting room; this occurred at 4 a.m. The night supervisor was called on the telephone by the physician, who left the hospital before the nurse had time to come downstairs. When she did so, the patient was on the floor having a convulsion and in a dying condition. The hospital had to add this mortality to its statistics. Admitting, therefore, that a certain portion of hospital mortality is unjustly placed against the hospital

records, it also must be admitted that in all probability many things could be done by hospital managements and attending obstetricians to safeguard further the lives of women brought to institutions for purposes of delivery.

The committee which made this survey has very ably and judiciously written into this report recommendations for the conduct of maternity departments in hospitals. Attention is called particularly to this part of the survey. It would be impossible to discuss all phases of these recommendations. For brevity this discussion will be confined to generalized statements and the conclusion will contain a series of recommendations which might receive the approval of the Obstetrical Society of Philadelphia in order to obtain for the city's institutions a more impartial judgment by all parties concerned in regard to maternal mortality in hospitals. When the original committee, of which I was a member, accepted the responsibility of making this survey, they laid stress particularly upon the importance of following up a statistical statement by educational and corrective efforts. The Obstetrical Society of Philadelphia, composed of individuals who are particularly interested in this work, should carry out or should render whatever aid they possibly can to this phase of the work.

When hospital obstetrics are considered it is usually proper to divide hospitals into those highly specialized institutions doing nothing but obstetrics and gynecology, the general hospitals having an obstetric division, and the smaller hospitals which, although having an obstetric staff, are largely dependent upon a courtesy staff composed mostly of general practitioners for their obstetric cases.

The highly specialized institution usually has a closed staff composed of men who have had adequate training in this branch of medical science. The members of the assistant staff have

* Read before the Obstetrical Society of Philadelphia, Dec. 6, 1934.

had more than the usual amount of experience and are particularly interested in this subject. The resident staff are usually postgraduate students who have had a well-rounded internship in general medicine and surgery, a very essential part of the training of anyone who is to become an obstetrician. The appointment of residents in obstetrics is most desirable because in no other branch of medicine or surgery is there as much responsibility thrown upon the house staff, and the presence of a man who has had a complete internship is always a safeguard to the woman in labor. The interns are closely supervised because they work in close coöperation with the resident, and the nurses concentrate their endeavors on maternity work to the exclusion of other things. This set-up is ideal and should work for a distinct improvement in obstetric practice. Although such institutions are always criticized for a high incidence of operative deliveries, when all the factors involved are taken into consideration, the results are adequately satisfactory. In this type of institution the work is more closely supervised, mainly because of the fact that private patients make it necessary for some member of the staff to be present almost all the time. Consequently, his consultation and advice are more frequently called upon by the resident staff.

Unfortunately it is a generally accepted fact that anyone can give an anesthetic for delivery. Obstetric anesthesia is a very important factor in the safeguarding of the life of both mother and child. The giving of obstetric anesthesia requires special training if it is to be satisfactory. This department in a specialized hospital is usually very good, but in a general hospital is usually very bad.

In spite of the fact that hospitals of this type offer what appears to be an ideal situation both for the doctor and the patient, particularly from a physical standpoint, they must be especially watched by the staff because of the ever present frailty of the personal equation and the dangers of meddling midwifery. This type of hospital offers the best for the mother and child providing the work is properly supervised.

The general hospital has many problems not seen in the specialized institution. It has, in addition to the problems found in a specialized hospital, an intern staff not usually supervised by a resident, and anesthesia is given by individuals not particularly trained or interested in obstetrics. The dangers of intramural infection are more pronounced and, unless associated with a very active private service, not likely to be so closely supervised.

One of the main reasons for difficulty in maternity divisions of general hospitals lies in the fact that the staff is usually dominated by that glorious masterpiece of medical knowledge, the general surgeon, who, with his colleagues, looks upon the obstetric department with disdain and blocks every effort upon the part of the obstetrician to better the service. This primarily is the fault of medical education and should be corrected not only in the minds of the members of the general medical profession but particularly in the minds of the lay hospital administrators, who by the process of osmosis have absorbed the idea that anyone can take care of an obstetric patient. Many general hospitals have a closed staff but have no restrictions on its members from other departments doing obstetric work. A hospital may grade its surgeons so that the tyro may not do an appendectomy without supervision but will allow the ophthalmologist to deliver babies.

The third class of hospital is one with a large courtesy staff, and included in this group for purposes of discussion may be placed the private hospital. The obstetric department of these institutions should be particularly supervised because of the danger of untrained men attempting complicated deliveries. This presents a difficult problem because, unless rigid rules are not only made but strictly enforced, many tragedies are bound to happen. That it is possible to accomplish this has been proven on numerous occasions and, in order to be explicit, I will discuss my personal experience in an institution of this kind.

On the outskirts of Philadelphia the Delaware County Hospital has functioned as a community general hospital for a period of 7 years. During that time 2021 babies have been born there. Of the women delivered, 8 have died. A review of these deaths shows only one case of puerperal sepsis. This occurred in a multipara who had a spontaneous delivery after 4 hours of labor and who had neither rectal nor vaginal examination. The other deaths evaluated by the Analysis Committee show 5 preventable and 3 nonpreventable. This is a small group of patients but a satisfactory record. There are on the courtesy staff of this institution 111 physicians who have obstetric privileges. When such privilege is granted it is for nonoperative obstetrics except low forceps application, and this is to be done only when the head is crowning. Many physicians have encountered serious difficulty doing what they termed low forceps application. Their diagnosis of the presenting part in relation to the vaginal outlet had been faulty, and

upon giving the patient an anesthetic they found that they were attempting to do a difficult delivery which previously had seemed to be a simple procedure. Unless the head is absolutely crowning, the term "low forceps" should not be used. Very little difficulty has been encountered by any of the courtesy staff attempting complicated deliveries. This is true because the majority are younger men who have been taught the dangers of obstetrics. Also, they know the members of the obstetric staff are always willing to aid them by a minimum amount of contact with the patient and with the idea of remuneration placed in the background.

In institutions of this type a routine technic must be adopted and strictly enforced. For example, no vaginal examinations are allowed except in the delivery room. A certain method of preparation and draping of the patient is insisted upon. Although there has always been a question in my mind as to the efficacy of mercurochrome, it has been used to paint the external vulva, a small portion of the suprapubic region, and the inner sides of the thighs, not with the idea that this particularly prevented infection; but being of a brilliant red color, mercurochrome has a tendency to make the physician who is not particularly trained in surgical technic stay within these bounds with his sterile hands or instruments. Another very good method of controlling a courtesy staff is to have the supervisor of nurses fill out a blank upon the completion of any delivery. On the blank the question of breaking of technic is asked; if an operating suit is not used, if the gloves are not properly put on, if the patient is not properly draped, if any unsterile object is touched; the type of delivery, the type of anesthesia, and the method of delivery of the placenta are all enumerated. If any physician has broken any of these rules, he is not summarily discontinued from the courtesy staff, but it is found convenient to tell him the next time he tries to place a reservation that the maternity department for that particular time is filled. We have found that excellent coöperation has been received from the courtesy staff and have encouraged all of them to take part in the monthly discussions of their interesting maternity cases.

No matter how many rules or regulations are laid down in a maternity department, they are useless unless they are strictly enforced. And although doing so may occasionally cause some ill feeling between the obstetric department and the general practitioner, my own personal experience has been quite to the contrary. The entire medical profession is not necessarily antag-

onistic, but what most of the medical profession needs is someone to lead the way.

There are problems connected with the management of any maternity department, no matter what type of hospital is involved, but by alertness and by insisting that routine methods be used, a certain portion of the maternal mortality which occurs in the institutions of this city can be reduced. The purpose of this survey has been to show by accurate statistical figures just how bad the mortality is, and now, immediately following the completion of this survey, is the time to correct whatever faults may be found in the various institutions with which we are connected.

In conclusion there is presented in brief form the chief recommendations of this committee, with the hope that the Obstetrical Society of Philadelphia will take recognition of the importance of improving the maternal mortality in this city.

RECOMMENDATIONS

1. The staff of an obstetric department should insist that the directing authorities provide the minimum of standards for a maternity division as outlined by the American College of Surgeons.

2. A maternity staff should be composed of competent physicians who have had adequate training and who have operative ability. The courtesy privileges of a maternity division should be given, whenever possible, to all practitioners who are ethical. But this privilege should be limited to this class of physicians only in uncomplicated cases.

3. There should be closer coöperation between the attending staff and the courtesy staff.

4. Antenatal clinics should be more closely supervised by the senior members of the staff.

5. The house staff should be more closely supervised by the attending staff. The benefit of matured judgment is needed at all times in caring for maternity cases.

6. Obstetric staff conferences are essential. At this time not only maternal deaths but also complicated cases should be discussed in a frank and impersonal manner. A discussion of a maternal death will very frequently point out an error in judgment which is not only of benefit to the younger members of the staff but often to the seniors. Not only are errors in judgment found but frequently errors in technic, which when determined occasionally will lead to the improvement of delivery room service.

7. A standard technic for delivery rooms should be formulated and should be changed only by consent of the entire staff.

8. Obstetric anesthesia, whenever possible, should be controlled by a separate department and should be given only by individuals who have had more than the usual amount of training in obstetrics.

9. Obstetric analgesia should be made available to a larger percentage of patients. The giving of proper obstetric analgesia will reduce the number of difficult operative deliveries.

10. More patients exhibiting indefinite symptoms in the antenatal clinics should be admitted to the house service for study.

11. Particular attention should be paid to patients supposedly in labor applying to the admission room. They are sometimes allowed to go home on the judgment of a house officer who decides that they are not in labor. This is particularly true of women who have ruptured membranes. They should be admitted immediately.

12. There should be closer coöperation between the other departments of the hospital and the obstetric department. Consultation with other members of the staff provides an essential safeguard to the women during pregnancy, labor, and the puerperal period.

13. Immediate blood transfusion is necessary in an emergency case in which loss of blood has been sufficient to cause shock, *etc.*, and a better system of obtaining donors is essential.

14. The Social Service Department should receive the fullest coöperation, particularly in regard to having patients keep their appointments in the antenatal clinic.

15. The question of zoning the city, as pointed out by the committee, is a very feasible one and should be seriously considered.

16. The responsibility of watching the patient in labor is too frequently placed upon the nurse, no matter how capable she may be. The house staff should be taught to observe the patient in labor at more frequent intervals.

17. Ward patients should receive the benefit of mature judgment just as frequently as private patients.

18. Finally, the essential conduct of every maternity department rests in the closer supervision by the attending staff and eternal vigilance against errors in judgment and technic. It is only with constant supervision of the nursing and house staffs that tragedies can be averted and the maternal mortality reduced.

1731 Pine Street.

ESSENTIAL CONSIDERATIONS OF MENTAL DEFICIENCY*

ARCHIBALD LAIRD, M.D., POLK, PA.

Complete understanding of the mental defective includes not only the recognition and classification according to accepted standards but, equally essential, the knowledge of the causes, social determinants, and theoretical and practical methods for controlling the condition, together with a knowledge of Pennsylvania State provisions for the defective.

Individuals unable to think, reason, or judge have defective intelligence, which, if accompanied by retarded learning power and varying degrees of social maladjustment, is called a cerebral tergmulation or mental deficiency. The extent of the intelligence defect is determined by psychometric tests in which the connate, innate, or general factor of intelligence is expressed in terms of mental age, and the connotative or specific factor of intelligence, which is the educable component, might be represented by the intelligence quotient.

The mental age in the defective states very

accurately the amount of intelligence at a given time and is uninfluenced by education. The intelligence quotient is the degree of brightness, which is a ratio between the mental age and physical age; it enables one to predict the mental development a given individual will have at maturity. Mental maturity has been arbitrarily set at the age of 15 to 16 years. Any individual at maturity possessing a mental age from 0 to 3 years or an intelligence quotient from 0 to 25 is called an idiot. Those with mental ages from 3 to 7 years or intelligence quotients of 26 to 50 are imbeciles, and those with mental ages of 7 to 12 years or intelligence quotients of 51 to 70 or 75 are morons. Too fine a distinction cannot be made between these classes of defectives on the basis of intelligence alone; thus, other factors are considered, such as character, temperament, and personality traits. Harmony between these traits in an environment of mentally normal individuals determines the defective's social adjustment or maladjustment. If the intelligence defect is sufficiently great, as in idiots or imbeciles, social adjustment is not possible and

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

their conduct will never be acceptable to society. The moron may adjust socially regardless of his intelligence defect if he is subjected to a favorable environment and his unfavorable personality traits respond to proper training.

Arrested cerebral development is due to factors acting before and after germ cell conjunction, the former being plasmic factors and the latter somatic factors. The degree of mental deficiency depends upon the severity of the arresting force and the number of cortical brain cells destroyed or unformed. Any cause may produce any degree of mental deficiency, although plasmic defectives of the hereditary type are usually high-grade defectives, coming from bad stock, while somatic defectives are usually low grade and are products of healthy stock. Exceptions to the high-grade defectives are found in the plasmic types, represented by amaurotic family idiocy of the infantile (Tay-Sachs') and juvenile (Spielmeyer's) forms, and the Laurence-Moon-Biedl syndrome of obesity, genital dystrophy, mental deficiency, syndactylism, and retinitis pigmentosa, which are usually low-grade defectives. Amaurotic idiocy is perhaps a combination of genetic aplasia and an acquired degenerative process, whereas the latter is purely hereditary in character.

Plasmic factors include true heredity in which the gene alone or in combination determines the amount and degree of intelligence, and blastophthoria in which the unfertilized germ cell has been degenerated by certain substances such as lead, alcohol, and other toxins. In the latter case the cell is intrinsically good, but in bad condition as a result of external influences. High-grade imbeciles and varying grades of morons are examples of true heredity and appear generation after generation. Mongolism, with its distinctive physical stigmata, might be offered as an example of mental deficiency due to plasmic influences of the blastophthoria class. This type of individual may occur at any time during the reproductive period of women, the germ cell being altered by toxins, age, fatigue, disease, and other influences. Whether it is due to too few or too many chromosomes is yet uncertain.

Somatic influences include congenital, natal, and acquired causes. Congenital factors find the embryo or fetus acted upon directly by endocrine malfunction or some other principle, or by some condition acting on the mother and influencing the embryo or fetus, or due to conditions acting on both mother and fetus at the same time. In this way varying degrees of mental deficiency as a result of inhibited brain cell growth are produced as well as certain types

of paralysis due to incomplete development of the pyramidal tracts. Cretinism, hydrocephalus, microcephalus, and monsters are also accounted for in this manner.

Natal causes result from influences acting at birth and include the predisposing and determining causes. Prematurity is a predisposing cause in that the tentorium lacks elastic tissue and being more friable tears quite easily with resulting hemorrhage and subsequent destruction of brain tissue.

The determining causes include certain presentations, precipitate delivery, long labor, the use of pituitrin, and rough handling of the child at birth. Brow and breech presentations call for a vertical lengthening of the head which unduly stretches the tentorium and ruptures small blood vessels. The fetal head can withstand 4 times as much pressure when applied slowly, but is unable to withstand rapid compression without direct damage to its contents; hence, precipitate labor, hasty application of forceps, and rapid breech extraction will destroy the brain tissue or produce hemorrhage. Prolonged labor with excessive moulding is also destructive. The use of pituitrin before the third stage of labor causes abnormally powerful contractures of the uterine musculature sufficient to prevent proper oxygenation of the fetal blood in the placenta, and the fetal brain cells may be impaired. Complete destruction of cortical brain cells results from asphyxia of more than 10 minutes' duration. Anoxic and stagnant anoxemia are capable of producing petechial hemorrhages. Rough handling after birth will rupture tiny cerebral blood vessels. Hemorrhage from any cause may be subdural, subarachnoid, supracortical, intracerebral, and subdymal. The presence of free blood in the subarachnoid spaces produces an aseptic meningitis, which interferes with brain cell development. Mental deficiency resulting from birth injury is practically always accompanied by some form of paralysis together with symptomatic convulsive seizures.

Acquired causes are head injuries and toxic inflammatory processes, such as measles, whooping cough, and the like, affecting the cortical brain cells after birth and at any period before age 6.

Factors determining mental deficiency are physical defects and deformities, which mask intelligence and reduce its effectiveness, an inherent emotional instability, and a complex society, which is not suitable for the slower tempo of the defective by demanding more than his capacity allows him to accomplish. In dealing with the defective it is to be remembered that

the above factors do not cause mental deficiency. The correction and removal of physical defects and deformities will not relieve deficiency except to place the individual in the best possible condition to make use of the intelligence he has. His emotional tendencies lend themselves readily to suggestion because his powers of inhibition are poor; thus, unfavorable traits should not be exaggerated by unfavorable surroundings.

Rural life makes fewer demands on the defectives and is therefore a more suitable environment. Sex also must be considered, for subnormal girls with a mental age of 6 have a survival value in a community equal to men with mental ages of 10 or 11. They marry much more readily, and the traditional household duties are less searching in mental weakness.

Psychopathic individuals must not be confused with defectives, and the former account for most of the social problems such as delinquency, vagrancy, prostitution, and illegitimacy. Crimes committed by defectives are a result of their stupidity rather than a product of maliciousness. Repeated disappointment and failure in competing with normal individuals precipitate perverse social reactions. Vagrancy is practically unknown among defectives. Prostitution complicates the problem of mental deficiency rather than mental deficiency influencing the problem of prostitution. Members of this group are mostly heboidophrenic schizophrenic individuals. Frequently unmarried mothers are defective. This is due to lack of social wisdom and the increased suggestibility on the part of the defective. Illegitimacy is not confined to this class of individuals, even though the defective girl is less able to resist the erotic importunities of man.

A practical approach to the solution of the problem of mental deficiency varies with one's viewpoint. There are those who advocate permanent segregation of all defectives. Others suggest temporary segregation, where vocational training is taught with the idea of making the individual self-supporting in the community, providing his social attitude permits him to mix in society without friction. Some advocate methods for preventing the condition. It is impossible to segregate all defectives because of the huge economic burden involved. Temporary segregation which returns a large number of defectives to the community indicates a too elastic criterion of mental deficiency. Methods of prevention will not permit results without complications of a social, moral, and religious nature.

Accepted methods for controlling mental de-

ficiency are biologic, environmental, social, and palliative. No one method can be applied to a particular type of defective.

The biologic control aims to act at the source of the deficiency and by eliminating the causative factor should theoretically eliminate the problem. Plasmic defectives due to heredity require the application of eugenics whereby only the best and most fit mentally are encouraged to reproduce. Euthenics, a periodic, preventive, and constructive medical examination of the progenitors, should rule in the case of defectives resulting from blastophthoria influences.

Of the somatic causes, the congenital require euthenics; the natal, euthenics with emphasis on more careful obstetrics; and the acquired, a wider knowledge and application of the principles of immunity to disease.

Another solution, not advanced nor advocated by students of this problem, is euthanasia. This is the method invariably suggested by laymen who visit institutions and see a large number of low-grade defectives.

The practical application of eugenics to control mental deficiency will never be successful since the mentally incompetent are guided not by reason but by instinct in the matter of reproduction. Euthenics has good possibilities but must be vigorously applied to all who contemplate parenthood. Euthanasia cannot be considered because it is contrary to humane principles of modern society since the human mission is the preservation rather than the destruction of life.

Environmental control recognizes the defective's value in doing most of the indispensable drudgery in the world. It recognizes the more stable performance of monotonous tasks by defectives, in which they contribute with brawn what they cannot contribute with brain. It also recognizes that proper supervision is essential to minimize exposure to antisocial influences. In the male it implies freedom from criminal practices and the like directed by normal persons, and in the female it implies the prevention of exposure to seduction. Environmental control is careful to avoid all features which might induce character anomalies.

Environmental control is postulated by social control which implies, first of all, the application of good early home training to all defectives and, secondly, the application of a differential type of school training which considers the defective as a person possessing certain individual differences and peculiarities, and applies this training with due regard for his variations in mental ability. To meet this ever increasing

problem and to relieve the home and the special ungraded classes of public schools of personalities that absorb much time and consideration, institutional schools are essential. They exist not only to provide sustenance, training, and education for backward children, but also to develop better methods of care at a minimum of cost and to endeavor to find suitable ways of preventing those who are obviously unfit from propagating their kind.

In 1894 Pennsylvania assumed the obligation of caring for her defectives and established the Polk State School in Venango County. Additions have been made gradually to this institution and 2 other state institutions have been established, and yet the state facilities for the care of the mentally defective are far from adequate. Approximately 6500 are segregated with over 2500 awaiting admission. The fundamentals of care include personal supervision without undue restraint. A meticulous evaluation of the individual's deficiency on the basis of personal, developmental, and family history, social and moral reactions, economic efficiency, practical knowledge, history and examination in school work, psychometric test, and physical examination is made to facilitate classification and separation according to ability and possibilities. So far as mental age and physical ability permit, academic and industrial training is given, combined with social, esthetic, and religious instruction. At all times every effort is made to encourage a spirit of play in the performance of each task and to instill an element of work in all play, thus making life a harmony rather than a conflict between pleasure and duty.

The institution is purely custodial for those whose mental ages are under 6 years; for the higher grades it is socializing by attempting to provide a kind of training that will enable them to become wage earners provided their physique, adaptability, willingness to obey orders, and personality traits warrant the assurance that they will adjust themselves to society.

As an added factor in the community usefulness of the high-grade defective, the palliative method of control is suggested—selective sterilization. This measure, not yet legal in Pennsylvania, aims to eliminate the hazard of reproduction in paroled defectives, which is always certain to precipitate social maladjustment. It is offered with the object of completing a well-rounded type of institutional training for certain select defective persons. It is to be applied cautiously with no idea of entirely eliminating the problem of mental deficiency. Sterilized or unsterilized, the number of defectives returned to

the community varies directly with the number of children admitted to the institutions with mental ages over 7 years.

Mentally deficient children to be trained by Pennsylvania State schools for defectives must be legal residents of Pennsylvania. Application is made on voluntary or court order form prescribed by the Department of Welfare. This blank is divided into 3 parts: (1) The history and description of the child, together with a financial statement of his parents or guardian; (2) the examination and certification of the presence of mental deficiency by a legal practitioner of medicine in Pennsylvania; and (3) in the court order form the endorsement of the superintendent or the Board of Trustees, who agrees to accept the child for training, and in the voluntary form endorsement of local poor authorities.

This presentation of some essential considerations of mental deficiency is made for the purpose of enlisting an active and intelligent interest on the part of all medical practitioners, particularly pediatricians, in this field. Coöperative efforts medically will go a long way towards improving human strains just as the coöperative efforts of successive governors, secretaries of welfare, and superintendents have combined vision, interest, and determination in developing Pennsylvania State schools, the high standards of institutional excellence of which have been maintained by devoted employees.

Polk State School.

OLD-FASHIONED IRON PILLS PREFERRED FOR ANEMIA

Iron, one of the oldest medicines in the world, is still one of the most dependable for certain types of anemia, Dr. Walter A. Bloedorn, of George Washington Medical School, Washington, D. C., told the American Association for the Advancement of Science.

Prescriptions as far back as 1600 B. C. required the use of iron, and it has been used in hundreds of formulae since. Blaud's pills, first used over a century ago, are still a standard remedy for certain types of anemia.

The human body is not at all efficient for absorbing and using iron, so that relatively enormous doses have to be given to give the patient the needed benefits.

However, there is apparently no danger in the use of iron; it seems to be impossible to administer an overdose.

Also discussing anemia in its various phases was the Nobel Prize winner in medicine, Dr. William P. Murphy, of the Peter Bent Brigham Hospital, Boston, Mass. Dr. Murphy described the new concentrated liver extracts so potent that one cubic centimeter, prepared from an ordinary-sized slice of liver, has the anemia-preventing power of 11 pounds of fresh liver eaten in the ordinary way.—*Science News Letter*, July 20, 1935.

EDITORIALS

THE SEASON'S GREETINGS

Christmas itself is a beautiful sentiment—the most beautiful and unselfish, perhaps, of all human impulses.

We all have more problems this year than usual, but the burdens will be lightened all around if we think a little more of the other fellow.

How shall we remember our friends and loved ones? What can we do to brighten the darkened lives of those in need? These are the questions that fill the thoughts of men and women everywhere.

In all the gaiety of the Christmas Season, in all the giving of gifts, in all the social gatherings, may not the real meaning of the day be too often forgotten?

May the black cloud cease to ride behind the horsemen for at least one day in the year. The oldest must have something of youth at such a moment.

The JOURNAL wishes all its readers A Very Merry Christmas.

THE FIFTH TO SIXTH DECADES

Despite the exceptions to the rule, the saying of Oliver Wendell Holmes of many years ago to the effect that "the ships are coming in at 50" still holds true. Man, generally speaking, has had his fling in love, business, professional efforts, and family efforts at 50. His posterity, the fledglings, have grown up and are contemplating a nest of their own. The wherewith that stands between him and economic distress is in safe keeping. The prestige which he has established enables him to carry on with a degree of satisfaction. What he has done and what he still may accomplish in his established field are his driving force and inspiration—not to push forward so much but to hold on to what he has. He feels the panting breath of youth but a few paces to the rear clamoring to pass him; competition is keen and the pace is not so easily kept by those with gray hairs, big paunches, flabby hearts, sclerotic kidneys, and stagnation at the "top."

Aside from the physical changes at 50, one is struck with the mental changes in men he has watched around about him. Generally speaking, except it be an educator, a teacher, a scientist, or an unusual man in business, there

is a distinct psychologic change. Enthusiasm and chance are held in abeyance by conservatism. The desires for indulgences, meetings, social contacts, and community interests are in abeyance and his rationalization—"I have done enough such stuff; let some one else do it now"—is his solace to a guilty conscience that tells him he is not doing his duty. His prejudices are pretty well fixed. He listens to what is new but finds the old established way which he has learned through experience the best. His service to any movement is to be content with the use of his name. As an active worker he is a flop. His friendships are fixed; his reading is generally grooved; his philosophies are pretty well established—the world is all wrong, the younger generation is going to the devil, life is a mystery by which he has been trimmed, people must do things his way or the world is all out of step except himself. He is made tolerable to live with by good food, maybe a little drink, a nice single bed, a good night's sleep, a good cigar, a clever story, a Mae West picture, an Eleanor Powell tap dance, or a game of bridge. Further than this he doesn't care to be annoyed; without these he is a breathing, pulpy mass. If he lives in the city, he is pointed out as a distinguished gentleman. If he lives in the country, his hair is usually filled with hayseeds or there are cockleburs every place except in the seat of his pants.

The fifth to the sixth decades are pretty hard years. Some of the finest become disabled; many are in economic distress; many are left alone haunted by the memories of yesterdays; and many still lead the race. So what can be done about it? What does all this longevity of life mean? Medicine can make men better fit mentally and physically to cope with life's toll for the cost of living, a toll that becomes exacting when one passes through the gates from the fiftieth to the sixtieth station.

ANNUAL STATE REGISTRATION

Due notice has been sent out by the Department of Public Instruction in regard to annual registration by the State Board of Medical Education and Licensure. This registration should be completed on or about January 1 of each year. An attached card is to be returned at once with check or money order for the fee of \$1.00. Those who have retired from the practice of

medicine are requested to notify the State Board of Medical Education and Licensure.

This requirement of the State Board of Medical Education and Licensure should be given your immediate attention.

ANNUAL CONFERENCE OF SECRETARIES OF CONSTITUENT STATE MEDICAL ASSOCIATIONS

The annual conference of secretaries of constituent state medical associations, which includes the editors of the state medical journals, was held in the Palmer House, Chicago, Nov. 15-16. The secretaries and editors are indebted to the officers of the American Medical Association for most courteous hospitality and the arranging of a very attractive program, which was most successfully consummated.

The following was the program for the morning session, Nov. 15. The conference was called to order by Dr. Rock Sleyster, chairman of the Board of Trustees of the American Medical Association. Dr. E. A. Meyerding, St. Paul, Minn., secretary of the Minnesota State Medical Association, was elected chairman of the conference. An address was delivered by Dr. James S. McLester, Birmingham, Ala., president of the American Medical Association. He detailed his visit to the International Congress of Physiologists recently held in Russia. Dr. D. W. Cutter, secretary of the Council on Medical Education and Hospitals of the A. M. A., discussed the "Reciprocal Relations Between State and County Societies and the Council on Medical Education and Hospitals," in which he gave an epitome of the reorganization of medical schools now in progress. Dr. Paul Nicholas Leech, secretary of the Council on Pharmacy and Chemistry of the A. M. A., detailed some of the activities of the council and stated that this particular council is the least vulnerable of all activities of the A. M. A. Mr. J. G. Crownhart, secretary of the State Medical Society of Wisconsin, read a paper on "A Basis for Future Developments of Medical Service," in which opposition to the socialization of medicine was stressed. He stated that the alleged benefits of compulsory sickness insurance are extolled, and that the glaring defects and failures abroad are ignored. There is the constant baiting of the hooks with the spurious promise of increased income for the practitioner. A paper on "Our Potential Postgraduate Resources and the Training of Teachers" was read by Dr. Ralph H. Pino of Detroit. Dr. Pino made a plea for the use by all hospitals of daily staff conferences

which would afford graduate instruction and the training of teachers. The plan would demand an extensive program daily to cover all the activities of a hospital to accomplish the result which he desires. Luncheon was served at the Palmer House following the morning session.

At the afternoon session the following program prevailed. An address was delivered by Dr. J. Tate Mason, Seattle, Wash., president-elect of the A. M. A. He said that physicians must awaken to the dangers of socialized medicine, that the physician has been too busy attending to his own business to take notice of a big drive to socialize him. The New Deal's Social Security Act is an opening wedge in the socialization movement. Medicine to-day is represented by the average practitioner, and the idea of socialized medicine has not appealed to him as his concern. He does not realize that he will be entangled with politicians, and that his individuality, his idealism in treating his patients in his own way, will be taken away from him. The average practitioner thinks that such matters are the concern of the American Medical Association. He is right, but he should recall that, through his local medical organization, he is a member of the American Medical Association. When individual doctors realize that socialization would lower medical standards in the country, they will act. Dr. Mason does not think that we should ever go into politics except when we feel that politics affects the health of the people.

A paper on "The Need for Concerted Action on the Part of All Units of the Organized Profession" was read by Dr. D. F. Harbridge, secretary of the Arizona State Medical Association. Dr. Harbridge said the need is overwhelmingly great; our guild faces but one alternative—a closer, more personal, and more sincere alignment of all medical groups. There are 2 paramount dangers in the ascendancy threatening medicine to-day, the ever present apathy of certain physicians in regard to ethical standards and the ominous rumbling of economic disorder which has not only become a prime topic of thought with us but with the lay public as well. At this moment the diversified rather than the centralized support of the physician as it relates to medical groups stands as an obstacle to fulfillment of the aims and purposes of the A. M. A. There are too many medical societies. To secure better alignment there should be 6 sectional meetings and an annual session of the A. M. A. With the simplification of the nation's medical organizations the A. M. A. will find itself in closer touch with

the field of actual practice. Medical ethics is the keynote. A paper on "The American Medical Association and State Medical Journals" was read by Dr. E. M. Shanklin, editor of the *Journal of the Indiana State Medical Association*. Dr. Shanklin stressed the coöperation that must exist between the state medical journals and the A. M. A., and the need for all members of the state society to read its journal to be properly informed of the many activities of organized medicine. There was an open discussion on "Dual Membership," also "Helping the Patient to Secure Competent Medical Service."

The program for the Saturday morning session was as follows. "Publicity of Information Regarding Medical Economics" was read by Dr. W. F. Braasch of the Mayo Clinic, Rochester, Minn. Dr. Braasch stressed the fact that intelligent propaganda is the keynote and the doctor himself should be a propagandist, but no one should be a propagandist who is not well informed. Thus, every physician must be up to date on the problems of the medical profession to instruct the lay public properly. In the discussion of this paper it was brought out that no group is too small or too large to address; that the A. M. A. should also carry propaganda to the public; that the attack should be varied; that local conditions vary so that the component county medical societies must take the lead; that the A. M. A. cannot do it all, and only the local group knows the conditions of the community; that the medical profession must understand itself; that the editor never knows how well the journal is being read unless there is some wrong statement made, then he is surprised how many read it; that the public is now making demand for adequate care, although they have always had it but did not know it; that the physician at the bedside is the best propagandist. "A Survey of Medical Organizations" was detailed by Dr. Morris Fishbein, editor of the *Journal of the A. M. A.* Dr. Fishbein called attention to the fact that there were 135 national organizations and stressed the unfortunate condition existing of overdevelopment of medical societies, yet notwithstanding this fact there are more being formed. There was an open discussion on legislative activities, the Social Security Act, and health surveys.

The crux of the meeting may be summarized as follows. Each member of the medical profession must realize that the many problems discussed at this meeting must be solved by the local county medical societies, because the county medical society knows best the conditions existing in the community which it serves.

Therefore, the American Medical Association cannot outline any plan adaptable to the entire United States.

The meeting was very satisfactory and afforded much information for the secretaries of the constituent state medical societies and the editors of the state medical journals to relay to the general membership.

ALBERT E. ROUSSEL, M.D.

Dr. Albert E. Roussel of Philadelphia, aged 72, died Nov. 2 at the Graduate Hospital of the University of Pennsylvania from heart disease following a 2 weeks' illness.

Dr. Roussel was born in Philadelphia in 1863, and after finishing his high school education passed the entrance examination for the United States Naval Academy, but instead of entering the United States service he chose medicine as his profession.

He was graduated from the Jefferson Medical College in 1882, and after serving an internship at the Philadelphia Hospital and the Orthopedic Hospital and Infirmary for Nervous Diseases, Philadelphia, pursued graduate instruction in Paris, London, Heidelberg, and Berlin. For a number of years he was associate professor of the practice of medicine and clinical medicine at the Medico-Chirurgical College of Philadelphia. Upon the closing of that institution he was appointed professor of medicine at the Graduate School of the University of Pennsylvania, and upon his retirement from active teaching in 1931 was made emeritus professor of medicine.

He served as visiting physician in the former Medico-Chirurgical Hospital, the former Polyclinic Hospital, and the former Howard Hospital; he was also on the staff of the Eagleville (Pa.) Sanatorium for Tuberculosis. He was physician to the French Consulate and the French Benevolent Society.

The French Government awarded him on 2 occasions, the first award being the *Palme Académique* (Officer d'Académie) in 1907, and in 1924 he was made a Chevalier of the Legion of Honor.

He was a member of his county and State medical societies and a Fellow of the American Medical Association, a Fellow of the American College of Physicians, a member of the American Therapeutic Society, the American Association for the Advancement of Science, and the Philadelphia Pediatric Society. He was also a member of the Philadelphia Medical Club and the Phi Rho Sigma Fraternity, a director of the Penn Club, and at one time was associate editor of the *Philadelphia Medical Times and Register*.

Dr. Roussel was a gentleman of the old school, intensely interested in civic activities, and always present at affairs medical.

He is survived by his wife, a daughter, and a son.

ALEXANDER CREVER ABBOTT, M.D.

Dr. Alexander C. Abbott of Philadelphia, the distinguished emeritus professor of hygiene and bacteriology in the University of Pennsylvania School of Medicine, died on Sept. 11, aged 75.

Dr. Abbott was born in Baltimore, Feb. 26, 1860, a son of Alexander and Elizabeth Beatty Abbott. He received his preliminary education in the Baltimore City College and was graduated from the University of Maryland School of Medicine in 1884. He was a graduate student at Johns Hopkins School of Medicine and the Universities of Munich and Berlin.

In 1894 he was appointed first assistant to Dr. John S. Billings on the staff of the Laboratory of Hygiene of the University of Pennsylvania School of Medicine, and in 1896 succeeded Dr. Billings as Pepper professor of hygiene and director of the Laboratory of Hygiene; in 1899 the title was changed to Pepper professor of hygiene and bacteriology. From 1920 until 1928, when Dr. Abbott retired, he was director of the School of Hygiene, which department until this period had the status of a separate school at the University of Pennsylvania. In 1928 Dr. Abbott was made emeritus professor, having been connected with the university for 34 years. Between 1912, the year the first degree of doctor of public hygiene was conferred, and 1928, this degree was conferred upon 34 physicians who had taken the course in public hygiene. Dr. Abbott was instrumental in originating this, the first graduate course in public health leading to a degree in this country. He was a recipient of the honorary degrees of Sc.D. and Dr. P.H.

For a number of years Dr. Abbott was a member of the Philadelphia Board of Health. He was also a member of the Association of American Physicians, American Philosophical Society, American Public Health Association, Society of American Bacteriologists, Society for Experimental Biology and Medicine, etc.

During the World War he served overseas as Colonel, M.S., O.R.C., U. S. A.

He was a member of the following clubs: University, Sketch (Philadelphia), Army and Navy (Washington).

Dr. Abbott was an extensive contributor to the medical literature and was the author of the

following textbooks: *The Principles of Bacteriology*, 1892, 1921; *The Hygiene of Transmissible Diseases*, 1899, 1902.

Dr. Abbott was married Aug. 30, 1892, to Miss Georgiana P. Osler, daughter of Justice Osler, late of the Court of Appeals of Ontario. Two daughters and a son, Dr. William Osler Abbott, Philadelphia, survive.

As has been truly said, Dr. Abbott was "a forceful teacher with great charm of manner, a keen wit, and a delightful sense of humor, and was beloved by all."

JOSEPH CLARENCE KEELER, M.D.

Dr. Joseph Clarence Keeler, Philadelphia, professor of otology at Jefferson Medical College, was stricken with a heart attack while performing a mastoidectomy at the Jefferson Hospital on Sept. 17, 1935, and died within a half an hour. Dr. Keeler was taken at the operating table with symptoms which he thought were due to indigestion.

Dr. Keeler was born near Doylestown, Bucks County, Pa., in 1871, a son of the late Eli Keeler and Mrs. Anne Keeler. He was graduated from the Jefferson Medical College in 1896.

During the World War he served in the Medical Corps of the United States Army with the rank of captain and was assigned to duty in the southern camps.

He served for a number of years in the department of otology at Jefferson Medical College and in 1930 was advanced to the professorship of otology to fill the vacancy caused by the death of Dr. S. McCuen Smith. In addition to being otologist to Jefferson Hospital, Dr. Keeler was attending otolaryngologist to the Germantown Hospital, Philadelphia, and a consultant to the Pottstown (Pa.) Hospital and Newcomb Hospital, Vineland, N. J. He was a member of the American Otological Society, the American Rhinological Society, the American Otolaryngological Society, the American College of Surgeons, the American Academy of Ophthalmology and Otolaryngology, and a Fellow of the College of Physicians of Philadelphia.

He was the author of a textbook on otology and was a contributor to the medical literature.

He is survived by his wife.

SCIENTIFIC EXHIBIT—KANSAS CITY SESSION AMERICAN MEDICAL ASSOCIATION

The scientific exhibit at the Kansas City Session of the American Medical Association will be held in the Municipal Auditorium in conjunction with the other

activities of the Association, May 11-15, 1936. All applicants for space in the scientific exhibit must fill out the regular application blank.

The exhibit will cover a wide variety of subjects, including the basic medical sciences as well as the various specialties in medicine. The various sections of the scientific assembly have appointed section representatives, who will correlate the section exhibits, as far as possible, with the papers read at the section sessions.

Applications for the scientific exhibit close on Jan. 27, 1936. Assignments of space will be made about Feb. 24, 1936.

Further information may be obtained from

THOMAS G. HULL, *Director,*
Scientific Exhibit.

535 N. Dearborn St., Chicago, Ill.

THE REPORTING OF RHEUMATIC HEART DISEASE MORTALITY IN PHILADELPHIA

The United States Public Health Service with the coöperation of the Bureau of Vital Statistics of the State Health Department of Pennsylvania is attempting to determine the total mortality from rheumatic heart disease in the City of Philadelphia during 1936. Physicians in that area are requested to report all deaths from rheumatic heart disease as "rheumatic heart disease," followed by appropriate descriptions of the lesions involved. For example, deaths from rheumatic heart disease should be reported on the death certificates as "rheumatic heart disease—mitral stenosis and insufficiency," "rheumatic heart disease—acute pancarditis," etc., depending on the type of lesion.

Deaths from subacute bacterial endocarditis engrafted on preëxisting rheumatic lesions should be reported as "subacute bacterial endocarditis superimposed on rheumatic heart disease." Those occurring without a rheumatic background should be reported as "subacute bacterial endocarditis (no rheumatic basis)," or if engrafted on congenital cardiac malformation or other lesion it should be so indicated.

There is probably no major disease entity which has attracted greater interest among clinicians but regarding which less attention has been paid from the public health and epidemiologic points of view. Even such a relatively simple matter as the crude death rate from this disease has never been satisfactorily determined.

This is the first attempt to ascertain the total mortality from rheumatic heart disease in a large city in the United States. The success of the study depends largely upon the reporting of deaths from rheumatic heart disease along etiologic lines.

Dr. Oswald F. Hedley has been detailed by Surgeon General Hugh S. Cummings of the U. S. Public Health Service to do field work in this commonwealth, covering the above study. Dr. Hedley's headquarters are in the Maloney Building, University of Pennsylvania.

PROGRAM OF THE MENTAL HYGIENE COMMITTEE OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

1935-1936

1. Support constructive policies of the Bureau of Mental Health and the Mental Hygiene Committee of the Public Charities Association dealing with mental health problems.

2. Request the county medical societies to set aside

one program for mental health subjects during the year.

3. Request the superintendents of mental hospitals, schools, and institutions to coöperate with the county societies in their respective districts by either contributing to the mental hygiene day program or holding such a meeting at their respective institutions.

4. Programs for these meetings should stress the control of the procreation of the mentally unfit through:

1. Health requirements for marriage and the issuance of marriage certificates.
2. Identification and registration.
3. Community supervision.
4. Segregation.
5. Sterilization.

5. The Mental Hygiene Committee of the State Society, if requested, will make an effort to provide speakers for such programs arranged for the county medical societies by the Public Health Legislation Committee, the Public Relations Committee, the Mental Hygiene Committee, or the Scientific Program Committee.

6. Request the Scientific Program Committee of the State Society to arrange for one paper in the General Session dealing with the control of the mentally unfit, as well as representation in symposiums in other sections, at the next annual session. The Mental Hygiene Committee will, if requested, aid in the selection of speakers.

7. Request the Mental Hygiene Committee of the Public Charities Association to coöperate with the committee in its general program.

8. The editor of the JOURNAL assures us of his full coöperation in the matter of editorial space.

9. Request the president, the councilors, the chairman of the Public Health Legislation Committee, and the chairman of the Public Relations Committee, respectively, to stress the importance of control of the mentally unfit in programs for next year.

J. ALLEN JACKSON, *Chairman.*

THE WINDBER (PA.) ENCEPHALITIS EPIDEMIC

Oct. 28, 1935.

TO THE EDITOR:

Last August we promised you a note on the Windber, Somerset County, encephalitis.

The condition seemed to have made its appearance in the neighborhood of Central City and Windber early in the summer and was generally looked upon by practitioners in the community as "summer gripe" until a fatal case was necropsied at the Windber Hospital by Dr. H. A. Slesinger, when a correct diagnosis was made.

The exact number of cases which occurred could not be determined but it probably reached about 200. Children and young adults were principally involved, although all ages were affected.

Succeeding the Central City and Windber incidence a few cases were reported from southern Cambria County between Windber and Johnstown. About the same time, following descriptions of the illness furnished our several county medical directors, it was thought that a few cases had been observed near Minersville, in Schuylkill County; Ligonier, in Westmoreland County; and Bedford, in Bedford County; but the diagnosis in none of these areas was actually confirmed.

The chief resident of the Children's Hospital in

Cincinnati, O., wrote us some time in August to compare notes, since a number of similar cases had been treated there.

The onset was abrupt, with rising of temperature to 101° and 103° F., and relatively severe headache, usually frontal. Occasionally there were some nausea and vomiting. The duration of illness, on an average, was 3 or 4 days, followed by complete and rapid convalescence, although some complained of dizziness for a time after again getting on their feet. There was bradycardia, rates of below 60 having been noted. The spinal fluid was clear, under no pressure, sterile, and gave cell counts of from 6 to 8 up to from 400 to 600.

The case that came to necropsy was a boy, age about 14, who complained of his head and lapsed into coma immediately after returning from swimming. He was removed to a hospital where bloody spinal fluid was obtained on tap. Since it was suspected that he may have received a head injury while diving, he was trephined but succumbed some hours later. Grossly, the meninges and cortical vessels were found to be intensely congested. Microscopically, there were congestion, minute areas of hemorrhage, and round-cell infiltration of the cortex. This was the only fatal case.

Very truly yours,

EDITH MACBRIDE-DEXTER, M.D.,
Secretary of Health.

COMMENTS AND EXCERPTS

Government Again Warns That Dinitrophenol Causes Blindness.—Blindness from the use of dinitrophenol for reducing weight has not stopped the use of the drug in spite of repeated warning, says W. G. Campbell, chief of the Federal Food and Drug Administration.

The eye cataracts observed in dinitrophenol poisoning develop with a rapidity and malignancy hitherto unknown and result in total blindness within a comparatively short time. This drug may produce acute poisoning, the symptoms of which are nausea, stomach and intestinal distress, sweating, flushed skin, high fever, rapid breathing, and muscular rigor followed by death. The drug also damages the liver, kidneys, heart, and sensory nerves. It produces agranulocytosis.

The Food and Drugs Act, according to Mr. Campbell, is practically inoperative against this public health hazard. He says, "The only application of the law to these products is through some misstatement of fact or some false and fraudulent curative claim in the labeling. In any event, the law can be invoked only when the product has been transported across a state line."

"There is little doubt," continues Mr. Campbell, "that the cases of progressive blindness recently reported in California are the result of medication with dinitrophenol. It is to be regretted that the present federal law is silent with respect to the control of dangerous drugs."

Of all the products containing dinitrophenol now on the market, only one has been confiscated under the Food and Drugs Act, the administration reports. That was Slim, against which legal action was brought because of a label claim that it was "safe to use," whereas medical opinion is unanimous to the contrary. This proceeding was approved by Mr. Campbell, who states that in the absence of affirmative control over dangerous drugs it is the purpose of the administration to take advantage of any available legal technicality in proceeding against all products containing dinitrophenol.

This is contrary to the usual practice of the administration in enforcing the Food and Drug Act.

Dinitrophenol is sold under many fanciful names sometimes accompanied by a statement of the presence of the drug itself. Some of the names under which it has been or is now being sold are reported by the Food and Drug Administration as follows: Nitromet, Dinitrolac, Nitra-Phen, Dinitriso, Formula 281, Dinitrose, Nox-Ben-Ol, ReDu, Aldinol, Dinitrenal, Prescription No. 17, Slim, Dinitrole, Tabolin, and Redulso.

"It is interesting to note," said Mr. Campbell, "that all the so-called reducing preparations on the market fall into 3 categories: (1) Laxatives that deny the body the benefit of its food intake, as the salts, crystals, and herb teas; (2) obvious frauds that depend for effect upon the stringent diets prescribed as part of the treatment, as Syl-Vette and Stardom's Hollywood Diet; and (3) the unquestionably effective but dangerous articles containing thyroid or dinitrophenol, both of which act by speeding up the utilization of food. All of them are unwarranted impositions upon the public, which cannot evaluate claims made for the preparations and cannot readily appreciate the harm that may result from careless use of the products.

Medical Course Is Strain on Students' Mental Health.—Human tragedies encountered by the young medical student in the course of his training put a severe strain on his mental as well as his physical health, members of the American Psychiatric Association learned from Drs. Edward A. Strecker, Kenneth E. Appel, Harold D. Palmer, and Francis J. Braceland of the University of Pennsylvania and the Pennsylvania Hospital in Philadelphia.

But these investigators found that the development of professional ability serves as a balance wheel to relieve these strains and improve the mental health.

Suffering, sickness, tragedy, and death are part of the daily environment in which the young medical student must get his training. Birth and death, hopelessness, misery, love and courage, he meets in stark forms. His religion, his ideals, and his standards of right and wrong are constantly being assaulted and tested.

The effect these daily stresses have on the personality and mental health of the individual student was studied by means of a questionnaire which was filled out anonymously by many medical students.

Frank and illuminating were the replies. They told of increased consumption of alcohol, a changed attitude toward women, disturbing palpitations of the heart, and even sometimes of atheism.

Neurotic symptoms and instability develop in the majority of students some time during the course of their study, it was found. As the students developed professional ability, however, these problems were cleared up. Their acquisition of capacity and technic contributed in an important way to their mental health. —*Science News Letter*, June 8, 1935.

Finds That Liver Extract Relieves Roentgen-Ray Sickness.—Roentgen-ray sickness, which has been a distressing accompaniment and sequel to roentgen-ray treatment in many cases ever since the rays were first used in treatment, may be relieved by liver extract, Dr. Barton R. Young of Temple University Medical School reported at the meeting of the American Roentgen Ray Society.

The liver extract may be injected into either muscles or veins.

Dr. Young gave the extract to a series of 30 patients who suffered from nausea and vomiting following roentgen-ray treatments. Over half of the patients were completely relieved by the liver extract and about one-fourth more were partially relieved. The remainder were not helped.

Just why the liver gives relief to these patients Dr. Young said could not be explained at the present time. It is not a specific cure for roentgen-ray sickness because it does not help all patients. There is no way of telling in advance which patients will be relieved, but it produces no harmful effect, so Dr. Young advises using it on every patient suffering from roentgen-ray intoxication. By using liver extract, it is possible to give larger roentgen-ray doses over larger areas of the body, especially when the treatment is directed to the abdomen.—*Science News Letter*, Oct. 5, 1935.

Find Loud Noise Causes Deafness by Nerve Damage.—Continuous exposure to constant noise of sufficient loudness will cause deafness due to nerve damage, Dr. M. H. Lurie of Harvard University told members of the American Academy of Ophthalmology and Otolaryngology.

By listening in with a special kind of radio hook-up on the hearing apparatus of cats' ears, Dr. Lurie and associates were able to learn much about the causes of different kinds of deafness. Some of their conclusions are:

1. Deafness of adult life can be caused by the neglect of mild ear trouble of childhood.

2. Exposure of people to loud noises for long periods of time will cause a dying of the sensitive hearing cells in the ear, followed by deafness.

3. Certain diseases and drugs, typhoid fever, mumps, influenza, quinine, and alcohol, cause actual destruction of the nerve endings of the inner ear.

4. Explosions can dislocate these special hearing cells, throwing them off the vibrating membrane on which they rest.

5. Unregulated noise over long periods may seriously injure the nerves by which we hear.

In the course of the experiments the investigators found in the animals tested all the different types of deafness that human beings have. These included the inherited type of deafness, deafness caused by disease of the drum and bones of the ear that bring the sound to the inner ear, the chronic deafness caused by repeated colds, deafness in which the nerve of hearing itself is involved, and loss of hearing as a result of the animal hearing loud noises for a long period of time.

Besides studying these various kinds of deafness with the super-radio apparatus, the investigators examined the animals' ears microscopically in order to find, if possible, the exact causes of the conditions.—*Science News Letter*, Oct. 5, 1935.

MEDICAL ECONOMICS

Organized Medicine Must Direct the Medical Activities of America.—The Committee on Medical Economics of the North Side Branch of the Chicago Medical Society (Medical Society of Cook County, Illinois) presents an epitomized statement for the consideration of the medical profession, which was prepared by a special committee.

The data used was obtained from the answers to a questionnaire sent to every member of the branch, embodying the following 5 points:

1. The responsibility of the care of the indigent sick

and the low-income group (\$750 to \$1000 annual income).

2. Physician-patient relationship.

3. The place of the clinic in the problem of the sick.

4. Organized medicine should lead in all legislation and other activities in the problem of the care of the sick.

5. Organized medicine should mold public opinion in matters pertaining to all health problems.

The objective of this group of 450 members of organized medicine is to place this compilation of the opinions and constructive suggestions on medical economics in the hands of as many doctors as it is possible to reach.

The following is an abstract:

The medical profession recognizes that the sick or injured must have medical care under all circumstances.

The responsibility of providing that care for the indigent sick should rest with all taxpayers.

Why should the medical profession be expected to donate services and at the same time pay in taxes its share of the cost of sickness among the indigent? Remuneration for this medical service should be added to the other expenses connected with sickness among these people, and the total should be carried equitably by all taxpayers.

Of great perplexity in the economic situation is the so-called low-income group among our citizens. To specify a dividing line between the low-income group and others is not the least of the perplexities, and much difference of opinion exists in this respect. Here is considered in that group those whose annual income is \$750 to \$1000.

The main difficulty encountered by those included in the low-income bracket is not the physician's fee, which is always a personal flexible equation between patient and doctor, but the excessive costs of hospital domicile, roentgen ray, laboratory, operating-room, etc., which are fixed charges in most institutions and apparently unchangeable, at least at the present writing. The medical profession has ever arranged fees for services in keeping with the patient's ability to pay. Why not our hospitals?

Much doubt arises as to the wisdom in any organized plan whereby the low-income group would be cared for even partially out of public monies. This would establish a dangerous precedent. Patients in this group, in view of the fact that they are working and receiving financial remuneration for their services, must not be pauperized. On the contrary, they should be educated into the habit of paying something for medical care and into the habit of providing for their own medical service. Free or partially free medical service for those in the low-income group would soon present many formidable complications. Once acquired, the habit of public assistance to the sick in this group seriously undermines the very foundation of general practice.

Many of our former patients of this group are more or less regular in attendance at some of the advertising clinics now existing, and why not? These people are obtaining a complete check-up, of questionable accuracy and value it is true, at a ridiculously low fee, and all under one roof. In other words, these advertising clinical groups, prompt to recognize our weakness in failing to develop plans or adequately provide means for medical care for the low-income group, have thoroughly entrenched themselves in a field which should have been controlled by organized medicine.

For a clearer understanding of this phase of the subject, we must realize that:

1. Within the boundaries of Cook County, Illinois, there is a large transient population, as evidenced by the number of removals on May 1 and October 1. This pertains as well to all other large metropolitan areas.

2. Within the metropolitan area a large minority of the population is made up of "hand-to-mouth" people, as evidenced by the great number of successful pawn-brokers, small loan companies, and "credit, collection, and skip agencies."

3. The presence of a really large number of restaurants of all sorts, and of delicatessens, which indicates a large proportion of our people are most certainly not what we know as "home-makers."

4. On the counters or shelves of every drug store, most groceries and delicatessens, department stores, and taverns are to be found patent medicines nationally advertised by "silent salesmen," by newspaper, and by radio for the relief of practically every known ailment.

5. There always will be among the transient population a large percentage of people who will attend group or clinic practice, because the lives of such people do not tend toward stability of location, living, or work, and they, therefore, have little, if any, opportunity to obtain or retain the services of a private physician. In addition, many of these people will use group or clinic practice because they will consider it of lower cost and, in their opinion perhaps, of higher professional value, considering what they feel they can afford to pay.

The above-mentioned truths have a considerable bearing on the possibility or lack of possibility of maintaining a personal relationship between the patient and the doctor.

We must bear in mind the normal reaction of the average patient of desiring some one on whom to lean in time of sickness and trouble, and a disinclination to reveal confidences to more than one individual. Therefore, any one physician, be he a private practitioner or a member of a group or clinic, has within himself at all times, by the exercise of his scientific ability and personality, the opportunity of creating and retaining a satisfactory patient-physician relationship.

This personal relationship is of the greatest value to both patient and physician. To the patient because he knows his own doctor as an anchor in sickness and has confidence in his professional ability and personal integrity. To the physician because, with the establishment of confidence, that psychologic effect is obtained which predisposes the patient to accept advice and follow instructions.

Before the advent of the clinic and dispensary orgy, the care of the indigent sick rested with the family doctor, who accepted this burden willingly, until that pressure on his time and strength became unbearable.

With the increasing flood of immigrants from Europe, who had developed the clinic habit there, and the ever-increasing trek of our population to the urban centers, the problem of the care of the greatly increasing numbers of indigent thus centralized has become perplexing.

Many causes have developed as time has gone on for the greatly increased use of clinic mass treatment of the indigent sick, until many irregularities and much chiselling have crept into the picture.

Coincidentally, progress in the science of medicine has made great strides, and changing methods in teaching in the medical colleges have required increasing numbers of cases of the many different diseases for

clinical purposes. This trend in medical education for a period of time absorbed the indigent sick, who flocked to the medical school clinics. It has been the general belief that clinics existed for teaching purposes only, and such a belief is fair and equitable, since the educational value of the opportunity to study disease as it exists in fact made the care and treatment of clinic cases of great value to the teaching institutions and their students, and in this way the clinic patient paid for his treatment.

The place of the clinic as an institution for the treatment of the sick has suffered much encroachment by those belonging to the low-income group, to the great handicap of the doctor and a greatly decreased efficiency in diagnosis and treatment. This has developed the feeling on the part of steadily increasing numbers that free medical treatment is an inherent right. They fail to appreciate the fact that the acceptance of anything free—medical treatment or what-not—unless there is a true indigency, decreases both individual and community self-respect with a demoralizing effect on the public weal.

One must not lose sight of the fact that this low-income group constitutes the masses from which the bulk of practitioners obtain their livelihood; hence, some set-up must be arranged whereby clinical data may be obtained without great expense, leaving it to the attending personally selected physician to adjust his fees accordingly.

REMEDY

In seeking the remedy we must take into consideration: (1) Our lack of organizing ability; (2) insufficient funds; and (3) the difficulty of attaining harmonious thought on any one question.

A solution of this problem has been suggested in the form of a properly organized central clinic as a set-up in county medical societies, for the purpose of aiding in the care of the low-income group. This clinic should be manned by the members of the society who wish for such a connection, and should contain a social service division. The chief object of such a clinic in its initial set-up would be to provide for laboratory examinations and reports, within the means of the patient, for which the private office may not be equipped. Expansion of the facilities of the clinic to meet the needs of the general practitioner seeking additional aid for diagnosis and treatment would be optional with the local county society. It would be of vital importance to the physician sending a patient to this clinic to be assured of not losing his patient, and to know that all reports, including those of such social service as he might desire, would be given to him alone. Applicants without a personal physician would not be treated by the clinic, but would be assigned, in rotation, to those members who had indicated a willingness to receive such patients. Applicants already under the care of a physician would be sent back to him. Should hospitalization be needed for those patients, a list of hospitals which had agreed to cooperate with the clinic in a plan to make that care available to the low-income group would be included with other data given to the physician to whom the patient would be referred.

This set-up has the added advantage of creating and maintaining a satisfactory patient-physician relationship.

This feasible, workable plan for the care of those of the population included in the low-income group, with a properly developed and honestly administered social service set-up, could be advocated to the public

with safety by all members of organized medicine. This would place the care of the indigent sick where they would pay for their treatment by coöperatively placing themselves in the hands of the medical college as cases for study for teaching purposes. Thus the medical school and dispensary clinic would return to the status of treatment of patients for teaching requirements only, greatly decreasing the abuse of medical charity and at the same time abolishing the competition of the medical colleges with the very men whom they have carefully prepared for a vocation.

In such great public emergencies as war, any set-up such as the Veterans' Bureau, acting for the government should treat only those service men injured and sick in line of duty, and care only for the indigent service men if no other sources for treatment are to be had. The government should not be in competition in the treatment of the sick any more than it should be in competition with any other line of private endeavor.

The direction of the medical care of the sick is primarily the duty of the medical profession; therefore, in all matters pertaining to the sick the profession should take leadership or direct those upon whom this responsibility falls.

In public consideration of this subject, the best interests of the sick might be more efficiently served by the medical profession acting through a committee or individual in directing public policy in the different geographic sectors into which governmental requirements have divided the states. As an example, this form of medical activity might be directed to the formation of a public policy carried out by the mayor of a city or the governor of a state under control of the medical profession in every detail.

In legislative matters manifestly the profession's influence must be exerted indirectly through the legislators. In this capacity the profession must take an unselfish position in directing lawmakers to legislate in the interests of the sick. Recognizing the known fact that greater influence is possible by working from the inside rather than from without, medical men and women in increasing numbers should seek and obtain membership in governmental legislative and administrative bodies as well as in those of all organizations of social nature where the problem of the sick enters such activities.

In private matters this will be accomplished most successfully by the profession demonstrating a high degree of efficiency in rendering service to the sick.

To satisfy this public demand, this problem with all of its ramifying angles requires that all activities connected with the care of the sick must be placed in the hands of those trained for this medical work.

Organized medicine must develop a plan for a more effective guidance of public opinion.

It is not sufficient that the public knows that only by the untiring, unselfish, and laborious delvings in research by the medical profession has progress been accomplished in the prevention and cure of disease. The public must be impressed by the irrefutable fact that to maintain what has been gained and to continue progress, the public and the medical profession must labor in unison for their mutual benefit.

Given time, the public will learn the value of the viewpoint of the doctor in his special field. However, the static interference of ambitious lay foundations with medical aspirations but garbled knowledge, reinforced by greedy corporations dabbling in and peddling "cure-alls," hampers this effort materially.

The plans now operating depend in a large part on

free publicity and paid advertising in the various types of news agencies. Without the necessary funds, progress here is slow and discouraging, and results are limited in volume. To compete with the quacks and lay corporations by newspaper and radio requires proper and frequent advertising in the powerful newspapers and over the radio if the public is to be educated adequately by this means.

The newspaper world appreciates the objects and efforts of organized medicine, and goes far to promote those purposes by giving us some space in their columns, but in the last analysis a newspaper is a business enterprise and depends on its advertising space for a large part of its income. If much is to be accomplished in this part of the plan, funds must be raised to buy far more space and time.

While the committees do effective work, their efforts perforce must be limited. Therefore, plans for the accomplishment of our purpose must first major on the fact that this activity must have the participation of all members. Every doctor and all his close contacts must be informed promptly by organized medicine and stimulated to carry our propaganda throughout the length and breadth of the land. Every member of organized medicine, calculatingly and indefatigably, should talk with his patients, his close friends, those he meets on the golf grounds and everywhere else about the simple fact that there must develop a clearer understanding and a closer relationship between the public and the medical profession, and how to bring it about.

The doctor must be the mentor and friend of the mother, who guides the destinies of the family in matters of this kind, and not let her drift to the welfare and social worker organizations for prenatal care and advice in the raising of her children. She should be thoroughly impressed with the fact that in matters of health the only safe course to pursue is that laid down by those men and women who have given their lives to the study of health matters, and who are grouped together in organized medicine. With this definite conviction established she will feel it her duty so to train her children, and by her influence in the parent-teachers' associations and other organizations connected with education she will supplement her home training with training in the school toward the objective of a closer relationship between the public and the medical profession.

Women lead in humanitarian activities and, therefore, we should reach larger numbers of women by extending our activities throughout the field of powerful woman's clubs and their federated organizations. By acquainting them with the facts, we will enlist their support for our program.

The woman's auxiliaries throughout organized medicine should compose the "shock troops" to reach lay women. With the help of the medical societies with which affiliated, these auxiliaries should prepare addresses and send good speakers to these woman's clubs. As individuals they should attend the meetings of woman's clubs and be prepared to give an intelligent discussion on all matters which pertain to public health coming before these organizations.

Great impetus will be given to the attainment of the objective of developing a better understanding among laymen of their dependence on the doctor in matters of health when the 160,000 doctors in the United States energetically and consistently disseminate the same information to the lay public.

The inevitable result of this concerted effort will be that public opinion will swing to place medicine in the

position of influence to which it is entitled in the economic life of the country.—*The Aesculapean*, July, 1935.

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MEDICOLEGAL

Medical Opinions as to Chemical Reactions.—The Texas Court of Civil Appeals held, *Associated Indemnity Corporation vs. Baker*, 76 S. W. (2d.) 153, that physicians were competent to testify as to the chemical reaction of sulphuric acid when water came in contact with condenser tubes over the objection that they were not qualified as chemists but testified as experts. It is common knowledge that a doctor is to a greater or less extent a chemist, and the testimony of the witnesses showed that they were both well qualified to testify as to the effect of sulphuric acid on copper and other metals.—*Medical Record*, Oct. 2, 1935.

Where Roentgen Ray Is Unnecessary.—In an action by a patient for negligence in performing an operation and for breach of contract to improve the condition of her arm, an allegation that the operation was performed without a prior roentgen-ray examination, the defendant informing plaintiff that a roentgenogram was unnecessary as the operation was a minor one, was held demurrable by the Texas Court of Civil Appeals, *Levine vs. Carrell*, 98 S. W. (2d.) 289. Plaintiff did not allege that a roentgenogram was necessary for a proper diagnosis of her condition, and the operation performed was entirely upon the muscles and tendons. Therefore, the court said, such an examination could not have revealed anything which would have aided in a diagnosis of plaintiff's condition or in the performance of the operation.—*Medical Record*, Oct. 2, 1935.

Medical Opinions as to Probable Cause of Wounds.—In a prosecution for murder, *Burns vs. State*, 76 S. W. (2d.) 516, the Texas Court of Criminal Appeals held that medical witnesses were properly allowed to describe the gunshot wounds on deceased's body as being on the back of his head and to testify that some of the shot had fractured the skull and driven the fractured parts into the brain and also that there was lead in the wound. It is the general rule that a physician who has examined and described the wound may express an opinion as to the probable cause, nature, and effect of such wound and the consequence thereof without violating the rules of evidence.—*Medical Record*, Oct. 2, 1935.

Negligence of Hospital Employees.—Action was brought against a hospital for its failure, through an orderly in its service whose duty it was to administer to the needs of patients, to give plaintiff's husband, a patient in the hospital, proper physical care, as a result of which the husband sustained physical injury to his back, which resulted in complications causing his death.

The Georgia Court of Appeals held, *Mitchell vs. Executive Committee of Baptist Convention*, 176 S. E. 669, that the evidence was sufficient to authorize an inference that the plaintiff's husband, notwithstanding that he was a sick patient in bed in the defendant's hospital, had sufficient strength and capacity to avoid

the consequences of the alleged negligence of the defendant, and it was not error for the court to instruct the jury that the duty rested on him to exercise ordinary care to protect himself against any negligence of the defendant.—*Medical Record*, Oct. 15, 1935.

Corporation's Liability for Medical Service to Employee.—The president of a corporation directed an injured employee to go to a named physician and telephoned the physician that he was sending the employee to him and asked him to take care of the case. The physician treated the injured man, who developed a very serious infection of the hand. In a suit against the corporation for the bill, the defendant contended that there was no agreement to render the services or to pay for them. The District Court of Passaic, New Jersey, *Sullivan vs. Allwood Lumber Co.*, 177 Att. 687, held that when the defendant's president called the plaintiff he did so with the intention that the defendant intended to engage plaintiff's services and to pay therefor, thus giving rise to a contract between plaintiff and defendant.

There was no dispute that the defendant's president had power to bind the company so that a written agreement under the State Statute of Frauds was not necessary. And since the New Jersey Workmen's Compensation Act is binding only upon the parties to the statutory contract, the physician was not bound by that act because he was not a party to that contract.—*Medical Record*, Oct. 15, 1935.

Liability of Charitable Hospitals for Unauthorized Necropsies.—The liability of charitable hospitals for unauthorized necropsies was made clear in a ruling handed down by the Supreme Court on the *Grawunder vs. Beth Israel Hospital Association*, 272, N. Y. S. 171. The case is outlined as follows in the *Journal of the American Medical Association*:

The plaintiff's husband died at 8 o'clock one evening and the body was removed to the hospital morgue. The following morning at 9 o'clock an undertaker, sent by the plaintiff, called for the body but was told by hospital authorities that it was not then ready for delivery. At 2 o'clock in the afternoon he was allowed to take the body.

Later it was discovered that a necropsy had been performed on the body, the vital organs removed, and the space filled with cotton. The plaintiff, who had not authorized a necropsy, sued the hospital. The trial court gave judgment to the plaintiff after reducing the amount awarded to her by the jury.

The case then came before the Supreme Court of New York, and the opinion handed down stated that a hospital should not be held as an insurer of the safety of a dead body in its possession, nor should it be held liable because of the mutilation of a body in its possession by any person or from any cause whatsoever.

The evidence in the case clearly showed that the body was mutilated while in the exclusive possession and control of the hospital. The plaintiff, of course, could furnish no proof as to who did the unlawful act. The defendant hospital disclaimed all knowledge of this particular necropsy and called attention to its rules concerning the performance of necropsies. These rules, however, were not observed or in force in this instance, and might have been nonexistent so far as the plaintiff was concerned.

The defendant hospital, which should have knowledge of all the facts, did not show that some person pursuing an independent calling and not acting under the

authority or direction of the hospital performed the necropsy. The defendant alone knew what transpired within its walls during the night and morning following the death of the plaintiff's husband.

A hospital has the means to exercise control over what goes on within its building. Requiring it to take some precaution to prevent the unlawful mutilation of deceased patients is not placing an undue burden on it, and it should not be allowed to avoid all liability by professing ignorance of what has happened within its own confines. In view of all the facts, it was possible for the jury by reasonable inferences to find that this unlawful necropsy was performed by the direction or with the consent, knowledge, or permission of the defendant hospital. The judgment in favor of the plaintiff was affirmed.—*The Modern Hospital*, Oct., 1935.

HOSPITAL ACTIVITIES

Coördinating the Efforts of Hospital and Physician.—Dr. J. J. Golub, director, Hospital for Joint Diseases, New York City, states that the hospital cannot be separated from the doctor; both serve one cause and its concomitants. Their disagreement arises from conflicting economic viewpoints.

It is suspected that dispensary privileges are abused and that many patients who should engage the services of private physicians receive free treatment. If this constitutes unfair competition and interference with the livelihood of doctors, it must be realized that the solution cannot be found in legislation which prohibits dispensaries from charging any fees. Legislation along these lines would result in the shutting down of voluntary dispensaries.

If a way were found of operating voluntary dispensaries under such a law, many, if not all, of the patients who have hitherto paid the nominal dispensary fees would merely get this medical service entirely free. They would not go to a private physician. It is reasonable to expect that if a patient goes to a dispensary to save a part of the fee he would have to pay to a private physician, he would certainly take advantage of voluntary dispensaries or city-operated clinics required to serve without charge.

A cause for the present misunderstanding is our human unwillingness to submit our own rôles to rigid examination. In order to alter or improve any group attitude and action, the component members' thoughts and practices must be altered or improved. Individual attitude and action, when considered in combined form, constitute group attitude and group action.

A scheme for desirable relationship between the hospital and its medical staff is here set down.

RESPONSIBILITIES OF THE HOSPITAL TO THE MEDICAL STAFF

1. A scientifically planned and constructed hospital, ably and justly administered.

2. Suitable laboratory, roentgen-ray, basal metabolism, electrocardiography, and other auxiliary facilities and apparatus for diagnosis and therapy.

3. A sufficient number of ward beds for adequate service to the poor, and private and semiprivate accommodations at reasonable rates.

4. A well-organized outpatient service for the poor only, with control of those abuses that tend to lessen legitimate sources of livelihood of physicians.

5. An adequate nursing service.

6. Research facilities, and teaching opportunities and facilities.

7. An efficient social service department, to supplement the services of the hospital and physician by giving the patient such comforts as mental ease, convalescent care, and financial assistance through direct relief or reference to other relief agencies.

8. A sympathetic and intelligent attitude toward professional and economic problems of the physician and the community.

9. A willingness to listen to and seriously consider suggestions and complaints.

10. Nonparticipation in contract practice when this is found to compete with private practice and to lessen the sources of income of physicians.

11. Public recognition, in the hospital's account of its activities to the community, of the generous free service rendered by physicians as their contribution to the charitable work being done by the hospital.

12. Adherence to the requirements and standards of the American Medical Association, the American College of Surgeons, and the American Hospital Association.

13. Courtesy and kindness toward the medical staff, unattached medical visitors, family physicians, and all other visitors.

14. Appointments and promotions based on merit.

RESPONSIBILITIES OF THE MEDICAL STAFF TO THE HOSPITAL

1. Ethical practice of medicine.

2. Thorough and scientific medical care of patients.

3. Adequate and punctual attendance at hospital and outpatient departments.

4. Organization into suitable groups, as medical board, clinical society, and departmental conferences.

5. Serving on hospital committees.

6. Attendance at hospital, clinical, and scientific conferences.

7. Coöperation with other services and fellow staff members.

8. Instruction and development of younger staff members.

9. Instruction to nurses, medical students, and graduates in medicine.

10. Promotion of necropsy examinations.

11. A sympathetic and intelligent understanding of social service and its aims.

12. Understanding of and coöperation in administrative problems and difficulties, and constructive criticism to the administration for betterment of the services.

13. Economical use of hospital supplies and funds.

14. Loyalty to and support of the hospital.—*The Modern Hospital*, Aug., 1935.

What Is a Charitable Institution?—The subject of taxation is rightfully uppermost in the minds of citizens in this country at present. The populace generally has become tax-conscious. While all realize the necessity of taxation for the maintenance of government projects, the extension of taxation to religious, charitable, and other organizations is being closely scrutinized.

The hospitals of the country are peculiarly proud of being denominated as charitable institutions. Nevertheless, there are some who question their right to be so classed because of their receipt of fees for service rendered and because the property which they own is worth in total millions of dollars.

Generally, statutes of the various states definitely exempt from taxation institutions not conducted for profit. The receipt of pay from patients does not alter the hospital's charitable character. This is true because such funds, if devoted to the furtherance and purposes of the institution, cannot be classed as profit.

The fact that hospital benefits may be limited to a special class has also been the subject of spirited legal contests. If a hospital is not open to the public generally but is conducted only for the benefit of a particular group, tax exemption has been refused in at least one instance. Yet there is another court decision to support the charitable nature of an institution open without charge to the whole public or to all of a class for whose relief it is adapted. A psychopathic, orthopedic, or children's hospital represents an example of this type.

Of the greatest importance from a legal standpoint is the motive underlying the conduct of a hospital. If the institution is conducted for possible private gain even though no profits ever accrue or if provision in any form is made for personal gain by trustees or others, charitable exemption cannot be expected. The fact that an institution is conducted by denominational or sectarian groups has been interpreted as not interfering in any way with its charitable character.

Legal decisions affecting the exemption of land employed for tennis courts, nurses' homes, and hospital farms are important to many hospitals. In some states the number of acres exempted from taxation is definitely limited. This number ranges from 5 in New Jersey to 320 in Iowa.

Finally, any state indulges in a doubtful practice when it exacts a tax from a charitable institution on bequests for its future maintenance. Such a policy is certainly "robbing Peter to pay Paul."—Editorial, *The Modern Hospital*, Oct., 1935.

INDUSTRIAL MEDICINE

Industrial Dermatoses.—According to Drs. Joseph J. Eller and Louis Schwartz, New York City, industrial dermatoses constitute 60 per cent of the industrial diseases, not including actual accidents. The figures gathered from the States of Ohio, Missouri, Connecticut, New York, Massachusetts, and Wisconsin show that, among 15,050 industrial diseases recorded in these states over a period of years, 9628 were dermatoses. In these states there was an average of 2944 cases of occupational dermatitis yearly.

In 1934 New York State alone had 1012 cases of occupational diseases, with 689 cases of compensated dermatoses. These dermatoses were largely made up of dermatitis venenata and dermatitis eczematosa. Included were a few cases of glanders, tuberculosis, anthrax, actinomycosis, sporotrichosis, erysipeloid, keratosis, cancers, calluses, burns, and abrasions.

Employees with milder dermatoses or afraid of losing their positions because of their hypersensitivity to the materials with which they worked, or because of prospective financial loss while being carried as compensation cases often continued at their occupations. A larger number claimed compensation for trivial or unconnected dermatoses when fear of a lay-off or earnings less than compensation rates seemed imminent. This last group includes some malingerers who actually produce dermatoses or who manage to prolong and maintain them in a variety of ways. It must be realized that a large percentage of dermatitis cases found in in-

dustrial workers is due to the worker's contacts outside of his occupation.

Diseased and abnormal skins are more susceptible. Seborrhea, ichthyosis, pyogenic infections both focal and local, and skin injured from any cause offer less resistance to a skin irritant. A history of recurrent skin eruptions is always an indication of the possibility of skin sensitivity which increases chances of dermatitis. After sensitivity develops to one agent, the worker tends to be more sensitive to other substances.

Heavy metal poisoning (lead, arsenic, nickel, etc.) may possibly act as a predisposing agency, but this hypothesis is as yet unproven.

The chief causes of industrial dermatitis differ in various localities according to the prevailing types of industry. It can be safely stated that in general the majority of industrial skin diseases in the United States are caused by the action of acids, alkalies, caustics, oils, greases, solvents, and plants.

While it is certainly true that many cases of dermatitis develop only after years of exposure, most cases occur promptly in new workers or in employees exposed to new sensitizers. There is a definite epidemiology which appears in the exposure of individuals to a new irritant. A demonstration of a strongly sensitizing varnish occurred in an outbreak of dermatitis among 19 out of 32 exposed employees in 2 cotton mills.

One point not generally considered is the apparent immunity which develops in workers after first being sensitive to materials they employ. It seems that this occurs in those who develop a mild dermatitis only. The workers themselves say that they "become hardened" to the agent. Unfortunately, this immunity lasts only from one week to a month, and on the resumption of work after a period away from the materials the "immunizing" process must be repeated.

There is another kind of employee who works for many years without any trouble and then for some unknown reason becomes sensitized and develops a dermatitis from the materials which he previously handled with safety. Immunity does not develop in this type of sensitivity. They tend to develop hypersensitivity to other substances and present a very difficult problem.

The ideal method of prevention is to safe-guard the industries which have skin hazards so that the injurious chemicals will not come in contact with the skin of the worker. This can be and has been accomplished in many factories where the entire process of manufacture is totally enclosed. The raw materials are sucked up into reservoirs from which they flow into retorts and tanks merely by the turning of a valve. The finished product is barreled without the worker having come in contact with any of the intermediates of the manufacturing process. Modern factories are being built to conform, in so far as possible, with this standard. In some places the worker must be protected against irritating substances by wearing suitable protective clothing, such as rubber gloves, aprons, masks, goggles, and by the application of protective ointments. The actual elimination of unessential, strongly eczematogenous chemicals is being carried out. For example, hexamethylenetetramine in the rubber industry has been largely discontinued as too much of a hazard. The examination of new workers for possible evidence of predisposition would be of some value in industries and processes in which the dermatitis hazard is high. In factories where synthetic dyes and complex organic compounds are manufactured, new applicants should be patch-tested with the chemicals with which they will be called upon to

work, and those found to be hypersensitive should be rejected. There should be periodic routine examinations of the workers in search of those who have skin and other ailments, and those found should be given prompt attention.

The proper ventilation of workrooms is of prime importance in the prevention of occupational skin hazards. If the irritating gases or dusts are sucked away from the workers, there will be fewer cases of dermatitis. Exhaust hoods should be properly placed over processes giving irritating dusts or gases. Floors should be washed out at the end of each shift to remove dust. Cleanliness should be emphasized. Shower baths and lockers should be provided for the workers, and they should be required to use the showers and change from working to street clothes after each shift. It has been found that furnishing clean work clothes to the workers every day stopped outbreaks of dermatitis. In oil refineries the wearing of clean work clothes and the compulsory use of shower baths has stopped the occurrence of oil acne and oil boils, and has lessened the incidence of tumors of the skin.

In occupations in which the worker is exposed to irritating dusts, such measures have also helped in the abatement of dermatitis. Protective ointments have been found useful temporarily, pending the installation of other more suitable preventive measures.

Laws for compensation for industrial skin diseases are not uniform in different states. Only 11 states have laws for the compensation of industrial skin diseases. Some of these states specify the causes for which skin diseases are compensated; others do not. It would be very desirable to have model laws for compensation drafted and made uniform throughout all of the states. Most of the states that compensate for skin diseases have lay boards to decide whether a disease is or is not of occupational origin. Physicians are called to testify before these boards, and very often an unfavorable impression is made by so-called experts giving opposite opinions. Compensation boards should be composed of or guided by the opinions of an impartial group of state-paid physicians totally divorced from politics, if possible, and chosen for their familiarity with industrial processes and industrial diseases.

It certainly is advisable for the physician handling these cases to be familiar with the compensation law of his own state. Even then, legal advice concerning past court decisions on cases appealed to higher courts may be of interest in the matter of how the law has been interpreted in the past in similar cases.—*N. Y. State J. M.*, Oct. 1, 1935.

PHYSICAL THERAPY

Underwater Therapy in Chronic Arthritis.—In the September, 1935, issue of *Physical Therapy, X-Ray, and Radium*, Euclid M. Smith, Hot Springs, Ark., presents the following conclusions regarding the use of underwater therapy in chronic arthritis:

1. Underwater therapy, although popularized as a treatment for anterior poliomyelitis, is applicable to chronic arthritis.

2. Therapeutic exercise aided by heat and massage is essential to the correction of the deformities of chronic arthritis.

3. These exercises are best administered by use of the therapeutic pool in water at a temperature of 98 to 99° F.

4. The buoyancy of the water and the constant temperature during the actual time of movement are factors which favorably influence the disease.

- a. The affected joints may be moved through a greater arc without pain.

- b. The weakened, atrophied muscles are capable of more work without fatigue.

- c. A greater and more accurate exercise dosage may be given.

5. Definite beneficial physiologic changes are obtained.

6. These physiologic changes persist some hours after treatment and are obtained without stimulation to the central nervous system.

7. Underwater therapy produces a favorable psychologic effect.

PUBLIC HEALTH

Need for Water Purity.—A warning to the motoring tourists to avoid drinking water from sources of doubtful purity was issued by the State Department of Health some time ago.

The typhoid fever problem in Pennsylvania, thanks to public water supplies, sewage systems, and supervision of milk, is now practically a rural one. Were it not for contaminated water supplies yet sporadically existing in isolated sections, typhoid fever for the most part would be history in Pennsylvania.

Under no circumstances should tourists or campers use creek water for drinking purposes. If any question regarding the safety of the supply arises, the water should be boiled or one drop of iodine be added to every quart of water consumed.

The so-called vacation typhoid still manifests itself in the increasing typhoid fever rate during the summer months. If it is possible to impress the automobile tourist with the safety-first principle in the water and milk supplies there can be no question that a reduction in the typhoid fever rate would result.—*Pennsylvania's Health*, Sept.-Oct., 1935.

Active Immunization Against Poliomyelitis.—Drs. Maurice Brodie and William H. Park, of New York City, consider that, since isolation of contact cases in poliomyelitis cannot be effective because of the probably high carrier rate and since serum therapy is of no benefit because the disease is confined solely to the central nervous system, a logical means of combating this disease seems to lie in carrying out prophylactic measures on those of the susceptible age group, which usually includes those from age 1 to 5, at which age level there is little or no antibody.

There is a definite basis for the belief that active immunization against poliomyelitis can be effective, for humans and monkeys recovered from an attack of the disease are immune. Moreover, the fact that only 12 second attacks in humans have been recorded suggests that there is only one strain of virus. Thus, an effective vaccine should protect against any poliomyelitis infection.

Due to the fact that in the process of natural immunization some children contract the disease and succumb to it, an effective method of artificial immunization would be preferable.

In order that a vaccine be of use, it must be: (1) Antigenic; (2) safe and innocuous; (3) practical (easy to standardize). To meet these requisites, several preparations were made up, in some of which either the chemical or physical nature of the virus was varied.

In one method, subinfective doses of active virus were injected into monkeys. This antigen proved dangerous in that it sometimes produced infection. Another preparation was a serum-virus combination, which was discarded because it was impractical since many monkeys were required for its standardization. Germicidally inactivated virus was then tried. Of the various germicides used, formalin appeared to be the most effective. After many monkey experiments, it was found that a mixture of 10 per cent virus suspension and 0.1 per cent formalin incubated for 8 to 12 hours at 37° C. was the most efficacious of the formalized virus preparations tried, since with this treatment it was found that the virus was completely inactivated and so failed to infect and was also antigenic.

In addition, it did not produce irritation of the skin as did preparations which contained higher concentrations of formalin and which had been incubated at lower temperatures. It was also found that a vaccine prepared from virus over-treated with formalin, as was the case when the incubation period was prolonged, was not so antigenic as a preparation that was just inactivated. In testing the vaccine in monkeys, the material was given intracutaneously in 1 or 2 doses of 2.5 c.c., 5 c.c., or 10 c.c. In the course of this work, it was observed that one 5 c.c. dose produced an immunity which was better than that following a mild attack of the disease, and which compared favorably with the immunity produced by a severe attack of poliomyelitis or by immunization with active virus.

Work with the experimental animal pointed to the safety of formalized virus, because it was not infectious for monkeys since large amounts of it did not produce the disease when injected intracerebrally. In order to ascertain doubly the safety of the material before vaccinating children with this vaccine, 6 human adult volunteers were injected with it. None of these suffered any untoward reactions.

In the children the vaccine was administered in either 1 or 2 doses. One to 2 c.c. of each dose was given intracutaneously and the remainder subcutaneously. Samples of blood taken from the children before vaccination and at varying intervals after were tested for the presence of antibody. The serums were combined with several dilutions of poliomyelitis virus incubated for 2 hours at 37° C., kept on ice overnight, and then injected into monkeys intracerebrally. If the monkey developed a typical poliomyelitis, the serum did not have the supposed antibody content.

Two doses gave better results than one, inasmuch as a greater proportion showed antibody after 2 doses. With 2 doses more antibody was produced, and the antibody was still present in all of those who received 2 doses each of 5 c.c. at both 5 and 8 months, whereas with a single 5 c.c. dose there was a decrease of antibody at this time.

The 5 c.c. amounts gave at least double the antibody response that 2.5 c.c. amounts gave and showed a greater tendency for the antibody to persist.

Of 26 children who received a single dose of vaccine, 22 showed antibody response as did all 10 who were given 2 doses. Several children who failed to respond to a single dose responded after a second dose, whereas those who had lost their antiviral substance after a single inoculation showed a rapid response after a second inoculation.

The children most likely more susceptible and in need of protection are those with no antibody; 7 out of 9 of such a group showed a response to the vaccine. Those

with antibody present before vaccination responded better and in proportion to the degree of antibody.

In summary, formalin inactivated virus is probably a perfectly safe vaccine inasmuch as no harmful effects have developed after more than 3000 inoculations. Out of this group but few general reactions have developed. It has been shown that the vaccine stimulated antibody production in experimental animals and in humans. In the latter a single dose gives a response in 75 per cent of children and 2 doses in practically all. The antibody usually develops in about a week, reaching its height in the third to fourth week and with 2 doses is still present after 8 months. Whether or not sufficient and permanent protection is afforded must await further study.—*N. Y. State J. M.*, Aug. 15, 1935.

The Prevention of Poliomyelitis.—Dr. William H. Park, New York City, states that lately 3 vaccines have been proposed. The one by Dr. Maurice Brodie unquestionably produces a very definite amount of antibody in the blood of children who have received it with the exception of an occasional child. They are now advocating 2 doses for each child. The second dose should be given after a considerable interval and so produce an increased immunity. Whether the serum will be potent enough to prevent natural infection can be decided only after the vaccinated children have passed through an epidemic.

A second vaccine is the one produced by Dr. Kramer. A very carefully adjusted mixture of antiserum and living vaccine is made. This is found, when given in 3 doses, to produce a very definite immunity in monkeys. They are just about to use this vaccine in a few children.

There is also the Kolmer vaccine, in which a virus fully virulent for monkeys is used intradermally in children. It is Kolmer's belief, after having used it in several hundred children, that the virus has become so changed in the monkey that it is much less virulent for human beings and when added to this lessened virulence the vaccine is given into the skin or subcutaneous tissues, there is practically no danger. In this belief he has agreed in general with the belief of others and the lack of any harm up to the present time suggests that the vaccine is at least fairly safe. Whether a child which had not the slightest suggestion of any antibody might become infected can be told only after many hundreds and thousands have been injected. There is no reason to fear that the strains of virus from various cases differ from each other sufficiently to lessen the value of vaccination.

When we think of utilizing poliomyelitis vaccine we are staggered by the enormity of the program. We know that most of the children at a very early age are susceptible. These become gradually less so as the years pass until they reach age 5; afterwards the majority are no longer susceptible.

Can we think of immunizing practically all children since we have no test such as the Schick or Dick Test to determine who are susceptible?—*N. Y. State J. M.*, Aug. 15, 1935.

School Health and the Physician.—Dr. William Paul Brown, Albany, N. Y., states that there are phases of the activity of schools in stimulating health action by the pupils that are not clearly understood by many. The medical profession has shown an excellent attitude of coöperation with all agencies promoting the health of the upcoming generation. This has opened the way remarkably for teamwork by all physicians in the use

of the medical findings of the school physical examination.

He concludes as follows: (1) School health service can assist in cordial understanding of the entire profession as to the underlying principles of school health activities; (2) harm from open disagreement with the school physician is preventable by not advertising differences with school diagnoses in all contacts with the laity; (3) health behavior mistakes are found to be chronic and all children need a check-up on minor errors at every opportunity; and (4) teamwork of physician and school should be more common and can be excellently cordial if there is full understanding of the aims of the school health service.—*N. Y. State J. M.*, Sept. 15, 1935.

Morbidity in Pennsylvania in September, 1935

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	0	2	1	3
Allentown	1	3	4	0	20
Altoona	1	0	6	2	9
Ambridge	0	0	0	0	0
Arnold	0	0	0	0	0
Beaver Falls	0	1	5	0	0
Bellevue	0	0	0	0	0
Berwick	0	0	0	0	2
Bethlehem	0	1	0	0	4
Braddock	0	0	0	0	2
Bradford	0	0	3	0	1
Bristol	0	0	1	0	0
Butler	0	1	1	0	0
Canonsburg	0	0	0	1	0
Carbondale	0	0	0	0	0
Carlisle	1	0	0	0	1
Carnegie	0	0	0	0	0
Chambersburg	0	0	0	0	0
Charleoi	1	0	0	0	5
Chester	0	0	0	0	6
Clairton	0	0	1	0	0
Coatesville	0	0	0	0	0
Columbia	1	0	0	0	0
Connellsville	1	0	0	0	3
Conshohocken	0	0	4	0	0
Coraopolis	0	0	0	0	0
Diekson City	0	0	0	0	0
Donora	1	0	0	0	0
Dormont	0	0	0	0	1
Du Bois	0	0	1	0	0
Dunmore	0	0	0	0	0
Duquesne	0	0	0	0	0
Easton	0	0	0	1	3
Ellwood City	0	0	4	0	0
Erie	2	2	5	0	7
Farrell	0	0	0	0	0
Franklin	0	1	4	0	2
Greensburg	0	0	0	0	0
Hanover	0	0	0	0	0
Harrisburg	0	1	0	1	4
Hazleton	0	0	2	0	5
Homestead	0	0	5	1	0
Jeannette	0	0	0	1	0
Johnstown	3	1	2	0	17
Kingston	0	0	0	0	3
Lancaster	0	1	2	0	4
Latrobe	0	0	0	0	0

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Lebanon	0	0	0	3	0
Lewistown	0	0	0	0	0
McKees Rocks	1	0	2	0	4
McKeesport	2	0	3	0	0
Mahanoy City	5	0	3	0	0
Meadville	0	1	5	0	0
Monessen	0	0	0	0	0
Mount Carmel	0	0	0	0	0
Munhall	0	0	0	0	0
Nanticoke	2	0	1	0	0
New Castle	0	0	4	0	0
New Kensington	0	0	1	0	0
Norristown	0	1	0	0	9
North Braddock	0	0	1	0	0
Oil City	0	0	1	0	5
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	8	14	80	6	107
Phoenixville	0	0	0	0	0
Pittsburgh	12	4	56	0	69
Pittston	0	0	0	0	1
Plymouth	1	0	0	0	0
Pottstown	0	0	4	0	0
Pottsville	1	0	0	0	1
Reading	1	0	3	0	2
Seranton	4	1	8	0	1
Shamokin	0	0	0	0	0
Sharon	0	0	0	1	11
Shenandoah	2	0	0	0	0
Steelton	0	0	0	0	3
Sunbury	0	0	0	0	5
Swissvale	0	0	0	0	0
Tamaqua	0	0	3	0	0
Taylor	0	0	0	0	0
Turtle Creek	0	0	0	0	5
Uniontown	0	0	1	2	5
Vandergrift	0	0	0	0	0
Warren	0	2	1	0	1
Washington	0	0	2	0	0
Waynesboro	1	0	6	0	0
West Chester	1	1	2	0	0
Wilkes-Barre	4	0	3	0	11
Wilkinsburg	0	0	1	0	2
Williamsport	0	0	1	0	17
York	0	1	2	0	0
Townships					
Allegheny County:					
Harrison	0	0	0	1	0
Mt. Lebanon	0	0	0	0	0
Stowe	0	0	1	0	2
Delaware County:					
Haverford	0	1	2	0	0
Upper Darby	1	2	1	0	18
Luzerne County:					
Hanover	0	0	1	0	0
Plains	1	0	2	0	0
Montgomery County:					
Abington	0	0	0	0	7
Cheltenham	0	1	1	0	3
Lower Merion	0	0	8	1	4
Total Urban ..	59	41	262	22	395
Total Rural ..	73	70	351	59	222
Total State ..	132	111	613	81	617

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

THE early diagnosis of tuberculosis has been the aim of physicians and tuberculosis workers for years. Yet records show that the percentage of cases admitted to sanatoria in the minimal stage has not increased markedly during the past decade. Only about one out of each 6 patients admitted is classified as minimal. For this discouraging situation the patient is largely to blame; he usually waits too long before seeking medical advice. But in some instances the physician who first sees the patient is responsible for delay in diagnosis. Dr. W. Burton Wood again reminds his English colleagues of their obligation in discovering the early case, a reminder which may well be passed on to American physicians.

WHAT IS THE EARLY CASE?

All we can hope to do at present is to detect tuberculosis at a stage when the lung tissues show the first signs of disintegration. Early disease of this order can be diagnosed, and can, in most instances, be arrested. But early disease must not be taken to imply limited disease, for—especially in early life—its spread is often rapid, and early disease may involve half a lung within a few weeks of its appearance. We must learn not only to recognize early disease, but also the early recrudescence of disease which so often occurs.

It is customary nowadays to divide cases of pulmonary tuberculosis into 2 main groups—(1) the *proliferative* and (2) the *exudative*. These terms are cumbersome but useful, and more precise words would perhaps fail to express adequately phenomena as yet imperfectly understood.

1. Proliferative disease is disease of chronic type. The exudation which marks its onset is rapidly followed by caseation and by fibrosis. In general, the phthisis of fully adult life and of middle age corresponds to this type, but examples are also seen in childhood, adolescence, and the early adult years.

2. For our scanty knowledge of the exudative types we have to rely chiefly on roentgen-ray evidence. We have no opportunity of studying exudative disease in the necropsy room. In this form, seen typically in the phthisis of adolescence, the most noteworthy feature is the tend-

ency to parenchymatous exudation and the formation of soft-walled cavities. Such cavities are sometimes exactly circular, and, like the surrounding exudation, develop rapidly, and often disappear as rapidly as they have appeared, leaving only a faint linear scarring of the parenchyma.

From the diagnostic standpoint the important difference between the proliferative and exudative forms is that whereas pulmonary fibrosis is associated with more or less characteristic alteration in physical signs, pulmonary exudation of the kind occurring in early tuberculosis is not. Abnormal physical signs are often entirely lacking—neither palpation, percussion, nor auscultation will help. A roentgen-ray examination occupying a tenth of a second provides far more accurate and helpful information than an hour spent on stroking the skin over muscles, percussing Kronig's bands, trying to detect deviation in the projected tongue, and so on.

In the days before radiology was available we were taught that physical examination reveals only 25 per cent of the disease actually present. This wholesome teaching has been forgotten by those who still regard the skiagram as merely supplying corroboration of facts already ascertained by ears and fingers. *Pulmonary tuberculosis is a relatively silent disease.* It is this silence which differentiates it from most of the other chronic chest diseases. Bronchitis, bronchiectasis, malignant disease, pneumoconiosis,

the fibroid lung, all yield more or less characteristic signs. But when, as so often, a doctor writes: "I cannot find any physical signs in this patient's chest, *but* I suspect tuberculosis," he betrays the result of faulty teaching. "I cannot find signs, and *therefore* I suspect tuberculosis" should be the attitude.

If physical signs are unreliable, what is the general practitioner to do? Skillful interpretation of the roentgenogram is not always to be had and sometimes, indeed, it is difficult even to secure a chest film. But there is no need to submit every person suffering from a cough to a roentgen-ray examination.

Every student knows that there is one type of aortic aneurysm that is demonstrable by physical signs and another that reveals itself by symptoms. Now the fibrocaseous type of tuberculosis supplies more or less characteristic physical signs—upper lobe dullness, harsh breathing, fibrotic crepitations, and so on—but the type of tuberculosis that returns no answer when you knock usually betrays itself by symptoms. And both types shed tubercle bacilli, for both give rise to cavities, though an examination of the patient's saliva may supply a negative return from the laboratory. Two or 3 sputum tests may be necessary, though it is surprising how often the first examination will reveal bacilli, even in a very early case; and even the frightened patient who swallows her sputum may often be outwitted by an examination of the feces. The sputum test is the simplest and, apart from roentgen-ray examination, the most reliable test for tuberculosis, and yet it is frequently neglected, with disastrous results.

Of what does the consumptive complain? I have looked through my notes of 50 young consumptives (ages 15 to 25) recently seen at Victoria Park. Rejecting 6 cases which were apparently of at least 6 months' duration when I first saw the patients, I note that 37 out of the remaining 44 had symptoms suggestive of tuberculosis. Thus 14 of these young persons complained of cough with expectoration, while no fewer than 23 admitted to hemoptysis ranging from stained sputum to frank hemorrhage of the classical type. Approximately 50 per cent of the total number gave a family history of tuberculosis or admitted close contact with infection. Physical examination yielded suggestive signs in only half of the 44 cases, while in the remainder physical signs were absent or equivocal.

The plaintive whine of the patient seeking sympathy is seldom heard from the tuberculous. The tendency to minimize symptoms, return eva-

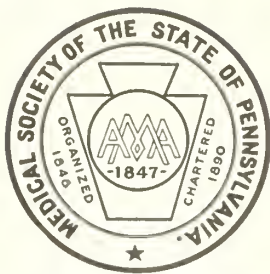
sive answers, or offer explanations for any symptoms reluctantly admitted is so typical of the consumptive that such a disposition should at once suggest the possibility of this disease. This is especially noteworthy when the question of blood-spitting is raised. If the tuberculous patient has had no hemoptysis, he denies in the tone of one who has been insulted by an offensive suggestion. In hemoptysis from other causes, the patient may treasure up his expectoration, proudly unroll his handkerchief for your inspection, or triumphantly extract a little bottle of blood-stained sputum from his trouser pocket.

The patient's appearance is worth more than a passing glance. The bright eyes and delicate complexion of the consumptive girl are familiar to us all. The smooth skin of the tuberculous was noted by Hippocrates. Even in middle age the skin of the thorax is often curiously smooth and fine in texture. Sweating axillae are more significant than a history of night sweats.

Inspection of the form and movements of the chest are of little help in the detection of incipient tuberculosis. The same may be said of percussion, unless pleurisy with effusion or bronchopneumonic consolidation may be of more value, for a weakening of the breath sounds may be obvious over an area of early infiltration. Fine, moist crepitations—heard best in the inspiratory phase following a short cough—audible over the apex or subapex of an upper or lower lobe are almost diagnostic. But we must not expect to hear them. They indicate very active disease and widespread involvement of the affected lobe. The apex of the lower lobe is favorably situated for auscultation. We are not likely to forget the "zone d'alarme" internal to the spine of the scapula when searching for crepitations, but we are apt to forget that a second "zone d'alarme" is situated internal to the angle of the same bone.

If the patient's symptoms, history, manner, and appearance, or if the physical signs or their significant absence, indicate the possibility of tuberculosis, the sputum test, repeated 2 or 3 times if necessary, will in the majority of cases prove the diagnosis. If the sputum test is negative roentgen-ray examination is essential before a final opinion can be given. And if this supplies evidence of tuberculosis, roentgen-ray control will thereafter be essential, for the progress of the case can only be adequately studied and its treatment properly conducted in the light of the information that only roentgen rays provide.

The Diagnosis of Early Pulmonary Tuberculosis, W. Burton Wood, British Medical Journal, Feb. 16, 1935.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

THE TUESDAY EVENING SMOKER

Apropos of the following excerpt from the minutes of the October 2 meeting of the 1935 House of Delegates, as published in the November JOURNAL, we shall in the January issue of the JOURNAL present an historic résumé of the social entertainments in connection with our annual sessions of years gone by:

JOHN M. KEICHLIN, JR., Huntingdon: I would like to ask if the Tuesday night smoker might not be dispensed with at the annual meetings.

JOHN M. QUIGLEY, Clearfield, moved that in the future the host county society be relieved of the necessity of providing a smoker if it sees fit, the decision remaining optional with the host society.

The motion was seconded by Francis A. Faught, Philadelphia, put to a vote, and lost.

A DIGEST OF SICKNESS INSURANCE

The Chester County Medical Society has included among its recent activities the preparation of a digest of sickness insurance. This compend, which we have had the pleasure of reviewing, contains a wealth of authoritative material which has been extensively indexed and which sets forth the claims of the advocates of compulsory sickness insurance as well as facts and opinions expressed by those who are opposed to it.

This 20-page mimeographed, paper-bound pamphlet will be sent postpaid upon remittance of 30c to Robert T. Devereux, M.D., 37 S. High St., West Chester, Pa.

The source material consulted by Dr. Devereux is reliable, and the indexing divides the claims of the advocates and the facts and reasons against sickness insurance into 61 different headings, each of which contains the keynote of a subheading or paragraph. It will be found especially useful to physicians or laymen at-

tempting to inform themselves on this important and at present widely publicized controversial subject.

STEADILY PROGRESSIVE

A comprehensive report of the work of the various county emergency child health committees as rendered by Dr. S. McC. Hamill, chairman of the state committee, was published in the September JOURNAL. Nevertheless, we are convinced that the steadily increasing accomplishments of the county committees, not only through indispensable service to the children but also through invaluable leadership in the co-ordination of the various health activities in every county, justifies the publication of the following from the pen of Chairman Hamill at this time:

We have 56 of the 67 counties organized and at work supervising the health of the children in the families on relief and wherever children in families on the borderline of relief (that means with just sufficient income to make them ineligible for relief) are found to be in dire need of help.

It has been reported to us from practically all counties that these borderline cases are really suffering more than those on relief, because they have had no one to guide them in the proper expenditure of their limited funds to secure nutritious foods and in how to prepare them.

Even in ordinary times committees of this sort would be of great value because they do, and should, contain in their membership representatives of the various health and welfare agencies within the counties, directed by the county medical societies.

This makes for a degree of coöperation in health work which has not been obtained anywhere in the United States heretofore. We have glowing evidence of a very decided improvement not only in health procedure but in the health status of the children of the state. One of the greatest weaknesses in our health work in the past has been the lack of this kind of co-ordinated effort.

Where committees have been carefully organized with good representation from all the agencies interested in health directly, together with the representatives from the women's clubs, parent-teacher groups, men's service clubs, church organizations, *etc.*, and a well-selected group of outstanding lay people, very remarkable things have been accomplished. The men's service clubs and the women's clubs have been especially helpful in securing funds to meet the office expenses of the committee and for the payment of such items as hospitalization for tonsillectomies, the purchase of glasses, and the like.

As the work has gone on, the state committee has become more and more convinced of the great value this work has for the children of the state. There has been a woeful lack of the application of preventive procedures throughout the nation, especially among the children of preschool age, an age period during which the great majority of the serious and handicapping diseases of childhood develop. If we can succeed in stimulating a broader interest in the protection of this preschool group, we shall do much to lessen sickness.

CANCER CONTROL MOTION PICTURE

Nov. 10, 1935.

To the President, Secretary, and Chairmen of Public Relations and Cancer Committees of Component County Societies:

The Commission on Cancer of your State Medical Society respectfully requests your continued coöperation in the control of cancer.

The control of cancer demands the alertness of the physicians throughout the state, but perhaps even more, the education of the general public to avoid

- (a) The neglect of lesions which may lead to cancer;
- (b) The neglect of early cancer.

An educational silent motion picture film has been prepared by our Commission with the object of reaching the public, and especially that part of the public that does not read books or pamphlets, or even listen to the radio for instruction on this all-important subject of cancer control.

This film and the required projector are the property of The Medical Society of the State of Pennsylvania. It is suggested that the officers of the various county medical societies or the Committee on Cancer Control address a request to the librarian at the State Society building, 230 State Street, Harrisburg, Pa., for the use by the county society of this film and "fool proof," automatic winding and rewinding projector.

This film consists of 56 frames, showing alternately pictures and messages. Each frame, however, carries a definite message on the subject of cancer; if a person looks at only one frame, he will have learned something. It can be projected on any size screen and for any size audience. It has already been shown to audiences of 800 and 1300. It should always be tested in advance, for the size of the screen and the location of the projector must be adjusted according to needs. It can be used in a store window or in a large hall.

In response to the 1935 Commission's letter of September 19, several engagements have been made for the use of the film, which was planned and filmed under the direction of the 1935 chairman of the Cancer Commission, Dr. George E. Pfahler of Philadelphia.

It is hoped that it will prove useful for demonstration on any occasion where people are assembled under

the coördinated sponsorship of the county medical society and civic groups, or even for demonstration at congested points, such as near railroad stations, large factories, *etc.*, where the film may be placed in a store window.

A request for the use of this film by and in the name of any of our county medical societies will imply the assumption of responsibility for its correct handling and its prompt return to 230 State Street, Harrisburg. The handling of the apparatus (shipped in a suit case type carrier) will not be burdensome or technical, requiring principally

- (a) Judgment in the selection of a place and time at which it will be shown, with some thought as to competing daylight or artificial light.
- (b) The constant presence of an interested member of the county medical society to supervise the showing of the film and to reply to questions relative to the control (not the treatment) of cancer.

There will be no charge to county medical societies for the use of this film; however, it will be shipped by express, charges collect, and should be returned charges prepaid.

It is the firm belief of the members of our Cancer Commission that the principal use of this film will be as an invaluable stimulus to public interest in connection with any and all county medical society endeavors in behalf of the early recognition of cancer or precancerous conditions so essential to control or cure.

Respectfully submitted,

SAMUEL J. WATERWORTH, Clearfield, *Chairman*
HARRY W. BERNHARDY, Rochester
WALTER M. BORTZ, Greensburg
ALBERT J. BRUECKEN, Pittsburgh
WILLIAM L. ESTES, JR., Bethlehem
GEORGE W. GRIER, Pittsburgh
GEORGE W. HAWK, Sayre
WILLIAM H. HOWELL, Altoona
STANLEY P. REIMANN, Philadelphia

Commission on Cancer, 1936.

AN EXPRESSION OF APPRECIATION TO GOVERNOR EARLE

Oct. 31, 1935.

HONORABLE GEORGE H. EARLE,
Governor of Pennsylvania,
Harrisburg, Pa.

DEAR SIR:

Under unanimous instructions of our House of Delegates, in session assembled, in Harrisburg, on October 2, 1935, we herewith convey to you expression of the gratitude and thanks of the 8250 members of our society thus represented for your warm welcome and your gracious utterance, in the name of the Commonwealth of Pennsylvania, of deep appreciation of the emergency medical relief services rendered by the physicians of Pennsylvania to their fellow citizens during the depression period of the past few years.

Please be assured also that the presence of Mrs. Earle and yourself on the rostrum at our opening general meeting on October first added much to the success of the occasion, and very happily symbolized the cordial and helpful relations existing between so many of our state departments and those of us who constantly serve the health interests of our people.

We were also instructed to express appreciation of

your coöperative interest in the passage by the 1935 Pennsylvania Legislature of House Bill No. 2742, known as the Dangerous Drug Act.

Sincerely yours,

EDGAR S. BUYERS, *Chairman,*
Board of Trustees.

WALTER F. DONALDSON, *Secretary,*
The Medical Society of the State of Pennsylvania.

GREETINGS TO DR. GUILFORD

Nov. 4, 1935.

W. M. GUILFORD, M.D.,
Lebanon, Pa.

DEAR DR. GUILFORD:

Upon motion of Dr. Ross V. Patterson of Philadelphia and unanimous vote of the House of Delegates of The Medical Society of the State of Pennsylvania, in session assembled, in Harrisburg, October 2, 1935, I have been instructed to convey the greetings and felicitations of the members of the society to you, who for so many years have maintained great interest in health and sickness service, characterized by your continued active membership in your county and state medical societies.

It gives me great pleasure, indeed, to bring you this message from the legislative body representative of your more than 8000 fellow members in the State Medical Society, and to add my personal best wishes for your continued good health. May your one hundred and third birthday on November 26, 1935, bring you many happy returns.

Sincerely yours,

WALTER F. DONALDSON, *Secretary.*

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contribution to the fund:

Woman's Auxiliary to Cambria County Medical Society \$20.00

Total contributions since 1935 report .. \$646.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to November 10:

ALLEGHENY: *New Members*—Russell A. Barnhart, 710 Brushton Ave., Robert O. Garvin, Jenkins Arcade, Frank T. Herron, 3710 Fifth Ave., Seymour B. Moon, Penn Ave. and Ninth St., Jessie Wright, 5512 Center Ave., Pittsburgh; Lester C. Shrader, 408 Westinghouse Ave., Wilmerding. *Removal*—William S. Dietrich from Pittsburgh to 1612 Bridge St., New Cumberland; A. Vaughn Winchell from West Penn Hospital, Pittsburgh, to Strong Memorial Hospital, Rochester, N. Y. *Death*—James E. Rush, Pittsburgh (Univ. Pgh. '20), Oct. 14, aged 48; Le Roy D. Cratty, Wilkesburg (Univ. Pgh. '13), Oct. 27, aged 45.

BEAVER: *New Member*—Donald W. Gressley, 620 Third St., Beaver.

BLAIR: *New Member*—Charles I. Stoner, 1525 Fourth Ave., Altoona.

BUCKS: *New Members*—John McL. Adams, Buckingham; D. Kenneth Leiby, Newhope; Paul M. Nase, Souderton; William J. Westcott, Doylestown. *Reinstated Member*—Joseph A. Brooke, Glenside.

BUTLER: *New Members*—Harry H. Morris, Mars; Charles B. Turnblacer, 128 S. Main St., Frank W. Nicholson, Box 667, Butler; John F. Burn, 101 Main St., Zelienople.

CAMBRIA: *New Member*—William L. Hughes, 230 Market St., Johnstown. *Removal*—James J. O'Connor from Spangler to Barnesboro; Theodore Wollak from Johnstown to State Hospital, Torrance.

CHESTER: *Reinstated Member*—John M. Toomey, Coatesville.

CLINTON: *New Members*—Edward Hoberman, E. Church St., Lock Haven; Henry G. McKeown, 243 Sixth St., Renovo.

DAUPHIN: *New Members*—Arthur Baptisti, Jr., 228 N. Second St., Harry B. Bower, 1943 N. Sixth St., Paul H. Schraer, 234 State St., John J. Walsh, 604 N. Third St., Harrisburg; Benjamin R. Beale, 404 Hummel Ave., Lemoyne; Nellie C. Heisley, Marysville. *Reinstated Member*—Oscar Benj. Millard, 812 N. Second St., Harrisburg. *Removal*—Malachi W. Sloan, Jr., from Berrysburg to 78 Cortland St., E. Stroudsburg.

DELAWARE: *Removal*—Catherine DeE. Edgett from White Plains, N. Y., to Elwyn Training School, Elwyn, Pa.

INDIANA: *Removal*—Wilbert E. Griffith from Indiana to Yatesboro.

JEFFERSON: *Death*—Elvin W. Jaquish, Punxsutawney (Med. Chi. Coll., Phila. '13), Oct. 8, aged 49.

LACKAWANNA: *New Member*—Nelson E. Newbury, Washington Ave. and Mulberry St., Scranton.

LEBANON: *Transfer*—Paul S. Seabold, Lebanon, from Delaware County Society.

LEHIGH: *Removal*—Elizabeth S. Bauder from Allentown to 102 W. Water St., Kittanning.

LUZERNE: *Reinstated Members*—Charles B. Crittenden, Kirby Health Center, Charles Hayden Phillips, 200 S. Franklin St., Wilkes-Barre.

LYCOMING: *New Members*—J. Carl Baier, 25 W. Third St., Alex. W. Blumberg, 2120 W. Fourth St., Walter E. Boyer, 1247 W. Fourth St., Roy L. Simon, 416 Pine St., Williamsport.

McKEAN: *New Member*—William D. Barry, Smethport.

MONROE: *Reinstated Members*—Claus G. Jordan, Stroudsburg; Lawrence W. Kinsell, E. Stroudsburg.

MONTGOMERY: *Removal*—W. Osler Abbott from Merion to Wynnewood.

MONTOUR: *Removal*—H. Arden Kimmel from Danville to 27 Brown St., Lewistown.

PHILADELPHIA: *New Members*—Daniel C. Baker, Jr., 2822 W. Columbia Ave., John J. Cheleden, 1514 E. Moyamensing Ave., H. Russell Fisher, 226 W. Gorgas Lane, Gtn., William E. Krewson, 3d, 6755 Germantown Ave., Laura A. Lane, ? ? ? , Philadelphia. *Reinstated Members*—Arthur McGinnis, Logan and Greene Sts., Gtn., Harry E. Fineman, 5737 N. Park Ave., Philadelphia. *Removal*—Patrick H. McAndrew from Philadelphia to 129 Walsh Road, Lansdowne; William G. Mitchell from Philadelphia to 103 S. Irving St., San Angelo, Texas. *Death*—Abraham A. Pless, Philadelphia (Temple Univ. '18), Oct. 8, aged 47.

SCHUYLKILL: *Reinstated Member*—Charles M. Delp, St. Clair.

SOMERSET: *New Members*—Asa Lee Hickok, Harold E. Musser, Somerset.

VENANGO: *Reinstated Member*—Charles H. Ashton, Franklin.

WASHINGTON: *Removal*—Collin R. Weirich from Cresson to 320 Station St., Bridgeville.

WESTMORELAND: *Removal*—Henry A. McMurray, Jr., from Greensburg to Youngwood.

YORK: *Death*—J. Frank Small, York (Univ. Pa. '89), Oct. 20, aged 70.

PAYMENT OF PER CAPITA ASSESSMENT

The following payment of per capita assessment has been received since October 10. Figures in first column indicate county society numbers; second column, state society numbers.

Oct. 12	Beaver	90	8108	\$3.75
16	Cambria	174	8109	3.75
19	Luzerne	325	8110	7.50
	Schuylkill	160	8111	7.50
	Chester	106	8112	7.50
25	Clinton	24-25	8113-8114	7.50
	Butler	50-53	8115-8118	15.00
28	Lackawanna	260	8119	7.50
29	Blair	99	8120	7.50
	Dauphin	211	8121	7.50
	Luzerne	326	8122	7.50
Nov. 1	Venango	54	8123	7.50
	McKean	50	8124	3.75
	Allegheny*	20-26	1-7	52.50
	Somerset*	1-2	8-9	15.00
8	Philadelphia*	1-6	10-15	45.00
	Dauphin*	1-6	16-21	45.00

* 1936 dues.

STANDING COMMITTEES

COMMITTEE ON SCIENTIFIC WORK

Frederick B. Utley, Pittsburgh, *Chairman*

Alexander H. Colwell, Pittsburgh
Walter F. Donaldson, Pittsburgh
Frank C. Hammond, Philadelphia
Robert L. Anderson, Pittsburgh
Clement R. Jones, *Chairman*, Local Committee on Arrangements.
Chairman, Scientific Exhibit.

AND THE SECTION OFFICERS AS FOLLOWS:

MEDICINE—Edward W. Bixby, Wilkes-Barre, *Chairman*; Joseph T. Beardwood, Jr., Philadelphia, *Secretary*.

SURGERY—John P. Griffith, Pittsburgh, *Chairman*; Robert L. Schaeffer, Allentown, *Secretary*.

EYE, EAR, NOSE AND THROAT—William Zentmayer, Philadelphia, *Chairman*; Warren S. Reese, Philadelphia, *Secretary*.

PEDIATRICS—Joseph Stokes, Jr., Philadelphia, *Chairman*; Theodore O. Elterich, Pittsburgh, *Secretary*.

DERMATOLOGY—Abram Strauss, Philadelphia, *Chairman*; Lawrence G. Beinhauer, Pittsburgh, *Secretary*.

UROLOGY—Carlyle Haines, Sayre, *Chairman*; David P. McCune, McKeesport, *Secretary*.

COMMITTEE ON PUBLIC HEALTH LEGISLATION

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James D. Stark, Erie
Cloy G. Brumbaugh, Huntingdon
Joseph A. Daly, Philadelphia
Thomas R. Gagon, Pittston
Alexander H. Colwell, Pittsburgh
Walter F. Donaldson, Pittsburgh

COMMITTEE ON SOCIETY COMITY AND POLICY

J. Norman Henry, Philadelphia, *Chairman*

Theodore B. Appel, Lancaster
William T. Sharpless, West Chester
J. K. Williams Wood, Willow Grove
J. B. F. Wyant, Kittanning

COMMITTEE ON PUBLIC RELATIONS

William H. Mayer, Pittsburgh, *Chairman*

(Term Expires 1938)

Term Expires

George H. Cross, Chester	1936
Charles Falkowsky, Jr., Scranton	1936
Charles F. Nassau, Philadelphia	1936
Francis F. Borzell, Philadelphia	1937
John P. Harley, Williamsport	1937
Wilmer Krusen, Philadelphia	1937
Robert M. Alexander, Reading	1938
Patrick E. Biggins, Sharpsville	1938
Alexander H. Colwell, Pittsburgh, <i>Ex officio</i>	
Maxwell Lick, Erie, <i>Ex officio</i>	
Edgar S. Buyers, Norristown, <i>Ex officio</i>	
Robert L. Anderson, Pittsburgh, <i>Ex officio</i>	
Walter F. Donaldson, Pittsburgh, <i>Ex officio</i>	

PRESS COMMITTEE

Walter F. Donaldson, Pittsburgh, *Chairman*
Frank C. Hammond, Philadelphia
Clement R. Jones, Pittsburgh

COMMITTEE ON BENEVOLENCE

Howard C. Frontz, Huntingdon, *Chairman*
Walter F. Donaldson, Pittsburgh
Edward B. Heckel, Pittsburgh
Clarence R. Phillips, Harrisburg

COMMITTEE ON NECROLOGY

Robert G. Barclay, Milford, *Chairman*
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Edward R. Gardner, Montrose
Charles F. Long, Philadelphia

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W. Burrill Odenatt, Philadelphia, *Chairman*
(Term Expires 1940)

Term Expires

Paul H. Wilson, New Castle	1936
Curtis C. Mechling, Pittsburgh	1937
Frank G. Hartman, Lancaster	1938
Maurice J. Karpeles, Philadelphia	1939

SPECIAL COMMITTEES

COMMITTEE ON DEFENSE OF MEDICAL RESEARCH

(*Subsidiary to the Committee on Public Health Legislation*)

Samuel R. Haythorn, Pittsburgh, *Chairman*
Harvey F. Smith, Harrisburg

COMMITTEE ON MENTAL HYGIENE

(*Subsidiary to the Committee on Public Health Legislation*)

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Charles H. Henninger, Pittsburgh
James W. McConnell, Philadelphia
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Howard K. Petry, Harrisburg

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George R. Harris, Pittsburgh
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(To Serve Until 1938)

John O. Bower, Philadelphia, *Chairman*
Cecil F. Freed, Reading
Paul Correll, Easton
William W. Lazarus, Tunkhannock
S. Gilmore Pontius, Lancaster
Harvey F. Smith, Harrisburg
J. Hayes Woolridge, Clearfield
LaRue M. Hoffman, Williamsport
Frank B. Krimmel, Erie
Ralph W. Walker, Butler
John W. Shirer, Pittsburgh
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EMERGENCY MEDICAL RELIEF IN PENNSYLVANIA

HAROLD A. MILLER, M.D., *Director*
 Harrisburg

PHYSICIANS PARTICIPATING IN EMERGENCY MEDICAL RELIEF PROGRAM—PLEASE NOTE

May we call to your attention the following paragraph from the Syphilitic Survey:

"Those participating shall receive an additional compensation of \$5 (making a total of \$25) for *each and every* obstetric case completed in accordance with the above outline. Those failing to take Wassermann tests on *each and every case* will not be considered as participants in the survey or the additional compensation allowed. (These physicians shall continue their obstetric work as provided in the Rules and Regulations.)"

It has come to our attention that in several instances physicians have not complied with the above procedure. Continued participation is contingent upon following the above procedure.

County Society Reports

CHESTER

Oct. 15, 1935

The meeting was held at the Phoenixville Hospital, with Vice-president Robert C. Hughes presiding. Luncheon was served.

The Executive Committee approved the recommendation of the Economics Committee (1) that the officers of the State Medical Society be requested to put into force immediately the mandates of the 1935 House of Delegates, particularly with reference to contract practice; and (2) that 140 copies of the Digest on Sickness Insurance as compiled by Robert T. Devereux be purchased and distributed to the various doctors in the county. It was recommended that the Public Health Day meetings this fall be held in Coatesville, Oxford, West Chester, Phoenixville, Kennett Square, Downingtown, and Parkesburg.

Dr. Dickey, the public health doctor, outlined the work which has been done during the past month. He had spoken before several parent-teacher associations. He informed the various groups that diphtheria immunization should be done by the doctor in his private office rather than to have large clinics where the work is to be done free. This will provide individual care in each case and the patient will be asked to pay according to his own individual financial situation. He particularly stressed the fact that it is the family physician's duty to see that each child in his practice between ages 1 and 6 is immunized.

The resignation of Wm. T. Sharpless as chairman of the Public Health Doctor Committee was reluctantly accepted.

Harold W. Jones, associate professor of medicine, Jefferson Medical College, discussed the treatment of the more common diseases of the blood, referring more particularly to that more recent entity known as pernicious leukopenia. This blood dyscrasia is typified by a marked and rapid reduction in the number of white blood cells. Clinically, the patient complains of a severe sore throat and gives evidence of a very high fever. It is now believed that the disease is most frequently caused by the indiscriminate use of amidopyrine. No hope is entertained for cure unless the drug pentose nucleotide is administered very early. He referred to macrocytic and microcytic anemia and spoke of the various extrinsic and intrinsic factors causing the condition. He believes that in the secondary anemias iron is still the drug of choice, and that it is a very efficient and remedial agent. In pernicious anemia, liver is the drug par excellence. It is no longer necessary to give large and continued doses of liver by mouth, as both Lederle's and Lilly's liver extract given intramuscularly has been proven most useful. Except in the most extreme cases, an injection of liver concentrate will often suffice.

JOSEPH SCATTERGOOD, JR., *Reporter*.

DELAWARE (EASTERN BRANCH)

Sept. 24, 1935

Edward L. Bortz, of Philadelphia, read a paper on "Visceroptosis." He said in part:

Visceroptosis may be classified under 2 main types: Primary or hereditary; and secondary or acquired.

Individuals are grouped into one of 2 types—hypersthenic or asthenic.

Visceroptosis may give rise to symptoms referable to the gastro-intestinal tract or to vascular symptoms. In reference to the gastro-intestinal tract, patients usually complain of "gas on the stomach," "indigestion," or "constipation." Many have a tired and weak feeling. Patients are often susceptible to infections, and a low blood pressure is usual.

What helps maintain the abdominal organs in place? The mesentery, intra-abdominal fat, and the shape of the abdomen, i.e., type of individual with small pelvis and large abdomen; and negative pressure in abdomen.

Three cases of the acquired type are seen to one of the hereditary type. The former is the most satisfactory to treat.

TREATMENT

1. Endeavor to increase the tonus of the musculature and have the patient increase in weight. These are best accomplished through proper exercises and diet. Proper stature and posture are most important.

2. A proper fitting belt is useful but should not be worn for too long a time. An elastic abdominal binder gives the patient a sense of support.

3. To obtain a good posture, exercises are designed to have the patient carry himself erect and to raise the abdominal organs.

4. To gain weight 5 or 6 feedings a day should be employed. The patient should lie on the left side to facilitate emptying of the stomach.

5. To combat constipation: Diet of many fruits and liquids; small quantities of mineral oil or milk of magnesia; suppository or enema; and regular bowel habits.

6. Drug therapy: Triple bromides and phenobarbital. Tincture of belladonna may be added to the above if a hypertonicity of the pylorus is present.

In answer to a question regarding the value of elevating the foot of the bed, Dr. Bortz stated that ordinary elevation of 5 or 6 inches is useless. The bed should be elevated from 12 to 15 inches at the foot, and no pillows should be allowed.

Oct. 22, 1935

The meeting was held at the Llanerch Fire Hall.

Collier F. Martin, Philadelphia, spoke on "Proctology as it Concerns the General Practitioner." He stressed certain cardinal points, namely, the pectinate line, which separated the anus from the rectum. This is important from the surgical standpoint. Most fistulas occur near the pectinate line and not higher.

Pruritus ani may be caused by piles, parasites, or fungi infections. Relief often is obtained by painting the surface with saturated solution of potassium permanganate. Salicylic ointments with acetanilid and vaccines sometimes give relief.

Fissure is best treated by dilating the sphincter ani or by excision. Ischiorectal abscess demands a large incision and no packing in the wound. Fistula is best treated by incision and no packing.

If external hemorrhoids are operated upon they should be opened freely and not packed. Internal hemorrhoids may be either operated upon or injected. Injection treatment should be used for selected cases only. Strangulation signifies a generalized thrombosis and should be treated by rest and wet dressings.

Prolapse of the rectum is either partial or complete; treatment of complete type by abdominal section is the

only satisfactory method. Stricture of the rectum is treated by colostomy.

The diagnosis of lymphogranuloma venereum is made by the Frei test.

THEODORE LIDLE, *Reporter.*

DELAWARE

Oct. 10, 1935

The meeting was held at the Chester Hospital. It was a joint meeting of the Delaware County Medical Society and the organizations which composed the Delaware County Welfare Council. The object of the meeting was to determine, if possible, how the medical society could aid the welfare organizations in health problems, and how the welfare organizations could best cooperate with the physicians.

John J. Sweeney had charge of the program of the evening. Mrs. Wm. A. Jacquette, president of the Delaware County Welfare Council, spoke upon "Who Are the Indigent Sick?"

Mrs. Jacquette first outlined the various agencies which care for the indigent, pointing out that there are 3 public or tax-supported agencies in Delaware County, namely, the County Poor Board, the Mothers' Assistance Fund, and the County Relief Board. There are 14 or more voluntary agencies, that is, agencies which are supported by voluntary contributions. Among these are the Red Cross, the various child health centers, the various community health centers, and the Delaware County Tuberculosis Association. The County Poor Board is now maintaining in full or in part over 2000 indigent, the Mothers' Assistance Fund is aiding over 1200 families, and on Oct. 5 the Delaware County Relief Board was giving aid to 5427 families of the unemployed. The various voluntary relief agencies are now aiding 5886 individuals in Delaware County. Mrs. Jacquette demonstrated by charts the potentialities of families needing relief. Forty per cent of the families in Delaware County have annual incomes of less than \$1000. Mrs. Jacquette did not attempt to show how the individual physician of the Delaware County Medical Society could fit into this picture of relief needs.

Mrs. Mildred LaDue gave an address on "What Is Expected of the Nonofficial Health Associations?" Mrs. LaDue referred particularly to the visiting nurse group. She briefly outlined the history, showing that these organizations grew rapidly after the war. They have 3 prime functions: To promote the health of families; to prevent disease; and to provide skilled nursing service in the home on a part-time basis.

It has always been the policy of the Visiting Nurses Association to have a medical advisory committee. In many cases this committee had not functioned, and perhaps one of the reasons that the doctors had criticized the organization was that the doctors themselves had assumed a disinterested attitude. It is quite probable that the nurses had overstepped their prerogatives in certain cases, but these cases had not been brought to the attention of the organization at the time of the misconduct on the part of the nurses. The policy of the Visiting Nurses Association is that the family must choose its own physician, and the nurse shall not be permitted to suggest or choose a physician. Mrs. LaDue made an urgent plea for better cooperation between the nursing service of Delaware County and the County Medical Society.

Mrs. Carter Worrell read a paper on "Functions of Welfare Societies." Mrs. Worrell did not bring any specific plan or recommendation to the attention of the society but simply dealt in generalities, urging that the

welfare society attempt to understand better the individual in the present social order. She briefly outlined what has been attempted and what has been planned for the various welfare organizations in their effort to better the conditions of the less fortunate members of society.

Dr. Frank R. Nothnagle, chairman of the Medical Advisory Committee, presented a paper on "An Outline of the Plan Now Working in Chester Child Health Centers." Dr. Nothnagle pointed out that the origin of the child health centers grew out of the well-meaning activities of various women's clubs, *etc.* The early policy of these clubs was to have large lists of representative families and to pay little regard to the position of the physician in the family. They had rather indiscriminately used various medications, such as cod liver oil, viosterol, orange juice, *etc.*, and had further administered toxin-antitoxin without the knowledge or consent of the family physician. This situation led to extreme criticism of the health centers on the part of the physicians. This criticism resulted in the Chester Health Center appointing a board of 3 physicians to plan and control the policy of these centers.

This Medical Advisory Board has now succeeded in evolving a program which is satisfactory both to physicians and the health center. The policy of the Chester Health Center now is to classify those coming to the Center as (1) persons unable to pay a private physician; and (2) persons able to pay a private physician. Only those in the former class are accepted. Persons able to pay are referred to their family physician. The family physician may then ask that the health center continue supervision over this family, or he may accept the case himself. Hence the responsibility is now in the hands of the physician. A plea was made for a similar program to be developed by health agencies in all parts of the county.

President John S. Eynon stated that there would be no discussion of these papers but that they would be referred to a special committee appointed to consider the material and suggestions in the papers and to outline what policy should be adopted by the County Medical Society. Dr. Eynon appointed John J. Sweeney as chairman of this committee. (This committee submitted its report at the November meeting of the society and recommendations were adopted. See January number of JOURNAL.—EDITOR.)

C. Irving Stiteler reported in full on the meeting of the State Medical Society at Harrisburg to which he and John J. Sweeney were delegates. It was approved that the physicians should refuse to accept the proposition of the Bell Telephone Company to list office hours in the telephone book.

A buffet supper was served.

E. ARTHUR WHITNEY, *Reporter.*

FAYETTE

Sept. 5, 1935

President John D. Sturgeon, Jr., presided.

William L. Mullins, cardiologist, Mercy Hospital, Pittsburgh, read a paper on "Cardiac Emergencies." He said in part:

The most serious cardiac emergency is coronary occlusion. In these cases it is important to recognize the basic cause. The main manifestations of coronary occlusion are substernal pain, shock, and dyspnea; one-third of these cases do not have classical symptoms but only shock with dyspnea. Six cases of coronary occlusion were referred to the Mercy Hospital with the com-

plaint of pain in the rectum. The treatment consists chiefly of complete and total rest for a period of 4 to 6 weeks. It is usually advisable to give one-half grain of morphine at once and one-fourth grain in an hour if necessary. Occasionally nitroglycerin may aid in relieving the pain. A daily light diet of 1000 calories or less is beneficial. Frequently other emergencies are associated with coronary occlusion such as the various forms of arrhythmia and embolism. The most serious form of arrhythmia is ventricular tachycardia, usually with a heart rate of 200 beats or more per minute. Six similar cases have been observed and the tachycardia relieved by the use of quinidine sulphate. After the physician is sure no idiosyncrasy exists, quinidine sulphate in selected cases has been given in as large a dose as 20 grains every 2 hours for 12 doses. Smaller doses usually produce the desired result.

Associated emboli usually arise from a mural thrombosis on the endothelium under the coronary occlusion. These emboli frequently cause pulmonary infarction, in which case oxygen is beneficial, especially if cyanosis is present. This type of embolism should be differentiated from that of a subacute bacterial endocarditis. Some believe that papaverine hydrochloride given in a dose of one-fourth grain intravenously may aid the patient after embolism has occurred.

The next most serious cardiac emergency is acute edema of the lungs. In this condition dyspnea, cyanosis, and the expectoration of frothy sputum are present. The mechanism of these attacks is hard to understand. Many believe that the left ventricle suddenly fails and the right one produces an over-production of blood to the lungs. One-half grain of morphine and one-twenty-fifth grain of atropine sulphate are beneficial. Venesection has helped.

Another serious cardiac emergency is acute congestive heart failure in which dyspnea or orthopnea develop. Venous engorgement of the peripheral veins, increase in size of the liver, and peripheral edema may occur. Examination of the height of the engorged veins in the neck with the patient in a semi-prone position gives a good index of the existing venous pressure, considering the sternum liver as zero.

Other cardiac arrhythmia may need emergency treatment. In paroxysmal tachycardia the rate is usually between 180 and 200 per minute. Frequently there may be no apparent cause. The condition is not serious but often is distressing. In extremely sensitive patients there may even be pain. This condition is often misdiagnosed by the physician as coronary occlusion while only coronary anemia exists. Frequently the cardiac rate may be restored to normal by deep pressure over the right carotid artery and vagus nerve. Occasionally when vomiting is induced by various means the resultant vagal stimulation will benefit the patient.

In the Stokes-Adams syndrome there is a loss of consciousness with a low ventricular activity or even complete cessation. The physician may use adrenalin, epinephrine, barium chloride, or even mechanical stimulation to induce ventricular contraction.

In cases of circulatory failure such as exist in shock or collapse, large quantities of fluid intravenously are beneficial. The best results are produced by the use of whole blood, solution of acacia, or a high percentage of glucose.

In discussion Elliott B. Edie, of Uniontown, reported a case of petechial hemorrhages associated with the Stokes-Adams syndrome. Robert H. Jeffrey advocated the use of the respirator with oxygen in cases of surgical shock.

RALPH L. COX, *Reporter.*

FRANKLIN

Oct. 15, 1935

The meeting was held at the Y. M. C. A. in Waynesboro.

Charles Reid Edwards, of the University of Maryland, gave an address on "The Pathology of Fat Emboli Following Injuries and Surgical Procedures." He said in part:

Fat embolism is a rather frequent cause of sudden death, and too often the diagnosis is made only at necropsy. It is a condition encountered by all practitioners of wide experience, and curiously enough the common etiologic factor of most of the ordinary maladies, infection, does not play a part in it. It is most likely to occur in those who have suffered damage to their blood vessels. This trauma may at times seem very slight, almost negligible, yet death may follow with ruthless suddenness. Operations below the diaphragm and on bony tissues seem favorable to the development of fat emboli. However, the vascularity of the part does not appear to be the causative element, but damage to blood vessels does seem to be outstanding, together with the slowing of the blood current.

The question arises—is air in the circulating medium a pathologic item? Probably it is not of importance unless the air be present in enormous quantities. No ordinary amount of air will cause an embolism. Nor are the many and varied chemicals used in modern medicine likely to give rise to fat embolism, or embolism itself, if the drugs are well mixed with a suitable vehicle. But an insoluble foreign body in the blood stream is a different thing, and of itself is well capable of causing ordinary embolism.

Fat embolism commonly does not occur in surgical operations, yet this condition seems to be on the increase—or at least it is attracting far more notice than it did prior to 1922, which was about the time when it first attracted attention.

Direct invasion of blood vessels by passage of fat through the lungs and the liver may occur. Changes in the blood constituents may obtain and thereby tend to increase the ability of the circulating fluid to coagulate.

Food plays a significant although undetermined part in making such a condition possible, and the effect has been ascribed to a shortage of potassium salts. At least this theory has been advanced. Starvation and fat embolism do not occur together, hence the well-fed are the more likely to be attacked. Fifty per cent of the cases occur in the obese. Evidently this is another argument why we should stay thin.

Thrombi may form in distal parts of the circulatory system and grow by filling bifurcations until a large vessel is reached. At such times surgery becomes futile, although embolectomy has been successfully done. Failure of the collateral circulation means that gangrene will occur somewhere along the line. And in time the heart may become involved and sudden death occur. In the pulmonary tissues this may give rise to lung abscess and even emphysema. Likewise there may be massive gangrene, leading to a fatal issue.

Fat embolism occurs in fatty parts of the body as well as in fractures of bone. In osseous tissue the blood vessels do not tend to close readily, and cases have been observed in which there has been a long-continued outpouring of fat.

The greatest amount of fat that can be readily and safely cared for in the circulating blood seems to be from one to one and a half ounces. More than that quantity is likely to be highly dangerous if not fatal.

The age of the patient is not so important a factor as the part of the body involved.

As may be inferred, fat embolism is like any other embolism. The extraneous matter is passed through the right heart into the pulmonary circulation and thence into the general circulation and into the viscera. In such cases fat will be found in the urine, the sputum, and the blood.

Fat embolism often occurs in confinements; and it is impossible to predict when it will or will not be met.

A case has been reported in which oil was injected into the bladder to promote catheterization, and death occurred, due to oil embolism.

Treatment at times may be of value, and at other times it seems to be pitifully inadequate. One of the outstanding symptoms in a case of fat embolism is fever, of rather prompt appearance and running to fairly high figures. This temperature may maintain itself for 8 to 14 days. Such a temperature is very significant if associated with the history of an accident or an operation in which fat embolism might be possible. At times the amount of trauma may appear quite insufficient to produce such a protean effect, yet death appears with tragic suddenness. Under such conditions it would be well to keep fat embolism in mind as a possibility.

The blood tension peculiar to the patient should be learned, if possible, and an effort made to bring the tension up to its normal point. A lowering of this tension may be an ominous sign. Increased temperature and lowered blood pressure will suggest a possible slowing of the circulatory stream with some puddling. These factors should be weighed, together with a careful consideration of past history and all present symptoms.

Attention should be given the lungs. Pulmonary atelectasis may occur. At this stage it is desirable to restore that person's normal blood tension by pushing fluid intake, together with the use of glucose and fruit juices. Maintenance of body metabolism is clearly indicated, and this may bespeak the employment of stimulants such as thyroxin. If there be reason to fear fat embolism, it might be well to use thyroxin prior to operation. Also the bleeding and coagulation time should be studied and, if needed, sodium citrate may be given intravenously. This drug is supposed to have some beneficial effect in preventing blood clotting.

The management of a case of fat embolism generally calls for simple remedies only. Every fracture should be immobilized as soon as possible. This is a highly important point, since motion obviously provokes the exudation of fatty matter. The splint used should not be too tight nor too loose. If too tight, its very pressure may not only cause discomfort but cause additional damage to blood vessels and thereby defeat the beneficial effect desired. If too loose, it is not effective in preventing motion.

Keep up the blood circulation and use glucose, thyroid, or digitalis as may be indicated. Keep the patient very quiet and reassured for 2 weeks following serious accidents. Twelve days seems to be the vital length of time in fat embolism.

Embolism due to fragments of blood vessels also occurs. Patients with embolism of the extremities may recover, although such cases will cause much anxiety. If the embolism is localized and defined, it is considered good surgery to encourage the breakdown of the embolus. Such a disintegration may permit the circulation to be restored if it is not delayed too long. In such an attempt sodium citrate does not seem to possess

any value. Suction by use of the Favex device may be of value. This requires the possession of a special apparatus, which may not be available. Embolectomy is possible though difficult, and must be done within the first day or two.

Cases of fat embolism seem to be equally divided between urban and country residents, although there does seem to be slightly more fatalities in those from the country. However the speaker stated that he had no statistics on this particular point. He again referred to the familial tendency.

It is an easy matter to stain a specimen of urine, using for this purpose a dye known as sudan III. First the specimen of urine is treated with ether, and then the stain is used.

It may be very advisable to drain fat from an area where it is detected in a wound or incision. Fat or oil injected into the circulation may prove to be highly toxic, even to the point of causing embolism.

FASSETT EDWARDS, *Reporter.*

LACKAWANNA

Sept. 17, 1935

President Ray J. Garvey presided at the meeting held in the Chamber of Commerce auditorium, Scranton. In the absence of J. Allen Jackson, superintendent of the Danville State Hospital for the Insane, Joseph A. Cammarata, physician of that institution, gave a talk on "Psychiatric Problems."

Sept. 24, 1935

The meeting was held in the Chamber of Commerce building, Scranton; President Ray J. Garvey presided.

Frederick J. Bishop announced for the Public Relations Committee that there would be vaccination of school children of indigent parentage in the council rooms of the Municipal Building. Volunteers of the society will take care of the vaccinations, assisted by nurses provided by the school district. Donald Guthrie, chief surgeon of the Packer Hospital, Sayre, discussed "The Diagnosis and Treatment of Ruptured Duodenal Ulcer." (This paper appeared in full in the report of the meeting of the Lancaster County Medical Society, held on Apr. 3, 1935, which was published in the August, 1935, number of the PENNSYLVANIA MEDICAL JOURNAL.) The discussion was as follows:

J. Norman White said that most patients have subnormal temperatures, 96 to 97° F. The hypodermic syringe is the worst enemy of the patient. It is remarkable how well these patients do without drainage if treated early. One of the biggest problems in diagnosis is encountered in those cases in which there is perforation of the posterior wall of the duodenum; there are different symptoms than those occurring in the anterior wall. The general result is better in the cases of perforating ulcer seen early than in the chronic types.

John D. Wilson detailed the case of a young girl who had been manipulated by an osteopath, when a duodenal ulcer ruptured. She was operated upon within 3 hours and recovered. This condition is very difficult to differentiate from acute hemorrhagic pancreatitis. There is one other condition which must be remembered—the abdominal pain and rigidity of diabetic acidosis with repeated vomiting and marked leukocytosis.

Dr. Guthrie, in closing, said that there had been no deaths at the Packer Hospital in any of the secondary gastro-enterostomies. The radical treatment gave 50 per cent mortality. Conservative treatment with simple

closure gave a 20 per cent operative mortality. On follow-up it was found that 74 per cent of the conservatively treated cases are well and suffering no complications.

FREDERIC B. DAVIES, *Reporter.*

LANCASTER

Sept. 4, 1935

The meeting was held at the Medical Club Rooms and was devoted to a symposium on appendicitis.

James Z. Appel read a paper on "Acute Appendicitis."

A compendium of his remarks follows:

It was suggested by the Committee on Appendicitis Mortality of the Pennsylvania State Medical Society that during the year 1935 each county society devote one meeting to the study of acute appendicitis as it exists in the respective communities. Our local committee thought this could best be done by a review of the cases treated in the 2 Lancaster hospitals for a period of years. Dr. Butterbaugh reviewed the cases of St. Joseph's Hospital for a 12-year period, and Dr. Appel did the same for the Lancaster General Hospital for a 5-year period.

This is a study of acute appendicitis; therefore, it is necessary first to define the term *acute*. The essayist realizes that to do this he will have to bear the criticism of surgeons who have their own definitions of the term. First of all the pathologic study of the removed appendix must show acute inflammation. This, of course, rules out many cases in which the pathologist can find only lymphoid hyperplasia or infestation with *Oxyuris vermicularis*. Furthermore, the history must show an acute condition with associated physical findings and laboratory work, if done. Many cases were not studied by the pathologist, and in these the essayist tried to look at the case as a whole in the light of findings at operation, history, physical examination, and laboratory findings. After reviewing the many cases proved to be acute by the pathologist, the essayist is confident that the acute nature of a case can be determined only by a study of this kind. There are many cases labeled acute appendicitis which in reality are not acute. It is these that have been eliminated, knowing full well that, if they were not operated upon, they may recur or continue to more serious conditions. But the essayist considers the vast majority would subside without operation and the patient be no worse off than before. Most of them probably should be called appendiceal colic. However, it is far better to operate on such a patient than not operate and have peritonitis develop.

As a result of the limitation of this paper, 1132 cases were studied and 331 discarded as not being truly acute or gangrenous. This leaves 801 cases on which this report is based. Of these patients, 466 or 58.18 per cent were males and 335 or 41.82 per cent were females. All but 10 of the patients were operated upon by 15 different surgeons; of these 10 nonoperative cases, 6 died soon after admission to the hospital, 3 were sent home to return later for operation to drain an appendiceal abscess, and one refused operation.

The typical cross section history of the cases was detailed.

The cases studied were divided into 5 classes: Acute, gangrenous, abscess, local or early spreading peritonitis, and general peritonitis. The surgeon's findings or the necropsy report was used as the basis of this classification. There were 342 acute cases; 221 gangrenous cases; 55 abscesses; 109 cases of local peritonitis; and 74 cases of general peritonitis.

It is interesting to note the fewer total cases among the females, with an actually larger number of female abscess cases than males, and a relatively larger number of the more serious local and general peritonitis cases among the women than the men. The essayist suggests that this is due to the rather common practice of appendectomy during the abdominal gynecologic operations, which should lower the incidence of acute appendicitis in the women, and also to the great difficulty of differentiating acute appendicitis from salpingitis, which would make the physician delay in operating and hence increase the number of abscess and peritonitis cases in the female.

The age incidence ran from 6 months to 76 years. The mortality rate was highest in the very young (difficult to diagnose) and the very old (low resistance).

Of the 801 cases studied, only 462 gave a definite story as to whether laxatives were taken or not; the fact that it was not mentioned in the history is no reason to believe that laxatives were not taken in all cases. The use of laxatives was more common in the serious classes than in the less serious ones. The decided jump in the cases from the simple acute to the more serious gangrenous, abscess, and local peritonitis types and the still greater jump to general peritonitis is convincing evidence that laxatives and appendicitis are bad mixers.

As to the advantage of early medical attention, there is no argument.

More than 78 per cent of the acute cases were admitted to the hospital within 36 hours of the onset of the disease. While in the same time from onset (36 hours) only 28 per cent of the general peritonitis cases were admitted to the hospitals. This is making it difficult for the surgeon to keep down the mortality.

Of the 51 deaths, 29 were attributed to general peritonitis; 6 to intestinal obstruction, which is very often associated with peritonitis; 4 to pneumonia; 3 to pulmonary embolism; 2 each to bacteremia and myocarditis; and one each to uremia, paralytic ileus (simple acute appendicitis), thrombosis of the inferior vena cava, hemorrhage, and agranulocytosis. In other words, 68 per cent of the deaths were due to peritonitis, and 20 per cent were due to pulmonary complications.

The complications which might occur in cases of acute appendicitis were listed in the order of the frequency of their occurrence in this series of cases. Some were of significance and others of little or no importance, but all had to be combated by the surgeon in the postoperative care.

The paper on "Mortality in Appendicitis at St. Joseph's Hospital" was read by Dorsey Butterbaugh. A compendium of his remarks follows:

One year ago a report was given of the 1213 cases of appendicitis operated upon at St. Joseph's Hospital during the 10-year period from Jan. 1, 1923, to Jan. 1, 1933. Only those histories of patients showing a rather definite attack of appendicitis or evidence of certain pathologic involvement of that organ were considered. The classification of Finney of Baltimore was followed, all cases being divided into 6 groups according to the history and operative findings: Chronic, in which the chief symptom was grumbling discomfort; chronic recurrent, wherein 2 or more definite attacks were reported and an internal operation was done more or less prophylactically; subacute, in which the operation was performed during or immediately following either a mild attack or one which was definitely subsiding; acute unruptured, in a large majority of which the appendix showed gangrenous changes; ruptured with abscess, in which there were definite signs of an attempt to wall

off the released infection; and ruptured with peritonitis, in which there was a fairly general or spreading infection, with little or no evidence of attempt at localization.

Some difficulty in classification arose naturally as the older charts were incomplete, too brief, or showed lack of laboratory study. Twenty-two surgeons performed these operations, 12 courtesy and 10 staff. The patients varied from ages 1 to 77; 561 were males and 652 were females. There were 60 who died, 2 on the operating table, and one, the longest to remain in the hospital, 160 days after the operation; 22 of the deaths occurred in women and 38 in men. The mortality rate for the various surgeons was very close, particularly in the last 3 groups. There were, however, more of the ruptured cases on the list done by the house surgeons.

The fact that 198 of the 1213 patients during this 10-year period had appendicitis which had already ruptured when operated upon shows the need to make an early diagnosis in order that an operation can be done before rupture of the organ. Factors aiding in the making of an early diagnosis are the leukocyte count and the percentage of polymorphonuclear cells. A proportionate increase respectively of these was shown as the incidence of the disease progressed from the chronic group to the acute ruptured with abscess. Pain and tenderness, according to these histories, were the earliest and most dependable symptoms. Only in a comparatively few histories was muscle rigidity or spasticity mentioned. Some 357 patients were mentioned as having vomited previous to operation, and only 78 were mentioned as having been constipated, and 22 as having had diarrhea. In 48 cases a cathartic had been taken previous to operation, with 7 deaths, a mortality of 14.5 per cent.

The mortality rate of the acute unruptured cases was far below that of either the ruptured abscess or peritonitis group. The giving of any laxative, cathartic, or purge is bad treatment if appendicitis is suspected.

In the attempt to lower the mortality of appendicitis another important consideration is that of time, both with reference to the duration of attack before operation and the time of hospitalization. In this group of cases the average time between the onset of symptoms and operation in the acute unruptured cases was only 2.8 days. In the cases ruptured with abscess the average time was 6.3 days, and 4.1 days in the cases of rupture with peritonitis. As so few of the histories included this valuable information, the above figures can only be taken as relative. They do point, however, toward the good sense of early surgical intervention. The average number of days in the hospital for the combined groups of ruptured cases was 23.9 days, whereas the average for the acute unruptured cases was 16 days. Another interesting finding was that of the nonacute cases; there were 37 cases operated upon with a period of hospitalization under 10 days. This again points to the wisdom of early and prophylactic operations. The old ice bag treatment, because of the delay which permitted spreading and intensification of the infection, is a dangerous method.

In order to supplement the above report, a study was made of the acute appendicitis groups for the following 2 years, viz., 1933 and 1934. There were operated upon in these 2 years at St. Joseph's Hospital 145 cases of the acute unruptured type, with 2 deaths, the mortality rate being 1.4 per cent. The onset of symptoms antedated operation on an average of 2.01 days. Ten of these patients had had a cathartic, all of whom recovered but averaged a day and a half longer in the

hospital. The others were in on an average of 12.1 days.

In the same period of time 15 cases of ruptured appendicitis with abscess were operated upon, one of whom, aged 71, died on the fifth day. The mortality rate in this group was over 7 per cent. One of this group had been given a cathartic, recovered, and was discharged from the hospital on the twenty-third day. The average time in the hospital for the others of this group was 22 days.

Of the 29 cases of appendicitis operated upon after the appendix had ruptured and spreading peritonitis had set in, 6 died, making the mortality rate 26.1. Eight of these patients had taken a cathartic, 2 of whom died. The averages in this series of cases compare very nearly to those of the previous 10-year period. The main difference was shown in the lowered mortality rate of the ruptured with abscess group, which decreased from 19 to 7 per cent.

In discussion John L. Atlee, Sr., said that the outstanding fact developed is the appalling mortality in the late cases and in those that have had laxatives administered. It is apparent that no surgeon and, therefore, no special treatment can avoid this mortality. If this mortality is to be avoided, these patients must be referred to the surgeon immediately. Unquestionably, we are seeing more late cases in the past 10 years than in the period preceding. In this preceding period we were appendicitis-minded. Literature, papers, and discussions were burning with the subject until the question of diagnosis and treatment was settled and the chapter closed, to be, alas, too soon forgotten. Our minds have been occupied with newer and unsolved problems. We must continue constantly to be appendicitis-minded in the case of every patient presenting acute pain in the abdomen. If a patient is sufficiently disturbed by acute pain in the abdomen to consult a physician, appendicitis must be considered as the first and most probable diagnosis. Pain starting in the upper or general abdomen and localizing in the lower right quadrant, nausea with or without vomiting, and usually failure of the bowels to move, with local tenderness and some rigidity are enough to insist on immediate hospitalization. To wait for fever, increased pulse rate, and leukocytosis is unnecessary and dangerous. The only way to prevent this terrible sacrifice of human life is to consider every patient presenting himself with acute abdominal pain as a case of appendicitis, needing immediate operation, unless you can definitely diagnose some other cause. If in doubt, give a placebo, order rest and starvation, and see your patient again in a few hours. Observe most carefully the localization of the pain, tenderness, and rigidity. If still in doubt, insist upon hospitalization or consultation.

Charles W. Ursprung said that it does not matter whether the mortality rate at one hospital is 1 per cent higher or lower than the other hospital, but the important point is the fact that many patients are dying each year from the effects of appendicitis. Education, both of the laity and the profession, has repeatedly been stressed as the way to reduce this mortality. Pound away at the facts that we all know but at times forget: In the presence of acute abdominal pain, never give a laxative, give nothing by mouth, and call your family doctor. In an exhaustive study of this matter, Haggard, in the April issue of the *American Journal of Surgery*, urged a vigorous campaign against the high death rate of appendicitis by the consideration of 3 factors: Hospitalize patients earlier, prevent administration of laxatives, and prevent mortality from spreading peritonitis.

Only one symptom is always present—pain; only one sign is uniformly present—tenderness; there is only one corroborative test—the leukocyte count.

No case of appendicitis is too mild to be operated upon. Conservative treatment is advocated by some, but certainly there should be no conservative treatment with patients who have taken a laxative.

Louise E. Keasby said that her experience would suggest that many cases of rapidly developing peritonitis were due to infection with *Streptococcus hemolyticus*. Streptococcal infection in the appendix is attended by the same grave sequelae as are noted with streptococcal infections elsewhere in the body.

WILHELMINA S. SCOTT, *Reporter*.

LUZERNE

Sept. 18, 1935

The meeting was held in the Medical Building, Wilkes-Barre, with Joseph P. Dougherty presiding.

Ross K. Childerhose, Devitt's Camp, read a paper on "Modern Methods of Diagnosis and Treatment of Pulmonary Tuberculosis." He said in part:

Some physicians consider the diagnosis difficult, but it is usually easy if time is taken to obtain a careful history. Always be suspicious of any one who has a chronic cough lasting more than 5 weeks. Often it is termed chronic bronchitis and frequently it is not so. Continued cough may also be present in bronchiectasis and lung abscess.

The symptoms are fatigue, history of pleurisy, and blood-spitting of over a drachm or more. In 900 cases, 27 per cent had râles, 99 per cent had roentgen-ray evidence, 35 per cent had tubercle bacilli in the sputum, and 12 per cent had pleurisy.

The physical examination is of less value in the early cases than roentgen-ray examination or a careful history. The roentgenogram shows definite evidence long before physical signs appear. In only 200 cases out of 1000 were there definite physical signs. In 400 the roentgen ray was the only means of making a diagnosis; 500 patients had cavities and only 5 per cent were discovered by physical examination. Always keep the disease in mind. The 5 cardinal points are: History of a chronic cough; history of pleurisy; hemoptysis; persistence of fine râles above the second rib in front, and fifth vertebra behind; and positive roentgen-ray plate.

Treatment should consist of modern methods. Morphine is not now given in a pulmonary hemorrhage. The blood carries bacilli with it and spreads to other parts of the lung. Calm the fears with barbiturates. Calcium or para-thor-mone are of no value. The best treatment is artificial pneumothorax to rest and collapse the bleeding part. Give codeine liberally to relieve the paroxysms of cough. The symptomatic care is simple, consisting of rest, nourishment, and plenty of time for cure. Too much emphasis has been laid on the use of fresh air. Localized rest to the lung decreases the toxemia and heals the cavities.

Collapse therapy causes a decrease in the circulation of the collapsed part, a relative anoxemia of the part, and increase of carbon dioxide tension in the tissues, and closure of the cavities, which results in the sputum becoming negative. If the sputum is positive, a cavity is present.

With artificial pneumothorax the air rises to the top of the lung. The more complete the collapse the better the results. In a series of cases 60 per cent of the pa-

tients with a complete collapse were alive at the end of 5 to 10 years.

Intrapleural pneumolysis is a method to cause collapse by cutting adhesions. Not all can be cut, especially those which contain lung tissue. About 70 per cent are successful. Eighty-five per cent of those having this method done can work after 4 years. One and one-half per cent is the mortality for this group.

Phrenicectomy is used in basal tuberculosis especially where there are adhesions at the base. Scalenotomy is being used more; in 135 cases 35 per cent were rendered free of tubercle bacilli. Extrapleural pneumolysis or the paraffin operation is another procedure. The cavity was filled with paraffin, and 70 per cent were benefited.

Thoracoplasty is used when pneumothorax is unsuccessful. The ribs above the diseased area are removed. The operation may be done in whole or in part. The periosteum is left in place and touched with 10 per cent formalin which prevents the regeneration of the ribs. The mortality in 3000 cases was 10 per cent.

The tendency is to allow a patient to work too soon. The time should not be less than one year. Pneumothorax or collapse should be maintained for at least 3 years. Between 3 to 5 years the lung may be allowed to expand. Use the sedimentation test to determine the time for return to work.

In discussion Herbert B. Gibby, Wilkes-Barre, asked if the speaker recommended phrenico-exeresis preliminary to thoracoplasty. Local anesthesia causes difficulty in doing intrapleural pneumolysis because the patient is nervous.

Dr. Childerhose said that Dr. Gibby had asked a controversial question. If the operation is to be of great extent, then the phrenic nerve operation should be done first. The temporary operations are being done more and more.

Oct. 16, 1935

The meeting was held in the Medical Building, Wilkes-Barre, Joseph P. Dougherty presiding.

Clyde M. Spangler, instructor in obstetrics, Jefferson Medical College, Philadelphia, gave a talk supplemented by lantern slides on "Prenatal Hemorrhage." He said in part:

Hemorrhage in the pregnant woman presents one of the most serious complications with which the obstetrician is confronted. It ranks third in the category of factors responsible for the persistent maintenance of a deplorably high maternal mortality throughout the world, being superseded only by septic infection and toxemia.

In a survey made in Philadelphia from 1931 to 1933, 121 out of 717 deaths were directly due to hemorrhage during some period of pregnancy.

In Jefferson Hospital there were 33 patients with placenta previa and 33 with premature separation of the placenta over a period of 5 years in 6962 patients. Bleeding is a symptom and not a disease, and the cause must be determined.

Abortion occurs during the first trimester of pregnancy. To date there is no definite explanation for its occurrence. The theories are: Abnormalities in development of the ovum; chronic metritis; uterine displacements, or restriction of normal development due to dense adhesions; and the possible effect of the glands of internal secretion. In spontaneous abortion the immediate cause of the expulsion is dependent upon hemorrhagic changes of the decidua.

Bleeding at times reaches alarming proportions. Seldom does a patient die of its effects, but rather as a result of sepsis. Especially is this true in the criminal abortion cases.

Abortions are managed with the thought of preserving the pregnancy. This can be done often by the use of sedatives and rest. Should it become inevitable or incomplete, evidenced by the passage of blood clots, persistent bleeding of increasing character, and the escape of amniotic fluid and uterine contractions of increasing severity, the uterus should be promptly evacuated with an ovum forceps or blunt curet. A negative pregnancy test is indicative of death of the fetus.

Hemorrhage from ectopic pregnancy is most serious during the early months. In the atypical cases bleeding is more or less constant, at first associated with pelvic distress typically unilateral but later due to pelvic irritation becoming general in the lower abdomen and being accompanied with the usual symptoms of pelvic infection. There is accumulation of blood in the pelvic cavity. Often these cases are curetted for a supposed incomplete abortion and the tubal pregnancy overlooked. Should there be doubt, the simplest means of diagnosis lies in the performance of a posterior colpotomy.

Hydatidiform mole is found during the second trimester. Hemorrhage is associated with an inordinate increase in the size of the uterus beyond that of the normal pregnancy. Grape-like masses intermixed with blood are irrefutable evidence of this condition. Prompt interference is necessary. After evacuation of the uterus, observations must be made to forestall chorionepithelioma. Pregnancy tests are necessary and, if positive reactions are noted, prompt removal of the uterus is necessary.

The conditions causing hemorrhage in the third trimester are placenta previa and premature separation of the placenta. The former is characterized by painless bleeding. Examination reveals an abnormal position due to the occupation of the lower uterine segment by the placenta. Also there may be heard the low uterine souffle. Roentgen ray shows the placenta lying subjacent to the fetal presenting parts. Premature separation presents a contrasting picture. Etiologically preëclampsic or nephritic toxemia is responsible in most cases. The former requires active prenatal supervision and the latter must be treated heroically.

The treatment must be active in both cases, and surgical. Patients with an undilated, thick, and firm cervix must have cesarean section done. With labor begun, the presenting part accessible, the cervix dilated, forceps or version with extraction should be done promptly. If the uterine wall has become suffused with blood, hysterectomy is indicated.

In every instance of bleeding in which the symptoms have assumed grave proportions, supportive blood transfusions are indicated.

Uterine rupture is always serious. In the past 10 years at the Jefferson Hospital, of 14,000 deliveries, rupture was seen in 5 cases. Three occurred in persons with cesarean section previously, 2 during attempted delivery. Postoperative sepsis was evident in those following the section. Occurring in the normally healthy uterus it is preceded by Bandl's ring. It is characterized by sudden, severe abdominal pain, shock, and features of internal hemorrhage. There is altered contour of the uterus. Proper prenatal care and the estimation of the patient's ability to deliver without difficulty should be observed. The active treatment consists in the removal of the fetus by the abdominal route, with amputation of

the uterine body below the site of the rupture. Supportive treatment for shock and hemorrhage should be instituted at once.

In discussion Max Tischler, Wilkes-Barre, said that ectopic pregnancy and concealment of hemorrhage can have associated with it a normal uterine pregnancy. He referred to such a case last year in the Wilkes-Barre General Hospital. The patient died after 20 hours in the hospital. She was nearly moribund upon admission. In the case of mole, Dr. Tischler asked how soon to interfere, and by what method.

Dr. Spangler said that there is not enough practical application of the theories and so it is best to use the older methods. To the question regarding mole, operate as soon as the diagnosis is made. The operation should be done from below. Pregnancy tests should be done at regular intervals and are positive if a mole is present.

MARJORIE E. REED, *Reporter*.

LYCOMING

Oct. 11, 1935

The meeting was held at Williamsport, with Herbert P. Haskin in the chair.

John B. Nutt read a paper on "Some Practical Applications of Studies of Maternal Mortality." These studies are taken from the Fifteen States Survey sponsored by the Federal Children's Bureau during 1927-28 (the number of puerperal deaths in this area was 7380); the New York City Survey, which included all the puerperal deaths in that area from 1930 to '33—2041; and the Philadelphia Survey of 1931-33, covering 717 puerperal deaths in Philadelphia. Thus a total of 10,138 puerperal deaths have been compiled and thoroughly analyzed by the Advisory Committee of the 3 surveys.

One of the most striking facts is the close approximation of results and conclusions of all 3 surveys, with entirely different personnel. This approximation would indicate that the conditions found were true for the country as a whole. Abstracts of each case history were done similarly in the 3 surveys, and the same is being used in the survey conducted by the Maternal Welfare Commission of the Pennsylvania State Medical Society. In addition to the usual data of birth and death certificates, the following pertinent facts furnished by the attending physician have been added to facilitate the study of each case.

26. Condition of the mother as to the presence of cardiac, nephritic, and tuberculous disease, tumors, syphilis, and relevant past medical or surgical history.

27. Incidence of intercurrent disease in this pregnancy and the time of onset.

29. Complications of this pregnancy and time of onset.

38. Presence of abnormal conditions at the onset of labor.

39. Prenatal care given, kind and amount, including summary of physical examination, heart, lungs, pelvis, or other abnormalities.

44. Presence of abnormalities affecting delivery in the third stage, as adherent or retained placenta, hemorrhage, uterine rupture, dystocia, *etc.*, and what treatment given.

57. Incidence of tears or episiotomy with degree and treatment, repaired or not.

59. Past obstetric history with time between births, any abnormality of the pregnancy, delivery, or puerperium.

60. Whether there were any operations, either incidental to delivery or as a secondary condition preceding death, and specify.

61. If home or hospital care. If home the type of conditions; if hospital whether planned or an emergency measure. The primary and contributing causes of death in detail, as listed in the international code.

140. Abortion (termination of pregnancy prior to 7 months) with septic conditions.

141. Abortion without mention of septic conditions.

142. Ectopic pregnancy with description of operative procedure, interval between the first symptom and operation; also if sepsis intervened.

143. Other accidents of pregnancy, not to include hemorrhage.

144. Puerperal hemorrhage from placenta previa or premature separation—time recognized and method of control. Description of treatment—was there transfusion?

145. Puerperal septicemia—was delivery operative or spontaneous? Type of postpartum care. Onset of symptoms after delivery in hours or days. Was there intra-uterine manipulation to deliver? Was there peritonitis? Report of culture or smcar. Specify treatment. Was there transfusion?

146. Puerperal albuminuria and eclampsia. Type of medical supervision up to the time of convulsions. Time of convulsions with regard to labor. Cooperation of patient. Treated at the home or in hospital. Details of treatment.

147. Other toxemias of pregnancy with duration of symptoms and description of operative or other treatment.

148. Phlegmasia alba dolens, embolus, and sudden death. (If embolus specify presence or absence of respiratory distress, cyanosis, pain, cough, and other suggestive symptoms.)

149. Other accidents of childbirth, including (1) cesarean section, type—classical or cervical; indications—elective or emergency; number of vaginal examinations, number of hours in labor, and whether or not there had been any operative interference prior to the cesarean section or any secondary procedures at the time of operation; (2) other operative or instrumental procedures during delivery, with indications; (3) ruptured uterus; (4) operative shock; (5) other causes of accidents of labor.

150. Other and unspecified conditions of the puerperal state, such as pyelitis, mastitis, mania, *etc.*

151. Nonpuerperal causes of death, either primary or secondary, such as appendicitis, pneumonia, influenza, *etc.*

In addition to the general conclusions regarding maternal mortality each of the 3 advisory committees attempted to analyze the cause of each death and to decide if such cause could have been eliminated, controlled, avoided, or prevented. They divided all deaths into 2 classes—inevitable and avoidable. An effort was made to fix the responsibility for the preventable factors. Such responsibility is divided between the patient and family or friends, and the physician or other attendant.

The responsibility of the death was assigned to the physician or other attendant when it could be shown that "a reasonable degree of learning and skill and the use of reasonable care in the exercise of that skill and the application of that learning" was not available to or exercised by the attendant at some time during the case.

In a general way the nonpreventable deaths fell into one of the following classes: (1) Hemorrhage—ante-

natal or postpartum—recognized and treated promptly in the accepted fashion; (2) spontaneous rupture unless due to drugs; (3) certain cases of ectopic pregnancy promptly and adequately treated, the patient not dying of sepsis; (4) exacerbation of certain chronic infections, caused by pregnancy; (5) acute infections complicating pregnancy, such as influenza; (6) some forms of cardiac, renal, or metabolic disease, some anemias, cancer, and organic diseases of the nervous system; (7) other uncontrollable factors difficult to evaluate must be kept in mind, such as general health and character of the population, race, housing, economic and social status, sanitary conveniences and personal hygiene, age, parity, *etc.*

General conclusions found present in all surveys are as follows:

1. Maternal mortality for negroes was higher than for whites.

2. Mortality was higher in the cities than in rural districts, in large part explained by the larger number of deaths from septic abortion in the cities and the many cases of serious complications in nonresidents brought to the city hospitals, where death occurs.

3. Parity, age, and the spacing of pregnancies were considerable factors in maternal mortality. There were more deaths in the very young, especially under age 15, and in those over age 45, the best age being from 20 to 25. The death rate was higher among primiparas, and the deaths showed a decrease up to about the sixth or eighth pregnancy, after which it abruptly increased. These figures show a potent argument for the need of some method of spacing pregnancies.

4. The death rate among the illegitimately pregnant was 2 to 3 times higher than in the legitimate, largely due to self-induced and illegal abortions. However, in one series the abortion deaths in married women were 50 per cent.

5. The Fifteen States Survey showed that in 9 per cent of the 7380 deaths there was no medical attention whatsoever or only when the patient was actually dying; 2 per cent died because of inaccessibility.

6. The period of gestation is a factor. For instance, the danger of abortion and ectopic pregnancy is greater in the first trimester, whereas most of the complications of pregnancy and accidents of labor are in the last 2 or 3 months.

7. Relative safety of hospital and home delivery was not evaluated in the Fifteen States Survey because of lack of data and also because many hospital deaths follow home delivery or attempted home delivery. However, it was concluded that there were too many hospital deaths, 899 or 12 per cent of all deaths. All surveys suggest that the facilities of a hospital tend to casual operative interference. Hospitalization has not reduced puerperal morbidity and mortality. Home confinements should include a program looking toward an increase in these deliveries. All 3 surveys reveal a higher incidence of operative interference in hospital practice, as high as 65 per cent in one hospital. A definite minimum standard of obstetric care should be adopted similar to that recommended by the American College of Surgeons, Twentieth Year Book, 1933, page 68.

8. Abortions accounted for one-fourth of all the 10,000 deaths, and 75 per cent were septic. In the cases of induced abortions 90 per cent died of sepsis. The Philadelphia report indicated that legitimately pregnant women died of septic abortion in twice as large numbers as those illegitimately pregnant. A 5 to 10 per cent reduction in total maternal mortality could easily

be brought about by education in contraceptive methods. As to prenatal care 40 per cent of the entire series received only the minimum adequate care; 40 to 45 per cent had none whatever. The minimum standard is given in the United States Department of Labor publication No. 153, 1925. It is also given in connection with emergency relief work. All surveys agree that this is the largest single factor for improvement in the death rate.

In the New York Survey 65.8 per cent of all cases were considered preventable; in the Philadelphia Survey, 56.7 per cent. Responsibility for nonprevention was assigned to the physician or attendant in 61.7 per cent in New York and 56.5 per cent in Philadelphia. In both surveys the patient's responsibility involved failure to obtain suitable care, ignorance, and lack of cooperation.

In conclusion, correction of preventable factors resolves itself into:

1. Remedial efforts to overcome lack of reasonable facilities. This must be dealt with differently in urban and rural areas.

2. Constant reiteration to prospective mothers, personally and publicly, of the dangers of induced and even accidental abortion.

3. Insistence on prompt, continuous, and adequate prenatal care in all cases.

4. Correction of errors in judgment and technic; graduate study, personally or in groups, should be taken.

5. Further education of the public regarding the physiology and adequate management of pregnant women.

6. Adoption and practice of at least the minimum standard of care by physicians and hospitals, and increased facilities for instruction of nurses, students, and interns.

7. The realization that the burden of prevention of preventable deaths lies on the doctors' shoulders in more than 50 per cent of the cases.

Charles Lehman gave a report with an analysis of 3 fatal obstetric cases. His conclusions were very similar to those offered by Dr. Nutt in his report. He gave in addition the statistics of the prenatal clinic in Williamsport.

Galen D. Castlebury read a paper, illustrated by roentgenograms and artistic sketches prepared by Henry B. Mussina, on "The Determination of the True Conjugate Diameter and the Diagnosis of Placenta Previa by Roentgen-ray Examination." He said in part:

The methods described in the literature appear to have been given such thorough trials with uniformly good results and to be so practical and relatively simple in execution as to warrant consideration whenever an occasion for their employment might arise.

Since the practice of obstetrics in all of its prenatal, natal, and postnatal phases is so complicated by the vagaries of nature, it is a fortunate circumstance that the more definite positiveness of the roentgen ray has been made adaptable in these deductions.

(The technic of determining the true conjugate diameter was described.)

The fortunate infrequency of placenta previa does not often command the necessity of diagnostic aid; nevertheless, the gravity of this complication is such as to commend any method of arriving at an earlier or more accurate recognition of the condition.

As in all diagnostic problems the clinical history is of prime importance, since the first appearance of

causeless, painless uterine hemorrhage occurring during the third trimester of pregnancy points the way to further investigation.

The anatomic relation of the pregnant uterus to adjacent structures constitutes the basis for roentgenologic interpretation.

Natural factors fortunately make the film demonstration possible. During the third trimester of pregnancy the bowels and omentum have been displaced superiorly and posteriorly, allowing the lower uterine segment to rest directly against the superior wall of the bladder with a tissue thickness of little more than a centimeter separating the uterine and bladder cavities. While the interpretation precludes that the presentation be a vertex one, it is a fortunate fact that 96 per cent of all presentations are of this type. The vertex in its normal position lies directly against the lower anterior wall of the lower uterine segment, the hard shadow of the fetal skull thus demarcating the inner uterine wall; the superior wall of the bladder can readily be demonstrated when that viscus is slightly filled with a contrast medium.

Although it is only the central or partial types of placenta previa that provide obstruction of such a degree as to be diagnosed on a film shadow, it is in these cases that diagnosis is most desirable as an immediate indication for the treatment to be instituted, mainly cesarean section.

(The radiographic technic was described.)

The accuracy of this diagnosis is attested to by a study of 35 cases of abnormal uterine bleeding occurring in the third trimester of pregnancy. Of these, 14 were demonstrated as cases of placenta previa, all of which were corroborated by clinical and operative findings. The remaining 21 cases were due to premature separation of the placenta, as shown at delivery.

The greatest value of this method lies in the fact that, in the majority of cases of suspected placenta previa, the diagnosis may be accurately determined without the necessity of vaginal examination and the inherent danger of infection of the genital tract.

LARUE M. HOFFMAN, *Reporter.*

MONTGOMERY

Oct. 9, 1935

There were present 53 members and 2 visitors. Motion pictures of eye operations were shown by Frank C. Parker, Norristown, of his work done at Wills Eye Hospital, Philadelphia.

Howard W. Hassell, chairman of a committee to ascertain the opinion of the members in regard to present laws governing contraception, submitted the following report, which was adopted:

RESOLUTION

WHEREAS, A questionnaire sent to each member of the Montgomery County Medical Society resulted in a vote of 85 to 15 in favor of changing the laws preventing physicians from giving contraceptive advice; therefore be it

Resolved, That the Montgomery County Medical Society requests the House of Delegates of The Medical Society of the State of Pennsylvania to initiate a comprehensive program with respect to contraception, instructing its appropriate agencies to undertake the necessary scientific study and to make every legitimate effort to have federal and state laws so amended as to remove the restrictions now affecting physicians; and that the secretary be hereby instructed to forward a copy of this resolution to the House of Delegates of The Medical Society of the State of Pennsylvania, and also to the House of Delegates of the American Medical Association.

The opinion is that the present use of contraceptives is too wholesale and indiscriminate, and that making it

lawful for physicians only to prescribe them would tend to keep the matter in its proper place under medical control.

WALLACE W. DILL, *Reporter.*

PHILADELPHIA

Sept. 25, 1935

On the occasion of the inaugural meeting the new president, George C. Yeager, was inducted into office. Mr. Conover, of the American Red Cross, made a plea for the support of this philanthropy by the medical profession. At the conclusion of this address, Dr. Yeager initiated an innovation regarding the treatment to be accorded the retiring president. Heretofore a gavel has been presented as an expression of appreciation, but this year the retiring president was the recipient of a life membership in the society by the action of the Board of Directors. This presentation was made to Seth A. Brumm, the retiring president. It is hoped that this custom will prevail.

The address of the retiring president was delivered by Dr. Brumm. (This appears in full in *The Weekly Roster and Medical Digest*, Oct. 5, 1935.) In it Dr. Brumm carefully analyzes the various projects undertaken by him and his associates in the administration of the society during the past year. Striking indeed has been his ability to inspire more than 400 members to take an active part in the committee and other work of the organization. These have been written in indelible characters in the history of this great medical democracy. He justly attributes to these members the accomplishments accredited to his administration and thereby calls attention to the fact that these projects are those of the membership.

His comments upon the physical plant of the society are most illuminating. He correctly assumes that the rightful place of the society as a civic force was assured when the organization provided a dignified home of its own. At the time of its purchase it was reasoned that the medical profession with all the authority at its command must guide the health activities of Philadelphia in conference with approved lay health agencies, or else eventually allow the laity to assume full control. The latter alternative was unthinkable. To attain its logical objective it was unanimously agreed that the society must have machinery with which to work, must have a building to house its machinery, and must have funds to run its machinery. The outcome of this understanding was the society building with ample facilities for bringing all other organizations into conference with the countless divisions of The Philadelphia County Medical Society on its own ground, the full time secretary, and the amplified official publication.

Adequate dues followed in time. In answering the hypothetical critics of the dues, Dr. Brumm accurately broke down the total into the various items covered by the dues and showed the direct value of each to be out of all proportion to the sum expended for all.

The value of organized medicine to public health departments and other governmental bodies was stressed. The subject of medical economics was carefully reviewed as it concerned the work of the society. The address concluded with a broadside directed towards the nationalization of medicine. It covered every phase of the attempts at socialization of medical practice and ended with a plea for the conservation of a high type of medical practice to be retained in the hands of the well-educated family physician.

Oct. 9, 1935

This meeting was in the form of a pediatric symposium. It was opened by Howard Childs Carpenter who read a paper entitled "The Physical Appraisalment of the Child." He stated that the appraisal should determine whether or not the child has achieved the fullest possibilities of his inherent physical endowment. Naturally a complete physical examination is an essential part of such an appraisal. The examination should be thorough and must include studies of the infections, defects of growth, and the presence or absence of allergic or other similar disorders. Most abnormalities do not occur suddenly or disappear suddenly. It is simply our inability to recognize them that occasions embarrassment. We are likely to be too premature in pronouncing their disappearance. A health appraisal undertakes to determine the type of child under consideration, the build, physical assets, and individual peculiarities. The limitations and potentialities of his environment must also be appraised. The findings for the specific child must be made at a specific time. Every child is different. It is therefore our object to interpret and evaluate the factors individual in each child. Dr. Carpenter believes that the standards usually employed are not sufficiently high and really represent substandard conditions. This thought was intensively delineated. His message stressed the importance of repeated examinations carrying with them the understanding that merely the absence of active disease does not imply perfect health in the child, and that functional impairments from various causes may retard maximum development in the absence of true pathologic involvement. Health appraisals undoubtedly will assist the child to meet the contingencies of life.

"Abortive Poliomyelitis" was presented by James Dowling Trask, of Yale University. In the opening remarks he referred to his early work in this subject in collaboration with John R. Paul, of Philadelphia. He discussed the method by which the virus is detected and the places where it is found, illustrating the text by lantern slides. The virus is detected only by the reactions it produces. It is found with considerable regularity in the spinal cord of persons who die from the disease but is rarely found in nonfatal cases. Since 1910 to the present time, the virus has been found in only 11 living patients (nonfatal cases). It has been found 3 times in healthy carriers, twice in contacts, and once in an apparently healthy person who was never in contact with the disease. Poliomyelitis is a very common disease, and the abortive form is 4 to 6 times as common as the frank kind. The principles of epidemiology are as important in the study of this disease as are bacteriology, pathology, or chemistry.

In the discussion, Charles Noone said that this summer there appeared in Philadelphia an epidemic (substantially) of poliomyelitis, the cases of which were chiefly abortive in type. It appeared at the time when poliomyelitis is usually prevalent in this community, and while these cases were occurring there were cases in and about Philadelphia which had undoubted paralysis. This was also true along the eastern seaboard this season. There have been epidemics of anterior poliomyelitis in which an unusually small number of cases with actual paralysis was reported. But these cases had the usual signs of poliomyelitis; they had altered reflexes (transient in many cases). They were almost invariably featured by fever, headache, and vomiting, with an increased number of cells in the spinal fluid. All this sounds exactly like abortive poliomyelitis. It is only when the epidemic is considered as a whole that any

divergence from the abortive form is noted. Otherwise, there was a disproportionate number of cases without any paralysis. In a given period, on the service of Wm. N. Bradley, of the Philadelphia General Hospital, of 119 cases admitted to the children's ward, there were 37 cases which seemed to be poliomyelitis. All were verified by lumbar puncture, and not one had any degree of paralysis. A disproportionately large number of adults was affected. At the time the 37 cases were received in the children's ward, there were in other wards 25 or 30 adults who had no paralysis. The signs these children showed and the general picture they presented seemed almost too definite and uniform, more so than the cases which were observed in abortive poliomyelitis. They seemed to have a given duration and a given termination, and one case was very much like another. There was a very marked familial incidence. The experimental work done at the Children's Hospital has been quite inconclusive. If these cases were not abortive poliomyelitis, certainly they appeared coincidentally with the epidemic in Philadelphia. If these cases were poliomyelitis, then we are confronted with the idea that the virus must have a different behavior at different times, places, and occasions. It is obviously impossible to explain the situation on the basis that half of Philadelphia has a different immunity to poliomyelitis. As a final thought, there is a question which will call for a great deal of additional work. Why does abortive poliomyelitis change so much with different circumstances. Can there possibly be any connection with the increase in virus infections?

"Roentgenologic Study of Diseases Affecting Long Bones in Children" was presented by Ralph S. Bromer. By means of lantern slides the essayist traced the progress that has been made in the past 14 years in the recognition of certain conditions in children by means of the roentgen ray, taking the long bones for such studies. These slides covered various phases of anemia, chronic lead poisoning, rickets, Gaucher's disease, infantile scurvy, and other conditions of juvenile pathology.

Oct. 16, 1935

This was a special meeting designated as George A. Knowles Memorial Night. J. Norman Henry, Director of Health, Philadelphia, made the address in the presentation of the bronze bust of the late George A. Knowles to the society, made possible by funds collected by the Memorial Committee. The eulogy served to emphasize the high esteem in which Dr. Knowles was held by his many friends and associates within and without the medical profession. His sacrifices for the benefit of the organized profession were extolled as well as were his kindly personal attributes. President George C. Yeager of the society made an address of acceptance of the bust for the society, reiterating those qualities of Dr. Knowles that had endeared him to his fellow practitioners.

The scientific program provided for the meeting comprised topics of a public health character by reason of Dr. Knowles' close affiliation with the Department of Health.

"A Résumé of the Recent Typhoid Fever Outbreak in Philadelphia" was presented by George E. Johnson, of the City Department of Health. (This was published in full in *The Weekly Roster and Medical Digest*, Nov. 2, 1935.) It was pointed out that this outbreak followed a supper given in honor of an American Legion post on Memorial Day, 1935, in West Philadelphia. This city had been congratulating itself upon the steadily declining case and death rates of this disease,

which in 1933 reached a minimum of 105 cases and a death rate of 0.6 per 100,000, thereby winning a second honor among metropolitan cities of the country. With the elimination of water and milk as sources of infection, attention became centered on the prevention, detection, and control of chronic carriers, who since 1922 have been placed under the jurisdiction of the Health Department. It was from a carrier that the outbreak under consideration arose. This Memorial Day dinner was attended by 264 patrons and guests, 228 of whom were Philadelphians and 36 residents of near-by townships. Two cases (mother and child) were reported in the incipient stage on June 18, 1935, by a hospital in this city; the home address was in West Philadelphia. They had attended this dinner. On June 20, 2 more cases were reported from the same neighborhood by the Delaware County Hospital. The following day 3 other children in the same neighborhood were reported by the attending physician. The outbreak eventually totalled 86 cases with 6 deaths. The investigation covered the laboratory study of all those that supplied or handled food or drink in connection with this dinner. It isolated the potato salad served at the dinner as the medium of infection and determined 2 of the food handlers as potential carriers of the infection. On June 25 one of these was designated as the true source. This study reflects most creditably upon the promptness and efficiency of the City Department of Health.

"The Prevention of Scarlet Fever" was presented by Harriet L. Hartley, of the City Department of Health. The years 1931 and 1932 brought to Philadelphia visitations of scarlet fever which were almost epidemic in character and inspired an intensive study in the field of prevention. The Director of the Department of Health, J. Norman Henry, invited Gladys Dick to Philadelphia in July, 1932, to demonstrate the Dick technic for the use of scarlet fever toxin as a testing and immunizing agent in scarlet fever. Dr. Hartley's paper reviewed the work done by the Health Department in this field, which is now rather well known through the publication of Dr. Henry's paper in the *Health Bulletin* and the *Journal of the A. M. A.* The statistics cited by Dr. Henry and Dr. Hartley would tend to show that it is a reliable method of prophylaxis provided the technic is carried out exactly as outlined by the Dicks.

"Opportunities of Reducing Maternal and Infant Mortality in Childbirth" was presented by Philip F. Williams. Notwithstanding all that has been said and done the reduction in maternal mortality has not been very great although there has been a decided improvement in the classification and recording of the deaths in this period, and with a clearer understanding of the situation much advance is anticipated. Great stress was laid upon the desirability and necessity of greater education regarding maternal welfare so that all groups concerned should be reached. Obstetric teaching is inadequate. Conservative obstetrics should be stressed more in the teaching of students and interns. There is need for obstetric residents in maternity in this country. It would seem advisable for every hospital having 1000 deliveries or more per year to establish a residency in obstetrics for graduate training. A certain amount of graduate instruction might be obtained, too, if hospitals would open their doors to community practice in maternity work. Hospitals should provide more beds for patients requiring prenatal study or treatment. It is important to provide adequate care and supervision of the prospective mother during her entire pregnancy. The value of intrapartum care also should be stressed. It has been shown by obstetric staff conferences and

surveys on maternal welfare that certain cases are treated improperly at delivery because of inexperience or lack of judgment on the part of the attending physician. More frequent consultations would be of benefit in giving advice and rendering additional assistance in complicated cases. If consultations were required in all major obstetric procedures, there would be a great reduction in operative incidence and its attendant hazards. The author concluded with a plea for greater education of the physician and patient.

"Prevention of Cancer" was the title of the paper read by Stanley P. Reimann. This paper was a brief sketch of the research work being done in this field and not an outline of a direct prevention. According to the latest views it is possible to prevent "somatic mutation," which is the histologic condition that eventually becomes cancer. Somatic mutation is the change in the internal mechanism of the cells whereby, instead of turning into normal units and replacing parts or enlarging organs for physiologic needs, etc., the cells do not turn into any structure but simply keep on multiplying without fulfilling properly their next function of maturing and growing with others in an orderly fashion. It is now definitely thought that the trouble is inside of the cells. Therefore, whatever changes occur in the environment of cells, using the term environment in its broad sense, must change their internal makeup before cancer can arise. Although cells are adaptable in high degree to changes in environment, there are certain environments—chemical and physical—that do affect the cells promptly, but their effect is manifested by an alteration in the internal composition of the cells so that they no longer mature as do normal cells. Reference was made to the influence of hormones in affecting differential growth, which is also in relation to cancer development. Hormones, however, have no direct effect upon the production of cancer. One of the most important characteristics of cancer cells is that they do not respond to the bodily influences which normally control growth. There seems to be an hereditary make-up predisposing to cancer. Early diagnosis is the pivotal point of prevention of mortality. Evidences of increased cell proliferation, especially in those with a family history of cancer, indicate prompt removal of such growths. The speaker concluded with an impassioned plea for greater enthusiasm for research work in this field.

SAMUEL HORTON BROWN, *Reporter.*

WARREN

Oct. 21, 1935

The meeting was the largest in our history; 34 members out of a possible 43 were present.

A graduate course is being organized with 30 participants; it will be held at the Warren State Hospital.

Thomas E. Jones, gynecologist of the Cleveland, O., clinic, the guest speaker, described the "Radium Treatment for Cancer of the Cervix Uteri." He said in part:

In spite of all the warnings issued about cancer, late cases are still too frequently seen. Physicians are to blame for some of these neglected cases because thorough and earlier examinations are not made. A diagnostic curettage with biopsy should be done in all suspicious cases. Radium is the treatment of choice in early as well as late cases.

Prophylaxis is of the greatest importance; the prompt repair of all cervical tears and the early treatment of

erosions by an electrocautery (linear cauterization) will do much to prevent cancer of the cervix.

There is seldom any metastasis to distant organs in this type of cancer; therefore, good results are obtainable if the affected area is treated thoroughly.

Large massive doses of radium over a short period of time rather than smaller doses are advised. In order to expose properly the cervical canal and fundus and place the radium in direct contact with the diseased area, the patient is anesthetized, as the treatment is painful. The patients leave the hospital the following day, but are required to return in 3 weeks for high voltage roentgen-ray treatment for 3 weekly treatments, then 3 monthly treatments, and then every third month for a year.

There are complications in this treatment due to burns of the bladder, rectum, and colon, which may be mistaken for recurrence.

Scars resulting from the irradiation may cause stricture of the bowel of a benign nature and yet severe enough to require resection. These complications may occur long after the treatment—from 8 months to 8 years.

Radium treatment should be undertaken only by those sufficiently equipped to care for the immediate and late complications. There is much variation in the use of high voltage roentgen ray by different radiologists. The higher voltages are preferable. Radium and roentgen ray are merely forms of heat and have no selectivity in relation to cancer cells. They cauterize like other types of heat energy.

MICHAEL V. BALL, *Reporter.*

YORK

Oct. 16, 1935

President Robert L. Ellis was in the chair.

Sydney Miller, clinical professor of medicine, Johns Hopkins University Medical School, Baltimore, discussed "The Present Conception of Nephritis, Including Treatment."

He said in part: During the past 100 years the newer physiology of nephritis has been understood; during the past 25 years the knowledge of the newer physiology has been brought to modern understanding. Nephritis is divided into 3 main groups: Glomerular, acute and chronic; nephrosis, the degenerative types; and nephrosclerosis, including essential hypertension.

Is there renal sufficiency or renal insufficiency? Renal function consists of 3 physiologic activities: Glomerular filtration; tubular resorption; threshold and nonthreshold bodies.

Further renal function is 3-fold: To maintain proper water balance in blood plasma; to concentrate chlorides; and, to maintain acid-base equilibrium. The first function is the most sensational and is the first to become involved in supervening nephritis.

Maximum renal efficiency is that condition in which kidneys are able to eliminate a great excess of water in a short time, in which water is conserved and all waste products of protein metabolism eliminated. Two-thirds to three-quarters of the normal renal structure must be destroyed before this function of the elimination fails, and this function is the last to fail in disease.

The specific gravity infrequently changes first in all forms of nephritis.

The phenolsulphonphthalein function test still holds reasonable place in function, but it is better done frac-

tionally at one-half hour intervals and the excretory power of the kidney charted in this manner.

Studies in blood chemistry are well intended, but they are illogically chosen.

The urea clearance test (van Slyke) is the most accurate laboratory approach to the mathematical picture of renal sufficiency or insufficiency.

In the urea ratio (ratio of urea nitrogen to total non-protein nitrogen of blood) 40 to 45 represents normal renal sufficiency; between 80 and 90 is markedly abnormal.

In acute forms of nephritis various strains of streptococci are more common. No acute forms are degenerative in type. The treatment of chronic nephritis is really treating part of a general disease. An adequate diet, including an adequate amount of protein food, is essential. With a high protein intake a high blood plasma protein can be produced. In hypertensive patients a low-salt or salt-free diet is not indicated, but in nephrosis chloride restriction is necessary because urine elimination is low and there is an absence of glomerular disturbance. Loss of protein causes the edema of body itself in the nephrosis.

General therapy takes into consideration 4 factors: Edema, which is rarely treated; anemia, which must be combated early by blood transfusions even when nitrogen retention is high; retention of nitrogenous products, only one-half gm. per kg. of body weight; and hypertension with cardiac failure—long digitalis treatment with hope that blood pressure will not fall as glomerular function fails when pressure is low.

The past 20 years have been fruitful in the study of kidney disease; renal physiology is better known; the cause and cure of the great majority of nephritics are unknown, especially the essential hypertension types.

In discussion Charles Rea, York, asked why so many varied blood urea indices were used in hospitals to-day; only the gasometric method of Van Slyke or the Folin method are used by him. In cases in which there is edema, frequently not enough protein is administered for kidneys to work on in so far as this element is locked up in the body cells only to be liberated by the internal administration of hydrochloric acid. Julius H. Comroe, York, stated that there is no rigid rule in treating each patient. What is the value of total protein in blood as a functional test, and what protein ratio to globulin is considered important? How does the sulphate clearance test compare with the urea clearance test in renal disease? George E. Holtzapfel, York, stated that Porter 41 years ago advocated liberal protein diet in nephritis; that protein is always protein, regardless of the food from which it may be derived; that each case must be treated individually.

Benjamin A. Hoover, Wrightsville, stated that he uses in many cases some form of theobromine. W. Frank Gemmill, York, stated that if serum globulin falls to 4.5 it is a bad prognostic sign. A patient may have a normal kidney and yet the serum globulin be low. In such cases blood transfusion should be done and glucose given intravenously. Scarification should be done to relieve edema if there is a normal serum globulin.

Dr. Miller, in closing, stated that he had no experience with the sulphate clearance test. There are many clearance tests now in vogue. Disturbances in the serum globulin ratio occur in diseases other than those of renal insufficiency.

H. MALCOLM READ, *Reporter.*

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

That there may be coördinated effort on the part of the state chairmen of the several committees, your president has sent to each county president a questionnaire asking for the roster of officers and chairmen of each component auxiliary. Without these names your state chairmen cannot do effective work.

Up to Nov. 10, the following counties had responded: Allegheny, Berks, Blair, Butler, Clearfield-Center, Chester, Clinton, Dauphin, Delaware, Elk-Cameron, Erie, Huntingdon, Lackawanna, Lancaster, Lawrence, Lebanon, Lehigh, Luzerne, Lycoming, Montgomery, Northampton, Philadelphia, Schuylkill, Somerset, Warren, Washington, Wyoming, Westmoreland, and York.

Tucked away in desks throughout the state are the others. You have already received a second call for these. *Please send them to your president.*

The president has visited Philadelphia, Montgomery, Lehigh, and Clearfield-Center counties. From the last named, she went to the National Board meeting in Chicago, and returned by way of Pittsburgh to attend a meeting of the Allegheny County Auxiliary.

The months are slipping by and the year will, all too soon, be robbed of active work by the summer months, so please use the days that are at hand to their fullest, that we may write a new page of greater endeavor with its attendant results in auxiliary achievements.

Along with your president's Christmas Greeting goes an earnest wish that each one will find some place in her Christmas activities for a thought of benevolence. If there be a doctor or any of his dependents who have been caught in the clutches of misfortune, will you share a little of your plenty with them. No one can do this with better grace than a doctor's wife. Your Christmas will be the happier thereby.

Your president hopes that she may soon see you in your own county, and, until then, she wishes you and yours the Merriest Christmas ever.

MRS. W. BURRILL ODENATT.

SUBSCRIBE TO *HYGEIA*

TO THE MEMBERS OF THE AUXILIARY:

Wherever in this state your lives may be cast, make Pennsylvania a bit more beautiful and better because you have lived in it. William Penn once said, "And my God will make Pennsylvania the seed of a nation, that an example will be set up to the nation."

As we look through the door of a new auxiliary year, we vision enlarged opportunities, greater possibilities, and added responsibilities.

Having served as county chairman of *Hygeia* for 3 years and having broadcast authentic health news among the laity, my thoughts naturally turn to that phase of work which has been nearest my heart—the promotion of *Hygeia* throughout the country.

Realizing the direct need for some instrument for conveying medical knowledge in a colorful, interesting way, which the masses could read and understand thoroughly, the American Medical Association sponsored the magazine *Hygeia*, which deals with the health problems faced by people of every age and in every walk of life.

At the Philadelphia session in 1931, the American Medical Association adopted the following resolution: "That the House of Delegates *urge* the Woman's Auxiliary to the American Medical Association, including county, state, and national organizations, to recognize as its chief activity the promotion of the distribution of *Hygeia* through parent-teacher associations, boards of education, and similar bodies interested in education."

As we turn the first page in the history of the new administration, while it is clean and new, let us write on it this challenge: "The Promotion of *Hygeia*." It is one of the finest pieces of work ever delegated to a body of women. We have accepted it as a great privilege and have taken up the torch where our predecessors have left off, brandishing it high in the name of humanity.

Our slogan this year is, "Every member a subscriber to *Hygeia* or responsible for a subscription." We have 1680 members in our state auxiliary and are asking for that many subscriptions. Surely you will not refuse to subscribe for *Hygeia*.

When the year has passed, as it will all too quickly, let us look upon this great piece of work as a picture well depicted in all its portrayals, each state having painted in her part as a unit toward a whole, and let us make our part of the presentation worthy of the history of Pennsylvania. Our auxiliary picture is changing by rapid strides; for instance, last year Georgia, Michigan, and a few other states daubed and even splashed on the paint, giving brilliant effects by adding hundreds of subscriptions to *Hygeia*. As each county in each state coöperates and does teamwork, our national picture can be kept true to its color scheme. Our *Hygeia* chairwomen are skillful artists and are ever ready to supply the right colors you are needing to make your state portrait worthy of the national picture.

Our stage setting is also ever changing; every coun-

ty in the state is our stage—you and I are the actors. The drama is waiting for us to take our parts. The curtain is rising and unfolding a new year. As your stage manager you will find me ready at all times to prompt your lines, shift the scenery, start the orchestra, or do anything I possibly can to make this year one grand success for *Hygeia*.

(MRS.) CECIL F. FREED,
State *Hygeia* Chairman.

THE HARRISBURG CONVENTION

In Pennsylvania there are 49 organized county auxiliaries, with 4 affiliated counties. At the convention 44 county auxiliaries responded to the roll call with written reports. During the year every county contributed to the Medical Benevolence Fund, with a total of \$3005. The total registration was 446, of which 25 were state board members, 85 delegates, 39 alternates, 277 members, and 17 guests. Three past national presidents were in attendance.

The business meetings were so well attended that after the first session it was necessary to secure more commodious quarters.—*Pittsburgh Medical Bulletin*.

"WHY AN AUXILIARY?"

The campaign now well under way to form auxiliaries to the county and state medical societies gives point to the question raised in the *Wisconsin Medical Journal*, "Why an Auxiliary?" We might as well ask, "Why a Wife?" says the writer, who dips his pen in effervescent ink and gives us this:

Medical organization went on for nearly a century in a state of single blessedness. Like an old bachelor it never seemed to realize that it was doing many odd jobs which could be done by a helpmate and that its standing in the community was being sorely neglected. Then one spring morning some 10 years ago came a comely lady, who announced herself as Mrs. Auxiliary, rolled up her sleeves, nudged Mr. Medicine in the side, and said, "Shove over—I'm going to pitch in, help get your house in order, and I'm going to be your partner."

The old fellow, unaccustomed to team work, grumbled and still sputters at times, but down in his heart realizes how efficient she has been. During the years she has grown and developed into a buxom housewife, on whom he has learned to depend more and more. She has been helpful in more ways than he realizes and she can do more and more for him as time goes on and he learns more to rely on her. Her main job is to improve his standing in the community. He has been a hermit and has covered up his sterling qualities and his good deeds. He has had few contacts with others and she can do much in bringing about a better appreciation of his work and of his worth.—*N. Y. State J. M.*, Oct. 15, 1935.

COUNTY AUXILIARY REPORTS

Allegheny.—The fourth General Health Program Conference sponsored by the Public Relations Committee of the auxiliary was held Nov. 1 at the Congress of Clubs; 44 groups were represented including church, club, and parent-teacher organizations.

Mrs. Daniel N. Bulford, committee chairman, presided and gave a review of the previous conference including a discussion of various types of health programs and materials published by the American Medical Association and available for use. The speaker of

the conference, Dr. Thomas B. Carroll, spoke upon "The Patient and the Doctor." He said in part:

The relation of the patient and the doctor is first the selection of the doctor. A good doctor is a man who gets good results. The lay idea of a good doctor is the doctor who takes the patient to the edge of the grave and then drags him out. The doctor should keep his patients out of trouble. A good doctor is a gentleman, cultured, refined, and sincere, is not an exploiter, and is recognized with ease by other physicians and only with difficulty by the lay people. He is not a profiteer. The line of demarcation between the exploiter and the profiteer is very slight. He is not a catering doctor—making a case out of a patient's complaints. This type of doctor finds out what the patient wants and tries to please the patient often without regard to the patient's best welfare.

Generally speaking not one patient out of every 4 who present themselves to the doctor for operation requires operative care. The doctor, therefore, who operates on all patients is operating unnecessarily in many instances, is not serving the patient's best interests, and is unworthy of confidence. Cesarean section is a very necessary operation when indicated. Under ordinary circumstances not more than 1 or 2 patients in a thousand should die from causes related to child birth.

Avoid any doctor who has a special method and cures all ills. He is insincere, is biased in his judgment, and is unsafe. Avoid the doctor who talks about patients all the time. Avoid the doctor who condemns another doctor with faint praise. A doctor who is not fair with his contemporaries is not fair with his patients. Avoid the doctor with the fancy office and all sorts of unworkable machinery and impressive equipment. The waiting room of a sincere physician is merely livable and attractive. The source of information for health problems is your tried and trusted family physician. Every lay person should go to the family doctor with every trouble; he will direct them to the needed specialist.

A motion picture entitled "Throne Rooms of the World" was shown, which depicted the effect of diet upon the history and survival of the various nations. This film was furnished by the Pittsburgh District Dairy Council.

The conference is planned with the aim of reaching lay groups through their representatives. Interest is growing as was demonstrated by the attendance and enthusiasm shown. Group meetings of this type make for better understanding between the medical societies and the public, and promote coöperation.

Berks.—The annual summer outing of the Berks County Medical Society and the auxiliary was held July 10. The auxiliary had a birthday cake commemorating the tenth anniversary of the founding of the organization; Mrs. C. D. Werley, our first auxiliary president, was an after-dinner speaker.

In September, the beginning of the year's activities, we entered upon a new decade. Programs for the year in the form of booklets listing meetings, officers, and other data were mailed to all members and prospective members. The Berks County Federation of Women's Clubs and Allied Organizations accepted the Woman's Auxiliary to the Berks County Medical Society as an allied member. We hope, through this larger contact, to further the spread of authentic health information.

A benefit card party was given by the Budget Committee at Medical Hall, which was a financial success.

Forty-one members motored to Meadow Grove, the summer home of Mrs. Malcolm Z. Gearhart, for our first regular meeting; 3 new members were welcomed.

On Sept. 19, the Second Councilor District meeting was held at the Reading Country Club. At the morning session of the auxiliary, Dr. Ruth Hartley Weaver, Philadelphia, read a paper on "Prenatal and Maternity Care." Guests were present from 6 counties. Honor guests were Mrs. Laurrie D. Sargent, state president, Mrs. W. Burrill Odenatt, state president-elect, and Mrs. John A. Farrell, district councilor.

Under the auspices of the Medical Society the auxiliary maintained a booth at the Reading Fair. Posters were displayed, motion pictures were shown, and several thousand pamphlets on health matters were distributed to the public.

Our auxiliary is proud to have had Mrs. Cecil F. Freed appointed State Chairman of *Hygeia*.

The October meeting was held at Medical Hall. Mrs. Paul C. Craig, our president, reported on the State Convention and Mrs. Arthur A. Cope discussed current medical events. There was a group of dramatic readings, and tea was poured. Mrs. Craig entertained the executive board and committee chairmen at a buffet luncheon, when plans for the year were discussed.

The November meeting was held on Armistice Day. Mlle. Germaine Benoit spoke on "International Relations."

Our auxiliary is helping with the preparation of the Christmas Seals for the mail. We are responsible for having volunteers working one afternoon each week.

Dauphin.—The regular meeting of the auxiliary was held Oct. 15, at which time the convention chairmen gave their final reports. It was voted to change our fiscal year to correspond to the fiscal year of the State Auxiliary, and the president appointed a committee to revise the constitution. Two new members were elected, making a total membership of 128 members.

Our corresponding secretary, Mrs. H. Drury Hawkins, as captain, and a very energetic group of doctors' wives, have successfully gone over the top in reporting their sales of Christmas Seals. Our president, Mrs. George H. Seaks, will captain a team for the local welfare drive and will be assisted by many doctors' wives from the auxiliary.

The members of the Harrisburg Academy of Medicine entertained their wives at a dinner dance Nov. 19, at the Penn-Harris Hotel.

Delaware.—The meeting of the auxiliary was held on Oct. 10 in the newly decorated sun porch of the Chester Hospital, with the new president, Mrs. Walter E. Egbert, in the chair. Delegates who had attended the recent convention of the State Auxiliary at Harrisburg presented reports of the highlights of the business sessions and social functions. A talk was given by Miss Harriet Oliver of Chester on "The Passion Play of Oberammergau," which she witnessed in 1934. Refreshments were served.

Elk.—On May 16, a meeting of the auxiliary was held at the home of Mrs. Norman R. Benner, Johnsonburg. It was approved that the regular meetings be held every 3 months.

The meeting of Aug. 29 was held at the Schaner Cabins, St. Mary's. Dinner was served to 9 members. Plans for ways and means to increase the financial standing of the auxiliary were discussed. A card party

was agreed upon and held Sept. 24, at the C. D. of A. Home in St. Mary's; 125 members and guests attended.

Franklin.—The meeting of the auxiliary was held on Nov. 6, at the home of Mrs. James H. Swan, St. Thomas. Miss Edith Morton, home management specialist of the State College extension service, gave an address on "Home Is What You Make It." The president, Mrs. Ambrose W. Thrush, of Chambersburg, presided. The roll call was answered by the members on the subject, "Eminent Women Physicians." Three new members were added to the roll. A social hour followed.

Lackawanna.—The auxiliary held a luncheon meeting, Oct. 8, at the Scranton Chamber of Commerce with Mrs. Harry M. Kraemer presiding. Reports on the recent Harrisburg convention were read by the following delegates: Mrs. William T. Davis, Mrs. J. William White, Mrs. James D. Lewis, Mrs. Frederick J. Bishop, Miss Sadie Falkowsky, and Mrs. Harry M. Kraemer.

On Oct. 26, the auxiliary held a card party at the W. W. Scranton residence, with more than 100 members and guests in attendance. Prizes were awarded and refreshments were served.

Mrs. Harry M. Kraemer was recently appointed councilor for the third district, which comprises 8 counties.

Luzerne.—The meeting of the auxiliary was held Oct. 9, at the Woman's Clubhouse, and was well attended. Mrs. Clarence W. Prevost, president, outlined the work for the coming season. The delegates to the State Convention gave concise reports. A guest speaker, Mrs. A. B. Shutts of West Pittston, who was a delegate to the convention of the State Federation of Pennsylvania Women held recently at Erie, gave excerpts from convention speeches given by national figures.

During the meeting the women folded bandages for the various hospitals. Refreshments were served.

Montgomery.—The auxiliary held its regular meeting on Oct. 9, at the Plymouth Country Club, with 22 members present. The business meeting was followed by cards. Reports of the State Convention were submitted by Mrs. J. Newton Hunsberger, Mrs. John G. Wilson, and Mrs. Joseph M. Ellenberger. Announcement was made that the project of sewing for the county poor, begun at the last meeting, had proved successful. Fifty new garments and a number of slightly used articles of clothing had been given to the Social Welfare Council for distribution.

State Health Day, Oct. 21, featured a program at the Y. W. C. A., which included music and talks on "Mental Hygiene and the Preschool Child."

Philadelphia.—The auxiliary held a meeting on Oct. 8, with a large attendance. The president, Mrs. Milton F. Percival, presided. Dr. George C. Yeager, president of the Philadelphia County Medical Society, gave an address and stressed the importance of women's aid in connection with the State Society welfare work. Mrs. W. Burrill Odenatt, president of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania, gave an address, and tea was served.

The Ways and Means Committee held a card party on Oct. 28. The auditorium was packed to capacity. On Nov. 25, a Thanksgiving card party was held.

Tioga.—The auxiliary met with the Society at The Little Tavern in Mansfield, Sept. 20, for dinner. The following officers were elected for the coming year: President, Mrs. Robert D. Leonard; vice-president, Mrs. Hughes G. Meaker; treasurer, Mrs. Charles W. Sheldon; and secretary, Mrs. Kenneth W. Watterson. The latter 2 officers were reelected.

One delegate and 2 alternates were elected to attend the State Convention at Harrisburg. We have an eligible list of 20 members. This year our aim is 100 per cent active membership.

Westmoreland.—The meeting of the auxiliary was held at the Latrobe Country Club, Oct. 8, with 31 present.

Mrs. Walter M. Bortz, Mrs. Bert F. Ober, and Mrs. R. E. Lee McCormick gave reports of the State Convention held at Harrisburg.

The benefit bridge party netted \$335.75, which is to be used to buy glasses for children.

After the business meeting, bridge was played.

Medical News

Births

TO DR. AND MRS. JOHN E. THOMPSON of Youngsville, a son, recently.

TO DR. AND MRS. BASIL R. BELTRAN, of Philadelphia, a son, Basil L., Oct. 12.

TO DR. AND MRS. STEPHEN DANA SUTLIFF, of Philadelphia, a daughter, Katharine Wood, Oct. 10.

Engagement

MISS MARGARET JANE ULLOM, daughter of Dr. and Mrs. Josephus Tucker Ullom, of Philadelphia, and Dr. Fred MacDonald Richardson, of Haddonfield, N. J.

Marriages

MISS LOIS WINTERS to Dr. J. Carl Baier, of Williamsport, Oct. 26.

MISS IRMA ARLEEN GREENAWALT, of Reading, to Dr. Ernest H. Dengler, of Pottstown, Nov. 2.

MISS MARGUERITE SINQUEFIELD to Dr. James W. Tarrant, Jr., Philadelphia, Oct. 15.

MISS ETHEL CHAPMAN, daughter of Dr. Leroy E. Chapman, of Warren, to Dr. John C. Urbaitis, of the Warren State Hospital, recently.

Deaths

PETER FRANCIS BROSIUS, Hazleton; University of Pennsylvania School of Medicine, 1900; aged 60; died Nov. 2. Dr. Brosius was born in Ashland, Pa. He starred as an end on the University football team. He was a member of his county and State medical societies and a Fellow of the A. M. A. A widow and son survive.

HARRISON MORGAN BROWN, Pittsburgh; University of Pittsburgh School of Medicine, 1904; aged 60; died Oct. 25. Dr. Brown was born in Winchester, Va. He was a member of his county and State medical societies and a Fellow of the A. M. A.

LEROY DELMAR CRATTY, Wilkensburg; University of Pittsburgh School of Medicine, 1913; aged 45; died Oct. 26. He was a member of his county and State medical societies and the A. M. A.

CARLOS THEODORE DE RIVAS, pathologist to the Santo Tomas Hospital in Panama City; aged 30; died in Panama, Nov. 13, after a short illness. Dr. de Rivas,

who lived at Lansdowne, was graduated from the University of Pennsylvania School of Medicine in 1927. He was assistant resident physician at the Friends Hospital and an instructor of clinical pathology at the Woman's Medical College of Philadelphia. He was the son of Dr. Damaso de Rivas, professor of parasitology at the Graduate School of Medicine of the University of Pennsylvania. In addition to his father, he is survived by his mother, his wife, and 2 sisters.

JOHN R. FORST, Philadelphia; University of Pennsylvania School of Medicine, 1893; aged 65; died Nov. 1. Dr. Forst was born in Norristown, Pa. He was a graduate in law although he never practiced this particular profession. He devoted his work to ophthalmology and until a few years ago was on the staff of the Wills Eye Hospital. He was a member of his county and State medical societies and a Fellow of the A. M. A. He was also a Fellow of the American College of Surgeons. His widow survives.

CHARLES D. FOX, Ardmore; Hahnemann Medical College and Hospital, Philadelphia, 1903; aged 55; died Oct. 24. During the World War he served as neurologist at several base hospitals of the American Expeditionary Force in France. He was a past president of the Tri-County Medical Society. He is survived by his wife, 2 daughters, and 2 brothers.

CLARENCE E. NEIPLING, Philadelphia; Medico-Chirurgical College of Philadelphia, 1911; aged 47; died Nov. 8, following a year's illness. He is survived by his wife and a son.

JAMES EDWIN RUSH, Pittsburgh; University of Pittsburgh School of Medicine, 1920; aged 48; died Oct. 14. He was a member of his county and State medical societies and a Fellow of the A. M. A.

THEODORE H. SEDGWICK, Versailles; Jefferson Medical College, 1877; aged 83; died Oct. 7, of acute pulmonary edema.

VLADIMIR ALEXIS SIILANTA, Olyphant; Medico-Chirurgical College of Philadelphia, 1916; aged 43; dropped dead of heart disease, Oct. 15. He was a member of his county and State medical societies and the A. M. A.

MISS EMILY T. SLOAN, daughter of Dr. Malachi W. Sloan, of Philadelphia, died Oct. 25.

J. FRANK SMALL, York; University of Pennsylvania School of Medicine, 1889; aged 70; died Oct. 20. Dr. Small was a member of his county and State medical societies and the A. M. A.

OLIVER E. SNOODGRASS, Philadelphia; University of Pennsylvania School of Medicine, 1886; aged 71; died Aug. 27, in Ocean City, N. J., of chronic nephritis and arteriosclerosis.

LOUIS REED SOUDER, Atlantic City, N. J.; Jefferson Medical College, 1887; aged 75; died Nov. 4. Dr. Souder is well-known to the older members of the medical profession of Pennsylvania. He was a graduate of the Philadelphia College of Pharmacy, 1883, and for 35 years was a medical examiner for Atlantic County. His father was Mayor of Atlantic City in 1874. His grandfather was the first physician to settle in Atlantic City.

HOWARD ROEDER SWAYNE, Pittsburgh; Jefferson Medical College, 1889; aged 72; died Sept. 1. Dr. Swayne was a member of the first board of directors of the Oncologic Hospital, Philadelphia, having practiced in Philadelphia a number of years. He is survived by his widow and 2 children.

SAMUEL M. WAGAMAN, Hagerstown, Md.; University of Pennsylvania School of Medicine, 1901; aged 62; died Nov. 8, from heart disease. Dr. Wagaman had retired from practice and was devoting himself entirely to medical publications. Sometime ago he joined

the staff of the Prior Publishing Company as managing editor of medical books, later becoming its president. In 1930 he dissolved his relationship with this company and organized the Mitchell Corporation, publishers of *Current Medical Digest*, of which he was editor until the time of his death.

Miscellaneous

DR. FLOYD G. SCHULER, of Warren, has recovered his health sufficiently to be able to resume practice.

DR. J. HOWARD SEIPLE, of Center Square, returned Oct. 16 from an extensive tour of France, Italy, Egypt, Palestine, and Syria.

DR. JOSEPH DAVID ARONSON, of Philadelphia, has been appointed special expert on tuberculosis in the Indian Service under the Department of the Interior.

ON NOV. 14, DR. JOSEPH H. BARACH, of Pittsburgh, delivered an illustrated lecture on "Inheritance and Disease," before the class in criminology of Bucknell University.

DR. WILLIAM K. SKINNER, a former member of the Warren State Hospital staff, who was married Oct. 3, was unfortunate in losing his wife by death while on their honeymoon in Europe.

DR. RICHARD F. RICHIE, of the Harrisburg State Hospital staff, has been selected for a Commonwealth Fund fellowship by the National Committee of Mental Hygiene. He will be affiliated with the Child Guidance Clinic of Cleveland after Dec. 1.

ACCORDING TO THE *Associated Press*, a surgeon at Leningrad, Russia, on Oct. 29, was sentenced to a year at hard labor for leaving a towel 60 centimeters in length in the abdomen of a man upon whom he had operated. The man died within a month.

THE CAMPAIGN FOR FUNDS for the Warren General Hospital resulted in raising \$56,000, which is \$11,000 more than the amount set as a goal. The physicians subscribed \$1800, showing a fine spirit of cooperation, as most of those contributing give largely of their time in service to the charity patients.

NOBEL PRIZE AWARD. It was announced in Stockholm, Sweden, Oct. 24, that the Nobel Prize in medicine has been awarded to Dr. Hans Spemann, professor of zoology in the University of Freiburg, Breslau, Germany, for his discoveries in connection with embryonic evolution. The award carries with it about \$42,000.

ACCORDING TO THE NOVEMBER, 1935, issue of the *Lackawanna County Medical Society Reporter*, Dr. Walter J. Reedy, of Scranton, has been appointed associate editor and will conduct the department devoted to hospitals and clinics, which will contain notices of the staff meetings of the hospitals in the county, hospital news of interest, and reports of unusual cases.

A PHILADELPHIA PHYSICIAN has asked the Common Pleas Court for an injunction against the proprietor of an ice cream factory next door to his home. The physician claims that a large number of patients refrain from coming to the office on account of the noise produced by the industry, and that he himself is becoming a nervous wreck.

DR. GEORGE M. COATES, professor of otolaryngology at the University of Pennsylvania Medical School, was the guest of honor at a dinner in Philadelphia, Nov. 16. A feature of the dinner was the presentation of a portrait of Dr. Coates, which is to be placed in the University medical school. The presentation was made by Dr. Benjamin H. Shuster, of the Graduate Medical School.

THE MEDICAL STAFF of St. Stanislaus Orphanage, Nanticoke, was organized June 25. The staff consists of: Dr. William Baurys, president; Dr. J. A. Drapiew-

ski, secretary; and Drs. Theodore Salaczynski, P. E. Ringawa, E. J. Kielar, H. L. Shemanski, B. A. Stegura, Joseph Dreier, Stanley Stapinski, and J. W. Pickarski. Ultimately there will be 12 physicians on the active staff divided among 6 services.

DEATHS FROM POISON IN BAKING SODA.—There have been numerous references in the newspapers in regard to deaths in San Francisco, attributed to poisoned baking soda. According to the *J. A. M. A.*, Nov. 30, the cases were all traced to salvaged sodium bicarbonate sold retail by one store. Apparently salvage agents sold 6 barrels, and at least one barrel contained sodium fluoride which was mixed with the soda. Arsenic was also found in some of the samples analyzed, but its source as yet remains unexplained.

THE ANNUAL MEETING of the Jefferson Medical College Alumni of southwestern Pennsylvania, eastern Ohio, and West Virginia was held in Greensburg, Pa., on Nov. 14. The afternoon session was held at Westmoreland Hospital and clinical addresses were given by Dr. Randle C. Rosenberger, professor of preventive medicine and bacteriology, and Dr. J. Torrance Rugh, James Edwards professor of orthopedic surgery. The banquet was held at the Greensburg Country Club.

ACCORDING TO *Science News Letter*, after the first of January, all applicants for a marriage license in the State of Connecticut must pass a Wassermann or Kahn test before a license will be granted. The certificate must be based on a blood examination by an approved laboratory. Other states requiring medical examination upon the issuance of a marriage license are Wisconsin, Oregon, North Dakota, Alabama, Wyoming, and Louisiana. North Carolina repealed its law this year.

THIS YEAR'S PROGRAM of the Chester (Pa.) County Medical Society includes informing the public about sickness insurance through talks to service clubs, etc. "A Digest of Sickness Insurance" has been compiled by Dr. Robert T. Devereux, a member of that society, in order to furnish members with readily available information which they may use in preparing addresses on this subject. Anyone interested may secure a copy of the digest postpaid by sending 30 cents to Dr. Joseph Scattergood, Jr., secretary of the Chester County Medical Society, West Chester, Pa.

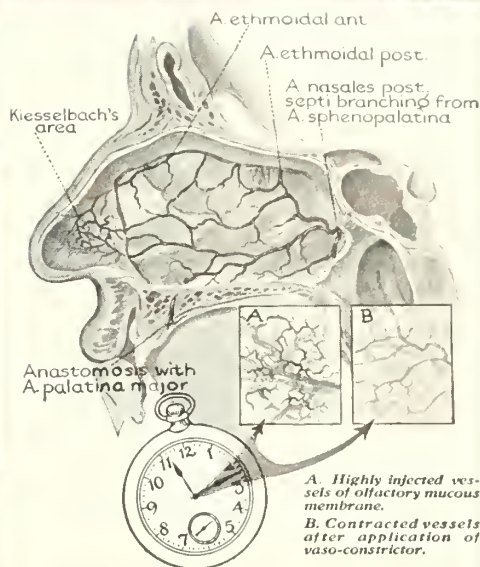
FOR 50 YEARS ACCLAIMED as one of the men who have accomplished much in the promotion of public health and the saving of human lives, as a result of work in biological science, Dr. H. K. Mulford was honored with a dinner in celebration of his Golden Pharmaceutical Anniversary at the Union League, Philadelphia, on the evening of Oct. 31, by a group of distinguished scientists, physicians, chemists, pharmacists, and educators. The event was sponsored by the National Drug Company, Mr. Charles E. Carr acting as chairman. Dr. Wilmer Krusen, president of the Philadelphia College of Pharmacy and Science, served as toastmaster.

TYPHUS TEST KILLS SCIENTISTS. Hoping to find new methods for combating anthematic typhus, 2 scientists who have been working at Butantan Institute, Sao Paulo, Brazil, using ticks and guinea pigs for inoculation of the typhus virus, died in the cause of science. Dr. Jose Lemos Monteiro, aged 35, bacteriologist, died Nov. 8, and his assistant, Dr. Edison Souza Dantas, died previously. Both of these scientists were bitten by typhus-infected ticks. Dr. Dantas knew he was bitten and placed himself immediately in a hospital for treatment. Dr. Monteiro did not know that he had been bitten until he was stricken with symptoms of the disease.

THE HARDEST WORKED MAN in the Lackawanna County Medical Society for many years has been Dr. Frederick J. Bishop. Acting as trustee of the state society and councilor for 6 counties, his interest in the
(Continued on page xiv.)

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MEDICAL NEWS

(Continued from page 222.)

affairs of the profession has never wavered and his activity never lapsed. Accepting the very thankless job of referee for the SERB in Lackawanna County, he has attempted to give the members of the profession a square deal in their medical relief work in spite of much red tape. As the chairman of the committee on public relations of the Lackawanna County Medical Society, his very weighty and quite lengthy monthly reports bore witness to the extensive work of Dr. Bishop and his committeemen. As he retires from the arduous duties of trustee and councilor, we know that he takes with him the best wishes and heartiest thanks of the members of his own county society, as well as those of the membership of the rest of his district.—*Lackawanna County (Pa.) Medical Society Reporter*, Nov., 1935.

PEACE-TIME VETERANS HOSPITALIZATION.—As a result of the Harrison Hospitalization Bill peace-time veterans were made eligible for hospital care. This measure was sponsored by the Veterans' Administration in order to correct what was considered to be an injustice with regard to peace-time veterans. Prior to the enactment of the Economy Bill in March, 1933, veterans of the regular establishment had no right to hospital treatment by the Veterans' Administration. They were, however, entitled to domiciliary care in the National Soldiers' Home.

The Economy Act extended benefits of hospital and domiciliary care, similar to those afforded war veterans, to those who had been discharged on account of disability incurred in line of duty. The new law represents a further extension of these benefits to include peace-time veterans who are pensioned on account of service-connected disability. This act does not affect hospitalization and domiciliary benefits afforded war veterans.—*The Military Surgeon*, Nov., 1935.

AT THE FIFTH ANNUAL CONVENTION of the Canadian Association of Occupational Therapy recently held at Toronto, Dr. Goldwin Howland, who was reelected president of the association, challenged the Canadian physicians and surgeons for not properly recognizing the value of occupational therapy. He was provoked to make the challenge following a visit he recently made to the Astley Ainslie Institute in Scotland. He states that it was remarkable that occupational therapy had so impressed the Scotch physicians with its value that they have built a splendid pavilion for a year's experience studying the principles and the methods, and this development must be compared with the difficulty that the Canadian organization is having in commencing the work in Canadian hospitals. He urged the necessity for each institution having a workshop.

MAYOR LAGUARDIA of New York City, on Nov. 2, extended a welcome to a group of European physicians who have come to our shores to study public health in the United States under the auspices of the League of Nations. The mayor spoke as follows: "You are the real ambassadors of peace. Nations now are attempting more and more to gain new colonies. Machine guns are not the solution. Doctors and engineers can do more for world peace than any group of men interested in armaments and warfare. The science of medicine has been a great boon to lands where disease has been prevalent for years."

The group is composed of Dr. L. S. Fridericia, University of Copenhagen; Dr. J. Parisot, University of Nancy; Dr. E. Rietz, Medical Health Officer, Stockholm; Dr. H. Van der Kaa, Chief Health Inspector of The Netherlands; Dr. B. Borcic, director of the Institute and School of Hygiene, Zagreb, Yugoslavia; and Dr. Frank G. Boudreau, chief of the epidemiologic intelligence service of the League of Nations health organization.

(Concluded on page xvi.)

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MEDICAL NEWS

(Concluded from page xiv.)

THE NATIONAL FORMULARY, SIXTH EDITION.—The American Pharmaceutical Association announces that its Council has officially approved Dec. 16, 1935, as the date when the new N. F. VI will be released for sale in all parts of the country, and has also approved June 1, 1936, as the date when the N. F. VI will become official and will supersede the N. F. V.

As previously announced, the N. F. VI will be distributed for the association by the Mack Printing Company, of Easton, Pa.

The new National Formulary represents a complete and thorough revision of N. F. V. Admissions and deletions are based on information obtained in the U. S. P.—N. F. Prescription Ingredient Survey. This survey was made to determine the materials prescribed and the extent of their use throughout the country. The N. F. VI, therefore, supplements the scope of the Pharmacopeia and supplies additional information on simples, formulas, diagnostic reagents, and standards required by the pharmacist in the practice of his profession.

Of the 689 monographs in the N. F. VI, 208 are drug or chemical monographs and 481 are monographs of pharmaceutical preparations. The more important additions have been in the monographs for ampules, tablets, fluidextracts, syrups, tinctures, and ointments.

THE FIRST ANNUAL MEETING of the Association of Resident and Ex-Resident Physicians of the George F. Geisinger Memorial Hospital was held at the Geisinger Hospital, Danville, Pa., Oct. 25 and 26, 1935.

In the absence of the president, Arthur Hawley Sanford of Rochester, Minnesota, the vice-president, Frank R. Hanlon of Wilkes-Barre, presided.

The scientific program consisted of surgical and medical clinics by Harold L. Foss and Carl E. Ervin. In addition the following papers were presented by members of the association:

The Limitation of Physical Signs in the Diagnosis of Tuberculosis. John H. Packard, Allenwood, Pa.

Empyema. Frank R. Hanlon, Wilkes-Barre, Pa.

Studies in Lung Abscess and Pulmonary Gangrene. Jacob J. Longacre, Cincinnati, Ohio.

Treatment of Status Asthmaticus by High Oxygen Tension. Frederic B. Davies, Scranton, Pa.

The Place of Roentgen Ray in the Treatment of Chromophobe Adenomas of the Pituitary Gland. William W. Vaughan, Boston, Mass.

Neurocirculatory Asthenia; Clinical Aspects and Diagnosis. Hays R. Yandell, Cleveland, Ohio.

Neurocirculatory Asthenia; Surgical Treatment and Results. Isaac H. Harris, Jr., Cleveland, Ohio.

Case Report—A Monstrosity. J. Edward Book, Newport, Pa.

Demonstration: Microscopic Diagnosis of Ringworm. G. Paul Moser, Ringtown, Pa.

Contraception. Virgil H. Duckett, Canton, N. C.

Autotransfusion. James P. Watson, Pittsburgh, Pa.

The Newer Knowledge of Nonprotein Desensitization in Allergic Disease. Henry K. Seelaus, Philadelphia, Pa.

The Surgical Treatment of Hypertension. James H. Yant, Cleveland, Ohio.

The Treatment of Prostatic Hypertrophy with Special Reference to Inhibin Therapy. Walter I. Buchert, Cleveland, Ohio.

An Unusual Case of Thyroid Crisis. Eurfryn Jones, Harrisburg, Pa.

Shock: An Experimental Study. Patrick J. Kennedy, Lansdowne, Pa.

The officers elected for the coming year are: Henry K. Seelaus, associate in surgery, Jefferson Medical College, Philadelphia, president; John H. Packard, Allenwood, Pa., vice-president; and Robert Y. Grone, Danville, Pa., secretary and treasurer.

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Book Reviews

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SURGICAL CLINICS OF NORTH AMERICA: Vol. 15, No. 3. Chicago Number (June, 1935); 239 pages with 119 illustrations. Per clinic year February, 1935, to December, 1935. Paper, \$12; cloth, \$16 net. Philadelphia and London: W. B. Saunders Company, 1935.

The contributors to this, the Chicago number, are in the main teachers in that city. An excellent symposium on fractures is included.

PERIODIC FERTILITY AND STERILITY IN WOMAN: A Natural Method of Birth Control. Prof. Hermann Knaus, head of the Clinic for Gynecology and Obstetrics of the German University of Prague, with foreword by F. H. A. Marshall, F.R.S., Cambridge, England. Authorized English translation by D. H. Kitchen, of Gray's Inn, barrister-at-law, and Kathleen Kitchen, M.Sc., M.B., B.S., London. With 64 illustrations and 12 tables. Printed by Wilhelm Maudrich, Vienna. Price, cloth, \$6.

This is an informative study based upon the author's discovery of the fluctuation of fertility and its relation to a natural method of birth control. This book is for the U. S. A. and Canada, obtainable at The Concp Company, Hobart, Indiana.

THE WOMAN ASKS THE DOCTOR. Emil Novak, M.D., F.A.C.S., honorary D.Sc. (Dublin) associate in gynecology, Johns Hopkins Medical School; former vice-president, American Gynecological Society. Illustrated by Carl Clarke. Williams & Wilkins Company, Baltimore.

Dr. Novak has contributed a book which fills a real need. It should be read by the physician, who in turn should have no hesitancy in recommending it to the laity. The aim of the author has been "to reach the average woman."

A TREATISE ON MEDICAL JURISPRUDENCE. Benton S. Oppenheimer, LL.B., LL.M., of the Cincinnati Bar; professor of law, College of Law, University of Cincinnati; professor of medical jurisprudence, College of Medicine, University of Cincinnati. William Wood & Company, Baltimore. Price, \$4.

This treatise on medical jurisprudence should be in the library of every physician, school of medicine, and hospital.

NATIONAL MEDICAL MONOGRAPHS: Obstetrics for the General Practitioner. J. P. Greenhill, B.S., M.D., F.A.C.S., professor of gynecology, Loyola University School of Medicine, Chicago. Edited by Morris Fishbein, M.D., National Medical Book Company, Inc., New York City.

This book condenses for the general practitioner everyday problems in obstetrics, based upon their practical aspects. The text affords a quick reference and an excellent guide.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. A complete dictionary of the terms used in medicine, surgery, dentistry, pharmacy, chemistry, nursing, veterinary science, biology, medical biography, etc., with the pronunciation, deriva-

(Concluded on page xix.)



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BOOK REVIEWS

(Concluded from page xciii.)

tion, and definition. By W. A. Newman Dorland, A.M., M.D., F.A.C.S., Lieut.-Colonel, M.R.C., U. S. Army, Member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association; editor of "American Pocket Medical Dictionary." Seventeenth edition, revised and enlarged with 945 illustrations, including 283 portraits. With the collaboration of E. C. L. Miller, M.D., Medical College of Virginia. W. B. Saunders Company.

The aim in this work has been to produce, in a volume of convenient size, an up-to-date medical dictionary, sufficiently complete for the varied requirements of all classes of medical men. It represents a middle course between the large, unwieldy lexicon and the abridged students' dictionary.

The present edition represents 3 years' work on the part of a large corps of collaborators; it contains 1573 pages—an increase of more than 100 per cent over the first edition.

One advantage of this work is its thorough editing, done by the staff of the American Medical Association under the direction of Dr. Morris Fishbein.

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INDUSTRIAL DERMATOSES*

EARL D. OSBORNE, M.D., AND EDWIN D. PUTNAM, M.D., BUFFALO, N. Y.

During the past 10 years there has been an increasing interest in industrial dermatoses. This has been brought about by 2 principal factors. The first and most important is the adoption in many states of more liberal workmen's compensation laws. The second factor is the realization among the medical profession and industrial commissions that new knowledge has been gained in the diagnosis of contact dermatitis, particularly through the development of the patch test, and an appreciation of the phenomenon known as allergy.

New York State has had a liberal workmen's compensation law for nearly 20 years. It appears to be only a question of time until all the states will follow this example. The lower cost of compensation insurance in Pennsylvania is frequently embarrassing to industrial concerns in New York State when in competitive bidding with a firm in Pennsylvania. At a recent meeting of dermatologists the question was raised as to how much time and energy the members from the various states gave to industrial cases. The answer to that question is that dermatologists give time and energy to the subject in the same proportion as it affects them from an economic standpoint. As long as there are inadequate workmen's compensation laws in the various states, the dermatologists, as a specialized class, will not have sufficient patients consult them to pay them to give time and energy to study the entire subject thoroughly. In New York State the dermatologist gives from 5 to 25 per cent of his time to industrial dermatoses. This has resulted in better and more complete examinations and marked improvement in methods of manufacture with reduction of industrial skin hazards.

As an example of the reduction in skin hazards, the electroplating industry may be mentioned. Prior to 8 years ago a large, nationally known manufacturer of windshield wipers seldom had less than 2 or 3 workmen per week presenting dermatitis of the face, neck, arms, and hands from contact with the spray from the various baths. Proper investigation with modern methods of the exact cause of this dermatitis resulted in the installation of improved apparatus and the almost total disappearance of cases of dermatitis. This same change has taken place in industry after industry and could only be brought about by the stimulation to reduce compensation costs.

The widespread increase in the knowledge regarding allergy has quickened our interest in the study of industrial dermatoses and improved greatly our understanding of the mechanism of the production of these dermatoses. Through the development of the patch test it has become known that practically all chemical substances can be responsible for the production of a dermatitis. Although it is true that dermatologists should acquaint themselves regarding trade processes, it is more important for them to investigate each case thoroughly on its own merits with modern methods. Not infrequently a hitherto unsuspected cause of dermatitis will be found which will affect trade processes vitally. There has been a change in the type of case seen during the past 10 or 15 years. Improved methods of manufacture have removed the common skin hazards. The ordinary ulcers and chemical burns are reduced to a minimum, and the vast majority of skin cases are now manifestations of cutaneous allergy.

Further clarification of some ideas regarding allergy is needed. It is recognized that allergy

* Read before the Section on Dermatology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

may be at first localized in a given area, such as on the face or on the dorsum of the hands, and that with repeated exposure of these areas the allergy may become generalized to include the entire skin surface. Dermatologists see examples of this phenomenon every day, not only in all forms of contact dermatitis but in a study of dermatophytosis. It would appear that a generalized allergy following a local attack of dermatitis must be due to one or more of the following factors: (1) Absorption of some of the original antigen into the blood stream with the production of a generalized allergy; (2) the production of a nonspecific antigen in the local area of dermatitis which may cause the general skin surface to react to various contacts other than the original offending antigen; (3) the production of some substance derived from damaged skin epithelium which might produce a generalized nonspecific cutaneous allergy. The latter 2 possibilities have been suggested by Mumford. Clinical experience and experimental research favor the first mentioned. It must be conceded that many patients who have presented a generalized eruption following a local contact dermatitis do react to all forms of mild irritants, such as soap and water, alcohol, *etc.* The skins of these individuals are apt to remain exceedingly irritable for many weeks or months, but eventually this tendency subsides and the patient remains sensitized only to the original or related antigens. Before these questions can be solved, further clinical observation and experimental study are necessary.

PATCH TESTING

The most valuable single aid in the determination of the exact cause of a dermatitis is undoubtedly the patch test. The technic of this test has been described and need not be repeated here. The following points however, need further emphasis:

1. The patch test should be applied as near as possible to the area of the eruption. If the eruption is on the hands, the test should be applied to the lower forearms.
2. Positive patch tests do not always prove that the substances tested are the cause of the eruption. The reverse is also true.
3. Results of patch tests must always be checked by clinical observation.
4. Contact with related substances both at work and at home always must be considered.
5. In using full-strength chemicals in patch testing, great care must be taken to differentiate between a chemical burn and a true eczematous reaction.

6. Mild erythema should not be regarded as a positive test.

7. Patch testing may sensitize some individuals not previously exposed to test substances.

8. A positive patch test may be accompanied by a marked exacerbation and spread of the existing eruption. In highly allergic individuals this may amount to a generalized exfoliative dermatitis. Because of this danger it is wise to defer patch testing in patients with an extensive and spreading dermatitis. Higher dilutions of test substances are advised in such cases.

9. Delayed positive tests demand more attention. Positive tests appearing 48 to 72 hours after application of the test are usually of great significance.

For purposes of this paper more than 300 cases of industrial dermatoses examined during the past 3 years have been reviewed. In 1932 a detailed study of several large groups of industrial workers was presented. We observed in mass experiment the latent or incubation period present when a large group of workers began to handle a new chemical which resulted in the development of cutaneous allergy. We have since repeatedly observed the presence of this latent period, which may be as short as 4 days or as long as 5 or more years depending upon the penetrability of the chemical handled and the amount of skin surface exposed to the chemical.

A number of illustrative cases have been selected for presentation in some detail.

CASE REPORTS

CASE 1.—Miss L. K., age 48, worked in a bake shop. A dermatitis appeared on the dorsum of her hands and forearms 5 months previously. Later the eruption appeared on the neck. Examination revealed a vesiculopustular dermatitis on the dorsum of both hands, the forearms, and the V of the neck. She was patch tested to baking powder, 2 bread flours, and 2 cake flours. She reacted 3-plus to both cake flours. Probably the only difference in the 2 kinds of flour was the activators or improvers added to them at the time of milling. We were unable to determine the exact composition of the activators used in the different patented flours. Our recent cases of dermatitis in flour millers and bakers have all been due to activators and not to the pure flour.

CASE 2.—Male, age 21, a draftsman, had worked with blueprints for 4 years, using potassium bichromate as a fixing solution. A dermatitis on the dorsum of the right hand and forearm had been present for 2 years. More recently patches had appeared on the thighs and ankles. Patch tests to potassium bichromate, 1-100 and 1-400 dilution, were strongly positive. The eruption disappeared but there were repeated recurrences on the hands and arms for 1½ years in spite of changing over to a peroxide fixing process. Finally the pockets of his working trousers were examined. They were found to contain crystals of potassium bichromate. Since discarding the trousers, he has had no further trouble. In-

finite attention to details is frequently necessary in solving an industrial dermatitis.

CASE 3.—Male, age 35, a painter, had worked as a painter 15 years with no previous skin trouble. He had had an eruption on the hands, forearms, face, and neck after spilling turpentine on the hands. The eruption persisted on the fingers and forearms for one year, with occasional outbreaks on the scrotum, trunk, and thighs. There had been no exposure to painting materials since the onset of the eruption. Patch tests to paint, flaxseed, turpentine, soap, and linseed oil were negative. There was a 3-plus reaction to white lead diluted with American oil. The dermatitis was not due to the originally suspected turpentine. The long duration of the dermatitis, with no apparent contact with the offending antigen, is hard to explain. White lead or basic lead carbonate, being almost insoluble, probably remains for many weeks in the pores of the skin. We have seen repeated examples of an industrial dermatitis lasting many months after cessation of exposure to the offending chemical.

CASE 4.—Male, age 48, a garage man, gave a history of a recurring dermatitis on the dorsum of both hands and fingers for 2 years. Finally the eruption appeared on the legs and elbows. Patch tests to 10 materials handled in this work, including soap, oils, greases, and gasolines, gave positive tests only to gasolines containing tetraethyl lead. Sensitivity to ethyl gasoline is becoming increasingly more common.

CASE 5.—Male, age 43, a nickel plater. The eruption began on the hands 3 months after the patient began work as a chrome plater. It spread to the face, neck, and arms. Examination revealed a very severe vesicular crusted dermatitis over the face, neck, arms, and hands. The patient was patch tested to 37 substances including 3 dilutions of nickel-stripping solution and hydrochloric acid. He reacted 3-plus to 1-1000 dilution of nickel-stripping solution and hydrochloric acid. He became so sensitive that his eyes and face burned when he entered the front door of the plant. In recent years dermatitis in nickel and chrome platers has almost disappeared in the better plants due to mechanical handling combined with covered vats and suction to carry off the fine spray.

CASE 6.—Male, age 28, worked as a varnish maker in a bakelite plant. He had worked at the same job for 8 months. Eruption on his hands had been present 36 days. Examination revealed a severe papulopustular dermatitis on the dorsum of both hands and fingers. He was patch tested to leather gloves, paper stock, dye, formalin, stearic acid, varnish, benzol, and 2 dilutions of cresylic acid. He gave strongly positive patch tests to cresylic acid and a moderately positive test to leather gloves. The dermatitis probably was prolonged by the use of calamine lotion containing phenol. It is well to remember that Lifebuoy soap contains 3½ per cent cresylic acid.

CASE 7.—Male, age 23, a metal polisher, had had an eruption on his face for 7 months, which was diagnosed dermatitis venenata and treated with roentgen ray, alpine sun, and local applications. He had had frequent exacerbations, especially on the eyelids and ears. He had worked at the same job for 7 years with no work for the past 7 months. Examination revealed a mild erythematous-squamous dermatitis of his eyelids and ear lobes. Positive patch tests with specimens of dust were elicited. He suffered a severe exacerbation after visiting

the plant to collect the specimens. The previous exacerbations had been due to occasional visits to the plant. He had no further trouble after changing his work. In this case compensation was paid for 7 months because of insufficient investigation of the cause of the dermatitis. Also, the patient had not been warned to stay away from the plant.

CASE 8.—Male, age 27, an inspector in a paper mill, had had a vesiculo-squamous dermatitis on the dorsum of both hands and arms for 4 years with frequent exacerbations. He was treated for seborrheic eczema. The condition always improved when he came home to Buffalo, and the eruption recurred when he returned to work in another city. With each attack the eruption became more widespread. Examination showed an extensive vesiculo-squamous dermatitis of the neck, face, hands, arms, and legs down to the shoe tops. Patch tests to 28 substances handled in his work gave only one positive, that to sodium silicate. This chemical was present as a finely powdered dust all through the department in which he worked. It required 4 months for the skin to heal. This patient was able to return to work in the same plant, but confined his work to the office. Sodium silicate or water glass is used in many industries. It is also a common ingredient in laundry soap.

CASE 9.—Female, age 21, a nurse, had had an eruption on the dorsum of her hands periodically for 3 years. For 2 years the eruption had been present constantly. Recently she had developed lesions on the face, neck, arms, and trunk. All forms of local treatment, including alpine sun and roentgen ray, had been ineffective. Patch tests to a large number of substances handled in her hospital work were negative. The eruption disappeared when she was away from work and recurred as soon as she returned. She was finally tested to rubbing alcohol; the reaction was 4-plus. Further tests to 95 per cent grain alcohol and absolute alcohol were strongly positive as well as to a hand lotion containing a small percentage of alcohol. We have been unable to find reference to a similar case in the literature. This case well illustrates how a common, unsuspected chemical substance may be the cause of an intractable, puzzling dermatitis.

CASE 10.—Male, age 38, a carpenter, had had a recurring dermatitis on the dorsum of his hands for 11 years, which had always appeared in the winter. Patch tests to wood dusts, oil, tar, and turpentine were negative. Patch tests to Health Guard soap, used by all the workmen at the plant, gave strongly positive tests in dilutions of 1-100 and 1-400. This patient has had no further trouble since using a pure olive oil soap. As industrial dermatitis is not always caused by the materials contacted in the work, each case demands thorough investigation.

CASE 11.—Male, age 66, a bolt tumbler, had worked at the same job for 9 months, with a dermatitis for the past 8 weeks. The eruption began on the face and spread to the arms, thighs, and trunk. He had drawn compensation on the basis of a dermatitis due to handling sawdust, soiled with acid and alkali used in polishing bolts and nuts. He had not worked for 8 weeks. Examination revealed an extensive confluent papulovesicular dermatitis, and patch tests to samples of clean sawdust and soiled sawdust were negative. Investigation showed that he had a small private greenhouse. Patch tests to 11 leaves gave 4-plus reactions to but one variety of coleus out of 7 varieties tested. The eruption disappeared rapidly when he stayed out of his greenhouse. In

this case the history of an active spreading dermatitis in spite of absence from work indicated the need for further investigation. Unquestionably, many workmen receive compensation when the cause of their dermatitis is nonindustrial.

CASE 12.—Male, age 50, a master mechanic in a rubber plant, was a valuable employee of the plant and had worked in it for 20 years with no previous skin trouble. For 7 days he had had a severe dermatitis on his face and neck which had disappeared in 14 days when away from work. The eruption reappeared as soon as he reentered the plant. Patch tests were positive to 4 samples of dust and negative to slate and sulphur powder, rice flour, and mica. Further investigation gave negative tests to dithenylguanadine and dimethyl-dithiocarbonic acid, and 3-plus to para-nitroso-dimethylaniline in 1-10,000 dilution. The latter chemical had been used as an accelerator for 2 years prior to the onset of the dermatitis. Attempts at desensitization with intracutaneous and subcutaneous injections of minute quantities of the offending chemical were without result. The patient was finally forced to resign and accept a menial job in another plant. The question arises whether this workman should receive partial disability compensation until such time as his earning power equals that at the time of onset of his dermatitis. We believe that he should.

CASE 13.—Male, age 61, a painter, had worked as a high-class painter for a wallpaper company for 25 years. The eruption on his face, neck, hands, arms, and legs was found to be due to turpentine. Patch tests with 1-500 dilutions remained positive for a period of 3 months. He suffered severe exacerbations following the patch tests and a complete generalization of the eruption with almost a fatal result. He required 6 months to recover. During this time there was a marked exacerbation from an ointment containing camphor. The same result followed the application of an ointment containing menthol. When he returned to work as a clerk, he received less than one-half of his former salary. This case illustrates several points: (1) There was an exceedingly long period of latency or incubation; (2) patch tests performed in the presence of a spreading dermatitis caused serious consequences; and (3) camphor and menthol, which are related to turpentine, were responsible for further extensive exacerbations of the dermatitis. As in the previous case we believe this workman should receive partial disability until such time as his earning power is restored to its former level.

CASE 14.—Male, age 24, a laborer in a chemical plant, had assisted in the manufacture of hydrogen peroxide for 4 years. The eruption began on the dorsum of the hands one month before examination. Two weeks later a generalized eruption appeared. The patient discontinued work at that time. Examination revealed a severe erythematous-vesicular dermatitis on the dorsum of both hands and forearms. Scattered over the entire body and face were discrete, papular, and papulo-squamous plaques simulating parapsoriasis; other lesions were of the erythema multiforme type. Patch tests to solutions which he handled gave a strongly positive reaction to tin oxide and barium sulphate. While under treatment, he had 2 severe recurrences of erythema multiforme type of lesions over the entire body. Three months after the onset only pigmented patches remained. The patient returned to work at another job in the plant but complained of nausea and dizziness

for 6 months. After he quit work in that plant there were no further symptoms. Inhalation was probably a factor in the production of nausea and dizziness. This was one of the most unusual cases we have ever seen and, in view of 2 other similar cases, we believe it to be rather characteristic of certain heavy metals.

CASE 15.—Male, age 54, a millwright in a cement company. The eruption had appeared one year previous on the dorsum of the hands. Within 10 days it had covered the entire body and scalp. Seven months were required for the patient to recover and at the end of that time there were active areas of dermatitis involving the toes, the groin, and the perianal and axillary areas. Examination revealed active mycotic infection of the toes of both feet, the groin, and the perianal and axillary areas. Smears and cultures were positive for fungi. The nails showed old mycotic changes. Under treatment the condition gradually improved, and the patient went back to work with an immediate exacerbation of dermatitis on the hands, arms, and face. Patch tests then showed him sensitive to crude oil used in his work. He required 4 months to recover sufficiently to return to work as a carpenter. He then suffered another severe recurrence, when he was found to be sensitive to wood dust and turpentine. With each recurrence of dermatitis, he had a marked exacerbation of his mycotic infection. Altogether this patient suffered 33 months of invalidism.

This case is an example of the problem presented by combined mycotic infection and dermatitis venenata. Although primary mycotic infection due to contacts in work is extremely uncommon, the exacerbation of an old mycotic infection by an acute dermatitis venenata occurs rather frequently and presents difficulties in diagnosis and treatment. A workman is entitled to compensation until the mycotic infection is under complete control.

CASE 16.—Male, age 54, had worked as a painter for 30 years with no history of previous skin disease. While working on an outside scaffold, he sustained brush burns across both palms and fingers from grasping a rope used to hold the scaffold. On examination, he presented localized patches of vesiculo-squamous dermatitis on the exact areas of contact with a rope one inch in diameter. Thorough examination revealed no other areas of dermatitis and no evidence of mycotic infection. Patch tests to turpentine, varnish, and shellac were positive. Under treatment, the lesions improved but 3 months later became dry, scaly, and fissured. New lesions began to appear on the feet which proved to be discrete patches of psoriasis, with characteristic heavy, silvery, imbricated scales on both soles and sides of the feet. Psoriatic changes in the nails appeared during the next 2 months.

At a hearing before the compensation commission, the patient was awarded compensation on the basis that the original dermatitis precipitated the attack of psoriasis. There was testimony to the effect that psoriasis occasionally occurs at the site of injury. In another similar case in a woman who complained of a burn from lye on the hands, compensation was disallowed because there was no testimony to the effect that a dermatitis preceded the development of the psoriatic lesions on the hands. We believe that these decisions were eminently fair. When asked by the industrial commissioner whether in our opinion the first patient would have developed psoriasis of the hands without any previous dermatitis, we, of course, were unable to give a positive answer.

CASE 17.—Male, age 43, a carpenter. Two years before, a block of wood had fallen on the bridge of his nose producing a scar 1 cm. long and .5 cm. wide, involving the full thickness of the skin. Three months prior to examination, the upper border of the scar had become ulcerated and covered with a crust. Examination revealed a scar of the above-mentioned size. Entirely surrounding the lesion was a raised, pearly border containing small telangiectases. The diagnosis was basal cell epithelioma, confirmed by microscopic examination.

We have had 2 similar cases during the past 2 years. In each instance, the industrial commissioner allowed compensation.

SYPHILIS IN INDUSTRY

Under New York State compensation laws, syphilis has given some cause for concern. We have never seen a primary infection with syphilis as a result of either direct or indirect contact of workmen in industry. Theoretically, of course, it can occur but it must be exceedingly rare. However, any syphilitic manifestation which is precipitated or aggravated by injury is compensable under New York laws. During the past 5 years we have had 5 instances of this. In 2 cases a unilateral interstitial keratitis was precipitated by minor injuries to the corneas of patients with congenital syphilis. The same thing occurred in a patient with acquired syphilis. In each instance the industrial court ruled that the patient should receive compensation and medical treatment until such a time as the eye condition was cured. Partial permanent disability was allowed depending upon the degree of scarring of the cornea. In the fourth case a workman suffered a minor injury to his back. This was followed by severe pains in the chest and back. Each day he became progressively worse. Thorough examination revealed an advanced cardiovascular syphilis with aneurysm and aortic insufficiency. This patient received compensation and medical treatment for more than a year and finally a settlement of \$5000. In the fifth case a man, age 35, suffered a rather minor injury to his scalp. Within one week he developed all of the classical signs of early paresis. The industrial court allowed this man full compensation and medical treatment, including fever therapy, until he was able to return to work. Had the patient died of paresis, his family undoubtedly would have received a full death claim the same as though he had been killed in an accident.

From a short review of these 5 cases it can be seen that syphilis is sometimes an important factor in industrial medicine. A routine blood examination would seem to be indicated as a part of the general physical examination before employment. It is to the interest of employers

to insist on thorough modern treatment for all employees suffering with this disease.

We have purposely avoided the presentation of many cases of malingering which we have encountered. Here again each case must be individualized, and absolute proof must be supplied the industrial commission in order to substantiate any opinions which the physician may have.

COMMENT

Some of the problems arising in the diagnosis and treatment of industrial dermatoses have been presented. Due to the rapidly increasing knowledge regarding allergy and contact dermatitis, the expert examination and opinion of the dermatologist is absolutely essential for the presentation of all the facts in any particular case. Dermatologists should coöperate to the fullest extent with workmen, employers, and industrial courts. It is our impression that industrial courts are eminently fair providing the facts are presented and substantiated by proper evidence.

This year a committee is to be appointed representing the American Dermatological Association and the Section on Dermatology and Syphilology of the American Medical Association to consider the various questions relating to industrial dermatoses and the relations between dermatologists and industrial commissions. There is a large field of usefulness for such a committee. Statistics regarding dermatoses in the various and manifold trade processes are needed and should be kept up to date. From a coöordinated survey of skin hazards in industry undoubtedly many valuable suggestions could be made, which would, if adopted, prove beneficial to workmen, employers, and industrial commissions.

471 Delaware Avenue.

UNITED STATES LEADS WORLD IN BIRTH CONTROL CLINICS

The United States has more birth control clinics in proportion to its population than any other country, Dr. Eric M. Matsner, medical director of the American Birth Control League, has found in the course of a survey just completed. There are more than 225 such clinics under medical direction in the United States, an increase of 80 since last November.

Birth control clinics are not only more numerous but more effective in this country, Dr. Matsner reported at the fall meeting of the league's board of directors. "Theoretically, Great Britain, the Scandinavian countries, and the Soviet Union are in advance of America, since they regard birth control as a public health measure," he stated. "Practically, they are not in advance, since the methods available to birth control clinics there do not surpass and seldom equal in effectiveness those used in American clinics. In Russia the materials are of definitely inferior quality."—*Science News Letter*, Nov. 2, 1935.

THE EXPERIMENTAL PRODUCTION OF ENLARGEMENT OF THE ACCESSORY SEX ORGANS IN THE RAT*†

A Preliminary Report

JAMES F. McCahey, M.D., DAVID SOLOWAY, M.D., AND LORENZ P. HANSEN, Ph.D., PHILADELPHIA

The experimental enlargement of the accessory sex organs in the rat is of interest because of the bearing this subject may have upon the problem of benign enlargement of the prostate in man.

The accessory sex organs are maintained in normal condition by the internal secretion of the testes, which is elaborated by the gonades in response to stimulation from the gonadotropic hormone of the anterior lobe of the pituitary gland. Rapid and marked atrophy of the accessory sex glands of rats will result from either castration or hypophysectomy.

The endocrine relationship between the anterior lobe of the pituitary gland and the testes is reciprocal in character. The gonadotropic hormone is a necessary factor for normal testis endocrine secretion; the testes in turn exert an inhibiting effect upon this hypophyseal function.

The accessory sex organs of rats may be readily enlarged by various experimental methods. The injection of testis hormone will cause increase in the size of these structures, but if such injections are long continued degenerative changes in the germinal epithelium of the testes are apt to occur. These changes are attributed to the depressing action of the injected hormone upon the basophilic cells of the anterior lobe of the pituitary gland with resultant lowered gonadotropic secretory activity.

Enlargement of the accessory glands may also be brought about by the injection into rats of various gonadotropic agents which stimulate the endocrine function of the testes. In certain conditions affecting human beings a gonadotropic principle may be present in the urine (Table I). These sex-gland-stimulating principles have the property of bringing about maturation-like changes in the ovarian follicles of immature mice and in this respect are similar in action to the gonadotropic hormone of the anterior lobe of the pituitary gland. However, they apparently are not all derived from this source as was supposed when they were first discovered.

Lower and Johnston (1931) reported a considerable increase in the size of the accessory sex organs of rats following injections of prolan, the gonadotropic principle found in the urine

of pregnancy. Geschickter, Lewis, and Hartman (1934) by injecting very large quantities of prolan into male monkeys produced enlargement of the prostate, which in one of the animals was extensive enough to cause retention of urine. However, Smith and Leonard (1934) found that if rats were injected with prolan for prolonged periods the initial enlargement of the accessories would not be maintained. They injected normal rats daily with 10 to 25 rat units of prolan and noted that the accessory sex organs regressed to near normal size at about the sixty-third day.



FIG. 1.—Photograph of rats which had been joined by parabiosis for 190 days showing dorsal aspect of common peritoneal cavity.

Similar instances of failure of continued response after an initial effect had been obtained by the injection of endocrine products are used in supporting the theory of antihormone action.

Another experimental method is parabiosis of normal and castrated animals as reported by Martins and Rocha (1931). This is done by uniting the skin, muscles, and peritoneum of 2 rats on adjacent sides in such a way that the animals are joined together with a communication established between their peritoneal cavities. Castration of one of these joined animals causes

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

† From the Departments of Urology, Anatomy, and Chemistry, Jefferson Medical College, Philadelphia.

an increased secretion of the hypophyseal gonadotropic hormone by reason of the removal of the depressing action of the testes upon this function. This hormone passes over to the non-castrate and by virtue of its stimulating effect upon the endocrine function of the testes produces enlargement of the accessories. However, testis hormone does not pass back to the castrate as is shown by the rapid atrophy of its accessory sex glands. It has been suggested that this non-passage is due to rapid utilization of the testis hormone in the noncastrate.

Parabiosis is a procedure which has certain advantages not possessed by the method of artificial introduction of prepared endocrine products into rats as previously mentioned. In animals joined by parabiosis there is evidently a continuous passage of the gonad-stimulating principle from the castrate to the noncastrate, and, furthermore, this hormone is normal for the species. Another advantage is that possible changes from chemical methods of extraction are eliminated.

TABLE I

CONDITIONS IN WHICH A GONADOTROPIC PRINCIPLE
MAY BE FOUND IN THE URINE OF HUMAN
BEINGS

Condition	Mouse units per liter of urine*	Probable source
Pregnancy	10,000-20,000	Placenta
Chorionepithelioma and hydatidiform mole (Aschheim)	100,000	Chorionic epithelium
Teratoma testis—adult types	50-500	Tumor cells
Embryonal types (Ferguson)	2000-10,000	
Castration—males (Hamburger)	100-500	Anterior pituitary
Menopause—physiologic or operative (Osterreicher)	80-300	Anterior pituitary

* A mouse unit is the smallest amount which will produce ripening of the ovarian follicles of immature mice.

Reported results of enlargement of the accessory sex glands produced by this method are based upon the findings in rats which were united for periods ranging from 30 to 40 days. No information is available at present to indicate whether the enlarged accessory sex organs are maintained in rats joined for longer periods or whether regression in the size of these structures occurs with time as is reported to take place when prolan is given parenterally for long periods.

With the object of studying the effect produced by long periods of union 12 pairs of young mature male albino rats were united. These rats were raised at Jefferson Medical College and were descendants of a male and a female obtained from the Wistar Institute. Litter mates of approximately similar weights were united, and for each pair another litter mate was kept for



FIG. 2.—Anterior aspect of genital tract of noncastrate rat which had been joined to castrate for 210 days. (Compare with Fig. 3.)

control, all 3 being sacrificed at the end of the experiment. Several pairs were alive and in good condition for more than 6 months after the operation. Not all of these were sacrificed at this time as it is proposed to make a later report upon the findings in rats united for periods longer than 6 months, which will include data on the weights of the individual organs and more detailed histologic descriptions than can be given in the time allotted for this presentation.

In 4 pairs of castrates and noncastrates united for periods of 16 to 18 days there were no marked gross changes in the accessory sex organs as compared to the normal litter mates.

In 5 pairs united for periods ranging from 27 to 210 days the accessory sex organs of the noncastrates were enlarged. This increase in size affected the penis, the glands connected with the prepuce (oil glands?), the ejaculatory muscle, Cowper's glands, the 3 portions of the prostate, the seminal vesicles, and the vasa efferentia. Enlargement was also noted in a gland-like structure which arises from the vas near its entrance

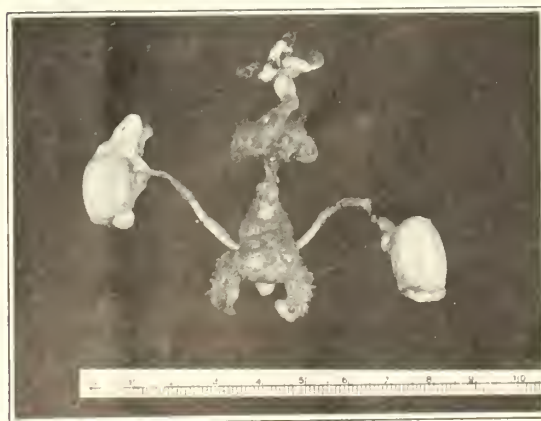


FIG. 3.—Anterior aspect of genital tract of normal litter mate. (Compare with Fig. 2.)

into the posterior urethra. The nature of this appendage is not known to us nor have we seen any reference to it.

The submucosal glands were inspected through an opening into the bladder and urethra, but in no instance was there any gross enlargement of these structures. Jenkins, Deming, and van Wageningen (1934) described these glands in normal rats and stated that they occur in 2 groups, which are designated as submucosal and pre-spermatric. These correspond in the human to the glands of Albarann and the glands of Tandler and Zuckerkandl.

Figures 2 and 4 show the ventral and dorsal aspects of the genital organs from a noncastrate rat which was united to a castrate for 210 days. Corresponding views of a normal litter mate are shown in Figures 3 and 5. The total weight of these organs of the noncastrate was almost double that of the normal.

This 210-day period of union represents approximately one-sixth of the life cycle of the rat. The fact that the testes responded to stimulation for this prolonged period as shown by the increased size of the accessory sex organs at the end of the experiment does not lend support to the theory of antihormone formation.

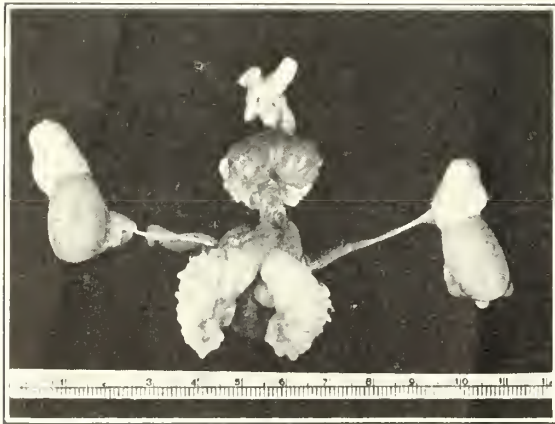


FIG. 4.—Dorsal aspect of genital tract of same noncastrate rat. (Compare with Fig. 5.)

In this pair and also in another pair which were united for 190 days there were marked changes in the testes of the noncastrate. The gonades were not greatly increased in size. Although sections did not reveal any noticeable increase in the diameter of the tubules pronounced changes in the spermatogenic epithelium and the interstitial cells were present. Cross sections showed the tubules packed with spermatozoa and the layers of spermatogonia and spermatocytes were increased in number. Longitudinal sections of the tubules showed loss of the wave of spermatogenesis seen in normal sections; no areas

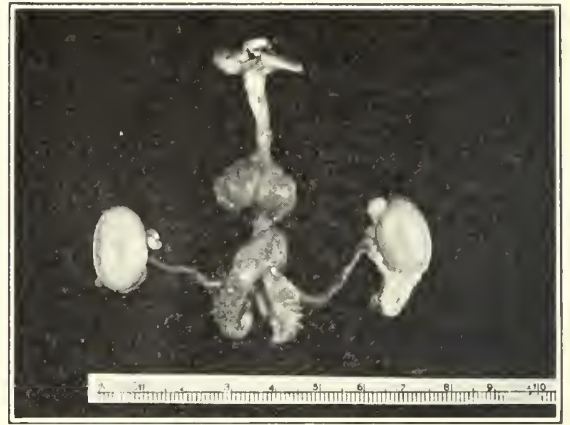


FIG. 5.—Dorsal aspect of same normal litter mate. (Compare with Fig. 4.)

free of completely formed spermatozoa were observed. The interstitial cells were increased in size and number.

There appears to be some confusion concerning the nomenclature of the 3 lobes of the prostate of the rat. Although the coagulating gland portion is dorsal to the bladder and lies in the same sheath as the seminal vesicles, it is, nevertheless, alluded to as the anterior lobe of the prostate. This designation leaves in doubt the exact character of the so-called middle and posterior lobes. The lobes situated in front of and behind the bladder are better termed the ventral and dorsal lobes.

Histologic sections of the enlarged ventral lobe showed a marked increase in the size of the acini, which were also dilated to an abnormal extent with secretion. The epithelium was definitely hypertrophied. In some areas the connective tissue seemed increased in amount.

SUMMARY

Gross and histologic changes in the accessory sex organs of noncastrate rats which had been united by parabiosis to castrates were found when the period of union exceeded 18 days. In 2 such pairs, which were united for 190 and 210 days respectively, there was marked enlargement of the accessory sex organs but no gross effect was produced upon the submucosal glands. A detailed report of the comparative weights of the normal and experimentally enlarged organs with histologic findings will be submitted later.

CONCLUSIONS

1. The testes of rats which were joined parabiotically to castrate rats were found to respond to this method of stimulation for periods of 210 days. The endocrine effects of this response manifested themselves in the marked and con-

tinued enlargement of the various portions of the genital tract as described.

2. The evidence submitted indicates that in these prolonged periods of union no so-called antihormone effect was produced.

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NOTE:—The authors wish to thank Dr. J. Parsons Schaeffer, Professor of Anatomy, Jefferson Medical College, for his interest in these experiments.

ABSTRACT OF DISCUSSION

D. ROY McCULLAGH (Cleveland): Dr. McCahey has produced a persistent prostatic hypertrophy in experimental animals. I should like to emphasize the endocrinologic aspects of his work. There is at present a very considerable interest in Collip's antihormone

theory. According to this theory, if a hormone is injected in large quantities, an antihormone is produced which will counteract the influence of the injected hormone. Most of the work concerning antihormones has been accomplished by the injection of hormones which have undergone certain chemical treatments in order to bring about purification. The gonadotropic hormone which causes prostatic hypertrophy in these rats comes directly from the castrated parabiotic partner and undergoes no chemical treatment. Under these conditions, there is no indication of antihormone formation since the prostatic hypertrophy persisted for many months.

There is every reason to believe that in certain instances benign prostatic hypertrophy in man is the result of an endocrine disorder. It is quite possible that the mechanism is similar to that just described by Dr. McCahey. If this is the case, this disease should be amenable to proper endocrine treatment.

THE TREATMENT OF CHILDHOOD PNEUMONIA IN THE HOME*

ELLSMER L. PIPER, M.D., PITTSBURGH

The task of presenting an accurate therapeutic appraisal of pneumonia is a difficult one. Volumes have been written upon this subject, and it has received more intensive study and more research than any other acute, infectious, contagious disease. The morbidity and mortality rate of pneumonia remains about the same as in the past decade. In recent years the danger of contagion has been generally accepted, and with the adoption of efficient prophylaxis a reduction in pneumonia morbidity may be expected. A quarter of a century ago the majority of children ill from pneumonia were treated in the home, frequently under unfavorable conditions. If recovery resulted it was not because, but rather in spite, of the treatment.

Pneumonia therapy has not kept pace with the scientific advancement that is being made in the treatment of many other diseases. The present status would indicate that there is no disease that has received greater attention and none in which there is a greater difference of opinion in therapy. Witness the bloodletting of former days, almost to the point of exsanguination, the cupping, both wet and dry, multitudes of plasters of clay, mud, and mustard, and various other external applications which would indicate that the pneumonic process was considered a local disease with systemic manifestations in contrast to our present-day conception of a general disease with local manifestations.

The rapid development of hospital facilities following the World War, together with the brief era of prosperity, developed a sentiment which made it fashionable to treat not only pneumonia in the hospital, but also many of the less serious illnesses of childhood. Nearly every hospital met this demand with the provisions of adequate facilities for the care of the sick child. This era of prosperity was followed about 6 years ago by a financial crisis with a resulting world-wide depression. The average wage earner, constituting the major group of our population, was most seriously affected. When illness was added, this group found it impossible to carry the extra financial burden of hospital care. Only the well-to-do, the rich, and the poor could enjoy the excellent facilities of the hospital. The home environment for the pneumonia patient has added additional responsibilities, and we cannot evade them. Whatever our present conception of the treatment of pneumonia may be, one thing is certain, we must be prepared to treat an ever increasing number of pneumonia patients in the home.

The search for a specific remedy in pneumonia therapy is almost as old as the search for the proverbial "fountain of youth." There is a wide difference of opinion to-day as to the therapeutic remedy of choice, and the physician who suggests a remedy may invite criticism and debate. Fortunately, the empiric basis for these suggestions is being replaced with scientific facts. The development of scientific research has stimulated more investigation and a better understanding

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

of pneumonia therapy. It has likewise opened the way to the danger of overcommercialization in the curative values of the many remedies offered. Fortunately, this danger is being minimized by effective control measures. The development of serum therapy, vaccine therapy, and chemotherapy presents many enthusiastic reports which reveal a lowered mortality; likewise, statistics are available which indicate no effect on mortality. The value, if any, of specific and nonspecific therapy is greatest when instituted the first day of the disease. The final word has not yet been given on this form of therapy.

The home care of the pneumonia patient demands laboratory facilities as an efficient aid in therapy. Roentgen-ray study is seldom necessary in uncomplicated cases, but the more important study of the blood should not be neglected. A blood culture at the onset of the illness may indicate the predominating organism. It should be repeated later in the disease if indicated. Complete blood counts at the onset and during convalescence may render valuable assistance in therapy.

The importance of good nursing by a trained nurse cannot be overestimated. It promotes the comfort and well-being of the patient, assures confidence, and quiets the anxiety and fear of the parents. No case is so mild that it may not ultimately offer a grave prognosis and none so severe that it may not yield and finally recover. If good nursing cannot be obtained in the home, then hospital care is indicated.

The value of well-kept clinical records is as important in the home as in the hospital. We can hardly conceive of a physician neglecting so great an aid. This record is of greatest value if it gives a complete word picture of the daily progress. A good record also lessens the tendency to unnecessary physical examinations.

The danger of overtreatment is especially true in the home environment. All treatment of pneumonia must be individualized; thus, the patient is treated rather than the disease. The schedule of treatment should be planned to permit the maximum of rest. Very little medication is needed in uncomplicated cases and none should be given which is not clearly indicated.

The ideal home environment should be similar to that of the private room in the hospital. The room should be large, well ventilated, in a quiet location, furnished with a comfortable bed and only the necessary equipment for the adequate care of the patient. No patient should be denied the benefits of fresh air, sunlight, and complete rest. Visitors should not be admitted to the sick

room because it interferes with routine nursing, annoys the patient, and there is the ever present danger of contagion. Unfortunately, the danger of contagion in the home is not sufficiently emphasized. The oversolicitous and anxious parents and uneducated attendants must be instructed to appreciate the truth of these statements. It may be difficult to obtain complete coöperation at all times, but we should set the goal for the standards and discipline of good hospital care.

Many therapeutic suggestions for the symptomatic treatment of pneumonia have been advanced and faithfully tried, only to be discarded. There are 3 classes of patients from the standpoint of therapy:

1. Those with reasonable care and good nursing which recover without special therapy.
2. Those under the most skillful care which are fatal because of the rapid development of the pneumonic process and an overwhelming toxemia.
3. Those which hang in the balance between life and death and in which rational therapy may accomplish much.

A special effort should be made to prevent the development of the more serious symptoms. A severe toxemia, associated with high temperature, nervous irritability, convulsions, and abdominal distention, either separately or combined, predicts an unfavorable prognosis. Prevention may be accomplished by the forcing of fluids, efficient elimination, hydrotherapy, mild alkalization, and proper diet.

The cough may require attention. It must be remembered, however, that its purpose is to empty the bronchi of accumulated secretions and is to be interfered with only when the cough is exhausting and prevents rest. Expectorants are mentioned only to be condemned; they are without value and may even be harmful. Small doses of codeine sulphate or phosphate or camphorated tincture of opium usually give relief. In many instances the cough has its origin in the nasopharynx and may be controlled by a plain alboline spray.

The nutritional needs of the well-nourished infant or child present less difficulties than those of the malnourished or undernourished patient. It is important to recognize the state of nutrition at the onset of the disease in order that the dietetic needs may be anticipated. The breast-fed infant should not be weaned. It may be necessary to dilute the feedings because of lowered digestive capacity. Older infants and children should receive a high carbohydrate, low total diet, with the first prerequisite a generous

fluid intake. The forcing of water alone plays an important rôle in better elimination, preventing toxemia, and lessening the tendency to acidosis. If sufficient water cannot be given *per os*, then it must be given by enteroclysis or hypodermoclysis with the addition of 5 per cent glucose in normal salt solution.

The indications for oxygen therapy are principally the respiratory symptoms of rapid, shallow respirations, anoxemia, and beginning cyanosis, with or without restlessness, delirium, hyperpyrexia, and toxemia. Oxygen, when indicated, should be used early before exhaustion develops with marked cyanosis. Delay may mean the difference between success and failure. The oxygen capacity of the body cells must be maintained and the gradient increased between the alveolar and blood oxygen. It should be given continuously as long as indicated under complete supervision of the physician but without the aid of the fire department and press publicity. Different methods of administration have been used. The use of the funnel suspended over the patient's face is wasteful and inefficient and is not recommended. The use of the intranasal catheter cannot compare with the efficiency of the oxygen tent. Portable oxygen tent outfits have been perfected for treatment in the home. The oxygen tent insures complete control for oxygen therapy and may be continued with safety as long as indicated.

The intramuscular administration of whole blood, 20 to 40 c.c., seems to be of value in delayed resolution. One of the parents may be used as the donor. Blood typing is not necessary. A limited experience with this form of therapy has resulted in rapid convalescence in 80 per cent of those treated. A preliminary report of a small group of 12 patients treated with whole blood is not conclusive, but may stimulate more study of this form of therapy.

Convalescent care demands the physician's attention until the patient has attained the pre-illness weight and is following an average normal weight curve. A complete blood count is indicated during convalescence to determine the degree of secondary anemia or other abnormal blood findings, and proper treatment should be instituted. Rapid convalescence is usually the rule in uncomplicated pneumonia, especially in young infants and children, with the exception of those suffering from disturbed nutrition before the onset of the illness. The disturbed nutrition group, unfortunately, constitutes a large number of cases, and special attention must be given hygienic care, diet, corrective measures, and the removal of foci of infection. Bacteri-

ologic studies during the course of the acute illness may render valuable assistance in the convalescent care. Early in the disease a positive blood culture of the *Streptococcus hemolyticus* may mean an empyema during early convalescence. Slow resolution and delayed convalescence may be anticipated in pneumonias in which the influenza bacillus predominates. It is in this group that roentgen-ray studies of the chest may reveal a tracheobronchial hypertrophy with a resulting bronchitis, which may be followed by emphysema and bronchiectasis. It should be remembered also that slow convalescence following so serious a disease may mean a tuberculous infection of the tracheobronchial lymph nodes, which only a careful study with laboratory aids can detect. The convalescent care of all pneumonia patients is as important as the treatment of the acute illness.

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ABSTRACT OF DISCUSSION

HOWARD B. EMERSON (Erie): Pittsburgh with its smoke and soot and high humidity has, it is claimed, a slightly higher pneumonia mortality rate than other sections of the state, but Erie, on the shore of the lake and having less hours of sunshine than any other city on the lake save one, has its pneumonia problem just as Pittsburgh. So far as can be learned, Erie is not much different from Pittsburgh in pneumonia morbidity and mortality.

Mortality statistics of pneumonia in children must be very unreliable. Cases are not reported, some cases of short duration are not recognized, and some are not even seen by a physician. One registrar gave the mortality as 110 per cent until he investigated.

The seasons in Erie differ some from those in Pittsburgh. The treatment of pneumonia does not differ; there is no specific treatment.

As to the use of oxygen tents, Erie can offer nothing from experience as to the effect on mortality, which is the test of all remedies. It is generally accepted that oxygen relieves somewhat the anoxemia, and the tent is the most rational and inexpensive method of administration. It is doubtful if it will ever become more than another good weapon in the fight against pneumonia.

The physician is relieved of many worries with the patient in the hospital, but it offers nothing in treatment that cannot be had in the average American home.

The moving of a pneumonia patient to a hospital is harmful, the older the patient the more harm done. It is better for the patient to lie where he falls with the prompt treatment suggested by Dr. Piper instituted. The rapid onset, high fever, rapid pulse and respiration cause a rapid dehydration, and the usual accompanying gastro-intestinal upset precludes the possibility of giving enough fluids. The subcutaneous administration of fluids should be stressed; it should be used to prevent dehydration, not to overcome it.

It is better to use a light woolen pneumonia jacket with a harmless ointment on the chest than to have a mud pack or onion poultice instituted by some fond

relative. A mustard plaster may have to be used if there is pain that cannot be relieved by medication or strapping.

ROBERT T. DEVEREUX (West Chester): A discussion of the treatment of pneumonia in the child in the home is timely. Many families at the present time cannot pay the heavy charges entailed by hospitalization; the medical profession should adapt treatment, so far as is possible, to their needs.

The function of oxygen therapy is the relief of circulatory disturbances, particularly cyanosis. Oxygen will probably be used oftener in the home than it has been in the past because there are reasonably efficient but simple hood arrangements and humidifiers now on the market that omit the use of the expensive soda lime and cost far less than the oxygen tent.

Although oxygen administration is indicated and is most useful in cyanotic cases, it has been our experience that it offers little help to children who have

toxemia out of all proportion to the cyanosis. In these toxic cases, all indicated symptomatic treatment must be used, including mental and physical rest, plenty of fluids, and a diet in thoroughly digestible form, carefully adapted to the needs and functional capacities of the individual child.

Liver extract appears to offer a new aid for overcoming toxemia. During the past year and a half, following the suggestion of William P. Murphy of Boston, we have treated a fair-sized series of cases of pneumonia and other infections with parenteral liver extract. In all of these cases white cell and differential blood counts were made, and in a large majority the effect of the injection on both clinical condition and blood picture was most gratifying. As Dr. Murphy showed in 1933, there is usually an increase in neutrophils within 6 hours after administration of liver. Parenteral liver extract is relatively inexpensive and is strongly recommended for use in treatment of pneumonia in the child in the home.

THE MEDICAL FATE OF PENNSYLVANIA'S UNEMPLOYED AFTER JANUARY 1, 1936*

GEORGE L. LAVERTY, M.D.,† HARRISBURG, PA.

In this era of reform, security, social justice, new deals, surveys, boondoggings, and diverse other theories, fancies, and hypotheses, I am requested by our esteemed secretary to peer into the crystal globe as the soothsayer of old. I approach the task encouraged by the oft-quoted aphorism that "coming events cast their shadows before." Conflicting rumors and changing trends have prompted postponing the preparation of this paper so that in the meanwhile I might observe the gentle winds of rumor kiss each sail of the ship of state.

The scholarly inaugural address of our president, published in the October issue of the PENNSYLVANIA MEDICAL JOURNAL, eloquently analyzes the philosophy and idealism of medical tradition. Herein Dr. Colwell anticipates the problem now under discussion. Having intimately observed the operation of Emergency Medical Relief during the past 2 years, I feel justified in answering his major question. Ninety-eight per cent of the physicians of Pennsylvania have "rededicated themselves to the time-honored ideal of the medical profession, which is that service shall be rendered before and without consideration of monetary compensation." We must face the cold fact that a minority of less than 2 per cent have sacrificed service on the altar of materialism. The great proportion of

our profession has not failed. I assert with confidence, come what may, *they will not fail*.

Official pronouncements indicated that the WPA would absorb rapidly all employables on relief. No provision for their medical care has been made. Unemployables are scheduled to become wards of the state and local communities. Accordingly, your close attention is directed to this announcement. Bills for medical relief services must be submitted within 30 days hereafter in order that payment may be made while funds are available. The FERA has supplied about 75 per cent of these funds, the state contributing the remaining 25 per cent. After federal contributions cease, the total funds available will need to be contributed by the state. Those physicians who delay submitting their bills for services rendered will encounter prolonged delay until special state appropriation is made for payment, *if such is ever made*.

The Program of Rural Resettlement offers evidence of the present trend for relief. This program, designed to rehabilitate the farmer, provided him with soil, shelter, stock, and seed. No provision had been made for maintenance while the crops were maturing. The demand for immediate necessities has prompted some of these farmers to use or to sell the expendable commodities while the Rural Resettlement Administration "held the bag." Plans are now under consideration for providing medical and other immediate needs.

* Read before the Conference of County Society Secretaries and Editors, Harrisburg, Dec. 10, 1935.

† Chairman, Medical Advisory Committee to the State Emergency Relief Board.

The WPA has met with innumerable obstacles which have caused the rate of employment to fall far behind schedule. Those who have been employed for a period as long as 8 weeks have received no pay. Therefore relief checks have been continued to provide them means of sustenance. Unofficially it is reported that \$8,000,000 of relief funds have been diverted for this purpose. Pressure groups have organized recently among WPA employees. On several occasions these groups have resorted to violence of a minor degree. The critical period in the relief program is now at hand. One uncontrolled temper in a sporadic mob may become an explosive spark. These tendencies in work relief lead me to believe that the program is failing in its objective. I anticipate that the future will find the trend reverse itself, that direct relief will not cease, and that WPA will fall into the alphabetical discard while Emergency Relief will continue in some form and with some initials, whether supported by state or federal funds—public pronouncements to the contrary notwithstanding.

Therefore, it is my opinion that direct relief cannot be closed precipitously in this state. Work Relief has failed in its efforts. Medical Relief to the unemployed and the Emergency

Child Health Program have been necessary and coördinated efforts of the state and the organized professions of the healing arts to meet a *temporary* need. These programs cannot be discontinued until *permanent* fields of employment are established in trade and industry. Should our government fail to meet its responsibility, organized medicine must establish some coördinated plan whereby adequate service will be continued. Well-meaning but misguided laymen should thus be prevented from organizing their pet clinics—with the physicians doing the work for experience.

Peering further into that mystic globe, I hear the click of the time clock and the shrill sound of the factory whistle; I see the toiler in the field and the mechanic at the mill; I see the lengthening pay roll and the receipted bills; I see dirt on the hands and a smile on the face. And I see an old friend, the family physician, greeted at the threshold, for they have "earned their bread with honest labor." What is the medical fate of Pennsylvania's unemployed after Jan. 1, 1936? I do not know—but I have confidence in my state, in my fellowmen, and in my profession.

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TREATMENT OF MENSTRUAL DISORDERS*†

FRANK C. HAMMOND, M.D., PHILADELPHIA

Gynecologic problems in the main are being recognized more and more as functional. It is not entirely a matter of organotherapy, and no rule of thumb can be followed in endocrine therapy. It is very important, however, that the physician know the normal part played by the endocrine system in the physiology of the body in order to understand organotherapy in the present-day treatment of diseases, more especially as it applies to the field of gynecology.

The rapidly increasing amount of endocrine literature is most confusing to the practitioner unless he has been able to keep abreast of the theories advanced; and those approved, held for further observation, or discarded. Although many believe that gynecologic endocrinology is extremely disappointing, yet there is a universal opinion that we must look in this direction for improvement in the methods of treating the functional gynecic disorders. In addition to this,

the marked frequency of these disorders and the unfortunate situation that there is no other known satisfactory treatment make it easy to comprehend why the harassed clinician will continue to employ empirically endocrine therapy, much of which is most expensive in spite of its questionable value for many indications, frequently, no doubt, due to turning a too receptive ear to the detail man and being misguided by the various recommendations disseminated through the mail. "The national cost of such medication would total a figure that would not be unimposing even in this day of stratospheric financing."

It is incumbent on the physician to make his organotherapy as rational as possible. To do this and to understand more thoroughly the disorders of menstruation necessitates, as previously stressed, at least a knowledge of the elements of reproductive physiology and endocrinology.

On the strength of various observations mostly based on experimental evidence, a modern theory of menstruation is evolved, in the light of which the events of the menstrual cycle may

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

† From the Department of Gynecology, Temple University School of Medicine, Philadelphia, Pa.

be summarized as follows: For the completion of the normal menstrual cycle, 4 hormones must be present, must be properly balanced in quantity, and must make their appearance in the proper sequence.

The stimulating sex hormone, prolan A, of the anterior lobe of the pituitary gland stimulates a primordial follicle in the ovary to develop. As this structure matures it produces the follicular hormone variously named *estrin*, *folliculin*, *theelin*, which in turn causes the endometrium to grow and acts on the uterine muscle. After full development of the graafian follicle, about the fourteenth day of the cycle, ovulation takes place, the ovum descends down the fallopian tube to the uterus, and a corpus luteum is formed in the ovary, the latter due to prolan B, also a sex hormone developed by the anterior pituitary lobe. When the follicle ruptures, it causes luteinization of theca cells and is known, therefore, as the luteinizing hormone. With the rupture of the graafian follicle, the lutein cells constitute the corpus luteum or yellow body. From then on, there is not only the production of *progesterin* or *corporin*, which controls the development of the characteristic premenstrual changes in the endometrium, but estrin is formed in much greater amounts. This estrin production causes a progressive inhibition of the anterior pituitary lobe so that the amount of ovary-stimulating hormone available gradually diminishes. Finally, estrin reaches its peak and correspondingly the amount of anterior pituitary lobe sex hormone has diminished to the point that it is insufficient to maintain the corpus luteum. This structure undergoes degeneration, which results in a cessation of estrin production and thus a breaking-down of the endometrium (menstruation). The absence of estrin then releases the inhibition of the anterior pituitary lobe, which again puts out its stimulating sex hormone to stimulate the development of a follicle for the next cycle. On the basis of this theory, menstruation is not due to an active agent which affects the endometrium, but to the withdrawal of estrin.

Although these studies may seem to be of purely academic interest, their great importance must not be underestimated. They have led to findings of inestimable value in certain conditions characterized by uterine bleeding, and hold promise of more to come in dealing with such problems as sterility, dysmenorrhea, and amenorrhea. Hence the proper understanding of menstruation is probably the most fundamental requirement for the successful practice of gynecology.

As the actual bleeding in menstruation is due to the withdrawal of estrin, it also accounts for functional bleeding at times. At or near puberty and the menopause sometimes the follicle persists, getting larger and larger, the endometrium becoming more and more congested, until the follicle exerts an inhibiting effect upon the anterior pituitary lobe, when there is a bleeding phase which may be prolonged. This type of bleeding could be helped by the use of progesterin, which is not available for commercial use on account of the cost of manufacture.

The complete dependence of ovarian function upon a stimulus from the anterior pituitary lobe is the sole control of ovarian function; it is the activator of the graafian follicle mechanism. Thus it can be realized why anterior pituitary extract is useful in some cases of uterine bleeding.

Disturbances of the hormonal mechanism result in menstrual disorders. Pituitary deficiencies are the most common causes, but it is claimed there is no known way of stimulating anterior lobe activity except by the rather empirical and at times uncertain method of irradiation. The administration of anterior pituitary extracts is to be considered purely substitutive.

In analyzing the results of the treatment of functional menstrual disorders by organotherapy there are those who believe that little or no results are obtained, while others consider satisfactory response in certain cases to a varying degree.

As the estrogenic substances available for oral administration are considered practically inert, the preparations for hypodermic administration are used in preference. The ones most frequently used are theelin, and theelin in oil (P. D. & Co.); amniotin (Squibb); progynon and progynon B (Schering). The estrogenic preparations most frequently employed for oral administration are theelol (P. D. & Co.); amniotin (Squibb); and progynon (Schering). The 2 chief commercial forms of the anterior pituitary-like preparations made from the urine of pregnant women are antuitrin-S (P. D. & Co.) and follutein (Squibb). The Council on Pharmacy and Chemistry of the American Medical Association has not as yet approved any estrogenic preparations on account of the extravagant claims made by the manufacturers.

The menstrual disorders that will be considered are amenorrhea, dysmenorrhea, menorrhagia, and metrorrhagia.

AMENORRHEA

This may be either primary, when the menstrual flow has never occurred; or secondary,

when it occurs after puberty has been established.

Thyroid extract still is one of the most dependable endocrine products. It is helpful not only in amenorrhea but also in menorrhagia.

The endocrine glands concerned in amenorrhea are the thyroid (hyperfunction), the adrenal (hyperfunction), the pituitary (hypofunction), and the ovary (hypofunction).

The amenorrhea of Simmond's disease is due to pituitary deficiency incident to destruction of the pituitary, hence is organic and not functional, and cases have been reported recently that have responded to the administration of prolan.

It has been reported by some clinics that cases of primary amenorrhea treated with pluriglandular extracts were benefited to a very limited extent, but that cases of secondary amenorrhea were greatly improved. Another series has been reported of primary amenorrheas with infantile genitalia which responded to estrin therapy only so long as the therapy was continued; further, that primary amenorrheas with normal size genitalia may respond spontaneously after treatment with estrin or progynon. The basic therapy has been the use of anterior pituitary and placental extracts. In those cases having a low basal metabolic rate, thyroid extract was incorporated.

When secondary amenorrhea is associated with pelvic disease, no relief is to be expected until such involvement is corrected.

Amenorrhea due to anterior pituitary deficiency is frequently associated with adiposity, sometimes moderate, at other times quite marked.

No treatment is required for the amenorrhea of the acute infectious diseases. When due to constitutional disease, treat the cause.

When the amenorrhea has caused perturbation and mental depression, more especially if due to erroneous ideas, the physician should explain to the woman in simple language the significance of menstruation, particularly emphasizing the fact that complete absence of the periods is compatible with good health. It is advisable, however, in most cases to place the woman under treatment, but only after explaining to her the doubtful results.

The cases of amenorrhea with definite associated symptoms, more particularly an associated sterility, otherwise unexplainable, which are causing the patient much concern, constitute a group presenting the clearest indications for treatment. In these cases the first thought is organotherapy, which is justified if based on rational indications; but this form of therapy is

rather unsatisfactory, although the oral administration of pituitary substance alone or in connection with ovarian and thyroid preparations does seem helpful in some cases.

Ultraviolet light has been advocated with the claim that not only does bleeding recur at regular intervals but the disturbing symptoms which many of these patients have also disappear, which sounds miraculous.

The treatment of amenorrhea to a large extent is supportive and hygienic; if anemia is present it will require appropriate treatment. It is universally noted that amenorrhea in young girls is often the first intimation of incipient tuberculosis; here consideration is given to the tuberculous involvement.

Irradiation of the pituitary gland and ovaries has been of value in some cases, but only radiologists who have mastered the irradiation technic and who possess the equipment to measure accurately the dosage should undertake this exacting treatment.

Amenorrhea due to change of environment or occupation or to nervous disturbances requires no special form of treatment, if any at all. Low dosage irradiation over the ovaries and pituitary gland is of value, and the treatments are considered harmless.

C. W. Dunn reports the results of the treatment of a small series of cases dealing with a clinical syndrome that was a primary state to the patient and the amenorrhea was a secondary clinical phase. He submits the following: The benzonated female sex hormone (progynon B) when administered in sufficiently large dosage will produce menstrual bleeding (in one case after an amenorrhea of 9 years' duration); combined with the anterior pituitary lobe extract it will induce menstruation in certain amenorrheas of one year's duration, even when associated with progressive and extreme atrophic states of the ovaries; it is nontoxic in extremely high single and accumulative dosage; and it is effective in migraine irrespective of sex.

There is a certain group of cases of amenorrhea in which it is not possible to determine the cause; therefore, rational therapy cannot be instituted.

If women who have amenorrhea can be convinced that they are as healthy as women who do menstruate, there is no need to treat them for the amenorrhea.

DYSMENORRHEA

Although dysmenorrhea is merely a symptom or manifestation of some abnormality, pathological condition, or dysfunction, it is referred to

as primary dysmenorrhea and usually is discussed as a disease. It is very probable that in some cases of primary dysmenorrhea the endocrinopathic form is the important one. The secondary or acquired type is due to palpable pelvic disease or uterine displacements.

From an economic standpoint if from no other, the problem of the treatment of dysmenorrhea is a very vital and pressing one and deserves for its solution the best efforts of the profession; the most baffling aspect of this condition is that its etiology has not been determined. The treatment of essential or intrinsic dysmenorrhea is one of the most highly unsatisfactory phases of gynecology, and it will remain so until the etiology is determined. The treatment is medical and surgical.

Measures for Immediate Relief.—Rest in bed in severe cases; hot applications; the coal tar derivatives often are efficacious but should be used with caution; benzyl benzoate is disappointing; codeine, in one-quarter to one-half grain doses should be used when other drugs afford no relief; it should be administered hypodermically if nausea and vomiting supervene. After all is said and done morphia is necessary in the occasional case.

General Measures.—Hygienic and constitutional; gymnastic exercises.

Local Measures.—Tampons and douches are of no value unless there is an associated pelvic lesion which will ordinarily respond to this form of therapy. Some cases of the so-called "nasal type" are benefited by treatment of the "genital spots in the nose."

Glandular Therapy.—This involves substitutional endocrine therapy, either antuitrin S or follutein. Thyroid extract is of value in some cases of subnormal metabolic rate, but must be used cautiously.

Röntgen Ray.—Irradiation of the pelvis or the pituitary area, or both, is worthy of trial in the occasional case of intractable pain.

Surgical Measures.—Although illogic and empiric as it may seem, dilatation and curettage, preferably with the insertion of an intra-uterine stem which is allowed to remain in situ for 3 months, is beneficial in many properly selected cases. This procedure should be used only in cases of antelexio-uteri and in those in which there is no other associated pelvic disease.

If the dysmenorrhea is due to pelvic disease or new growths, medical and surgical procedures applicable to their correction must be considered.

Resection of the Presacral Sympathetic Nerves.—This operation has been strongly rec-

ommended by its advocates for the relief of obstinate cases of dysmenorrhea which have proved rebellious to less radical measures. Good judgment must be exercised in the selection of suitable cases. Sympathectomy may be performed by anyone trained to do abdominal surgery; the risk is considered slight and the technique not complicated. As to end-results the benefits are permanent; there is no interference with normal menstruation or the functions of childbirth.

MENORRHAGIA AND METRORRHAGIA

Uterine bleeding may be functional with no demonstrable pelvic lesion; anatomic, in which a definite lesion in the pelvic organs is the etiologic factor of the menstrual disorder; or a third group that occurs in certain constitutional diseases.

The immediate treatment of menorrhagia and metrorrhagia is essential pending further study of the patient, for unless treatment is instituted early life may be threatened or a fatal issue result. Such treatment consists of: (1) Rest in bed, if imperative; (2) a capsule consisting of strychnia sulphate, one-thirtieth of a grain; Bonjean's ergotin, 2 grains; and gallic acid, 3 grains, taken 4 times a day; pituitrin given intramuscularly may be helpful; (3) the use of calcium by mouth, intramuscularly, or intravenously; the intramuscular injection of blood serum; blood transfusion; (4) vaginal gauze pack.

In the functional uterine bleeding of puberty and maturity, follicle cytolysis, absence or abnormality of corpora lutea, and hyperplasia of the endometrium are the usual pathologic findings.

In all types of functional uterine bleeding the amount of estrin in the blood usually is normal. It is universally agreed that whenever anterior pituitary hormone is found in the blood the prognosis is extremely unfavorable.

In the treatment of functional bleeding during puberty and maturity, the object sought is the production of progestin. Progestin is not commercially available; if it were it would control the bleeding. By stimulating the luteinization of the graafian follicle and corpus luteum through the administration of the anterior pituitary hormone it is possible to produce sufficient progestin to stop a majority of the cases of functional uterine bleeding. For this purpose follutein or antuitrin-S may be used.

Irradiation of the pituitary gland and ovaries has cured certain patients who failed to respond

to organotherapy, some having only one treatment.

Thyroid medication is of service in a number of cases of uterine bleeding.

The profuse bleeding of adolescence may be due to congenital syphilis, and responds to intravenous syphilitic therapy.

Operative treatment becomes necessary for

uterine bleeding when medical treatment fails. This includes radium and hysterectomy.

I am indebted to E. Novack, C. F. Fluhman, C. A. Elden, F. Gal, C. W. Dunn, and H. F. Kane, from whose contributions I have quoted in the text.

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GRAVES' DISEASE AND PREGNANCY

ISRAEL BRAM, M.D., PHILADELPHIA

Clinicians who see many cases of exophthalmic goiter or Graves' disease are frequently confronted with problems in these patients that relate to the gonads. While the psychosexual mechanism, commonly through sexual incompatibility, is frequently involved from an etiologic aspect, the matter of sterility on the one hand and pregnancy on the other in one already suffering from Graves' disease deserves serious study. This contribution is based on a review of 4000 cases.

MENSTRUATION

Menstruation in Graves' disease may undergo marked variations from the normal; amenorrhea may persist for many months and in chronic cases for years. Especially is this true of those having undergone marked emaciation and asthenia. Mazer and Goldstein believe that excessive thyroxin stimulation of the pituitary gland results in the production of an excess of anterior pituitary sex hormone and a persistence of the corpus luteum with resultant suppression of menstruation and an excess production of estrin.

Also, menstruation may be irregular in occurrence, duration, and quantity—now on time, now too soon, again delayed, at one time diminished, at another profuse and weakening. Since in exophthalmic goiter there is diminished calcium fixation, menstruation may in occasional instances become so profuse and protracted as to occasion much concern. Gardiner-Hill and Smith report a series of 67 cases of exophthalmic goiter with normal menses in 42 per cent, delayed irregular periods or amenorrhea in 57 per cent, and menorrhagia in 1 per cent. In 29 patients with toxic adenoma 65 per cent menstruated normally, 27 per cent presented irregularities or amenorrhea, and 8 per cent presented menorrhagia. In our series of 4000 cases of Graves' disease normal menstruation occurred

in 31 per cent, and was delayed or irregular in 43 per cent; amenorrhea occurred in 24 per cent and menorrhagia in 2 per cent.

MARRIAGE

A young woman suffering from Graves' disease should not as a rule contemplate marriage unless she is approaching recovery. Ideally speaking, marriage should not occur before one year after recovery has been achieved. However, should the prospective union promise to be a happy one, marriage under the conditions may occur during a remission from the disease, and satisfactory progress is likely to follow despite marriage.

STERILITY

Subjects of Graves' disease usually remain sterile during the course of this malady. However, a pregnant woman may acquire Graves' disease. In such a case the fear of the trials and dangers of childbirth may be the psychic trauma constituting the exciting cause of the syndrome. We have seen a number of patients who trace the origin of their Graves' symptoms to the ordeal of a difficult labor and in a few to a cesarean section. According to some authors almost invariably Graves' disease originates during the course of pregnancy. This has not been our observation, however. In 66 per cent of our series the syndrome was already present when pregnancy occurred.

In 1918 Markoe stated that of 100,000 pregnant women at the New York Lying-In Hospital only 8 appeared to be suffering with hyperthyroidism. The infrequency of pregnancy during thyroid hyperactivity is also indicated by the report of Mussey, Plummer, and Boothby. From 1916 to 1926, 5043 women with exophthalmic goiter were examined at the Mayo Clinic; only 32 of these presented an associated pregnancy. Of 2185 women presenting toxic adenoma only 10 per cent were pregnant. In

the 3678 cases of hyperthyroidism reviewed by Clute and Daniels pregnancy existed in only 0.41 per cent. In our series of over 4000 cases of Graves' disease the incidence of pregnancy was about 3 per cent.

PREGNANCY

The question of whether a woman suffering with Graves' disease should be exposed to pregnancy is vitally important. The doctor's answer invariably should be, "No! not until the patient has been recovered for at least 6 months."

A certain degree of hyperactivity of the gland would appear to be the natural safeguard against toxemia of pregnancy. We agree with Falls to the effect that the presence in a pregnant woman of clinical manifestations of mild thyroid intoxication is not an uncommon complication of pregnancy and if properly managed need not detract from a perfectly normal course of events.

It is well in passing to call attention to a point in diagnosis. As a physiologic phenomenon the basal metabolic rate after the sixth month of pregnancy is apt to be somewhere between plus 20 and plus 35 per cent. This must not be attributed to thyroid toxicity. The increased basal metabolic rate accompanying pregnancy is not associated with symptoms of thyroid toxicity such as tachycardia, loss in weight, tremor, and the like. The basal metabolic rate usually recedes to normal within a week or two after parturition. Also, during late normal pregnancy there is a gain of about 25 pounds in weight. Hence, if beyond the sixth month of pregnancy, the basal metabolic rate is above plus 35 per cent and there is a *loss* in weight, Graves' disease may be suspected even in the absence of goiter and exophthalmos.

In approximately 30 per cent of cases in our series pregnancy did not aggravate the Graves' disease; the remainder were made worse in varying degree. In about 15 per cent the superimposition of pregnancy on Graves' disease results in a crisis and usually in miscarriage with or without maceration of the fetus, or conditions may require a therapeutic abortion. The feasibility of thyroidectomy during pregnancy is advocated by some, but this is not a settled issue. Opinions on this matter vary with the experience of observers. Hinton believes that the types of cases requiring interruption of pregnancy are chronic hyperthyroidism associated with adenomatous goiter in which there is definite myocardial degeneration, and cases of Graves' disease which endanger the life of the mother through the presence of pregnancy. He believes that 90 per cent of patients having

hyperthyroidism with pregnancy can be carried to normal delivery if properly managed. Our experience coincides with that of Hinton. In the event of pregnancy in a sufferer from typical Graves' disease an attitude of caution against a too precipitous therapeutic decision should be assumed. While some patients in this plight had better undergo a therapeutic abortion, the reverse is true in others and when least expected the progress of the syndrome may be entirely to our satisfaction; the patient may improve, the infant may be born at term, and both the mother and child may appear perfectly normal thereafter.

In a goodly percentage of patients in whom Graves' disease was present at the time of conception, pregnancy seemed to ameliorate the syndrome. Especially is this true if the vital organs have not been damaged. For psychologic as well as endocrinologic reasons, the woman who is delivered of a live healthy baby is better off than she who has miscarried.

PARTURITION

Parturition in Graves' disease is fraught with at least 2 problems. The first is that of straining with each pain. Bearing down not only adds to the strain of an overworked heart, but also increases the size and vascularity of the thyroid gland. Moreover, the accompanying pain is a kind of shock which should be avoided. The obstetrician should use such means as would obviate the necessity of bearing down. Slight anesthesia may overcome much of the objectionable psychic trauma. The second problem is that of postpartum hemorrhage. It is essential to be in readiness for packing the uterus after delivery of the placenta. Postpartum injections of pituitrin and ergot in large doses by mouth are harmless and frequently useful in this connection. Finally, it is well for the obstetrician not to leave the patient for several hours after delivery is completed.

LACTATION

Lactating mothers suffering with Graves' disease do not progress favorably unless lactation is discontinued. Lactation must be discouraged after the first week or two, and the baby should be fed by a wet nurse or placed on an artificial mixture as soon as possible. We have often seen a very miserable patient improve with surprising rapidity very soon after breast feeding was discontinued. Moreover, the infant in taking the milk of such a mother is receiving food contaminated with the toxins of Graves' disease. It is evident, then, that such infants do far better away from the mother's breast.

SUMMARY AND CONCLUSIONS

1. In a series of over 4000 cases of Graves' disease we observed a history of normal menstruation in 31 per cent, delayed or irregular menstruation in 43 per cent, amenorrhea in 24 per cent, and menorrhagia in 2 per cent.

2. Pregnancy occurred in 3 per cent of our series. In 30 per cent of these the syndrome was not aggravated by pregnancy. The re-

mainder were made worse, and in 15 per cent spontaneous expulsion of the uterine contents occurred. In approximately 10 per cent of pregnant sufferers from Graves' disease the necessity for therapeutic abortion arises.

3. Parturition in a sufferer from Graves' disease requires vigilance respecting postpartum hemorrhage and the avoidance of psychic trauma.

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**SIGNIFICANT FACTORS RESULTING FROM THE STUDIES OF THE
EMERGENCY CHILD HEALTH COMMITTEE OF PENNSYLVANIA***

SAMUEL McC. HAMILL, M.D., PHILADELPHIA

A few years ago there was organized an American Academy of Pediatrics. It now has a membership of 900. It was not created to compete with nor to duplicate the services of already existing societies. It is not just another clinical society. Its principal interest is in the preventive aspects of pediatrics. The Academy aims to function in large part through the medium of state committees. The purpose of these committees is to develop state-wide programs for the protection of the health of children.

The Pennsylvania Committee was organized in the early part of 1933. At its first meeting, called for the purpose of developing a program for Pennsylvania, it gave consideration to the procedures that had been adopted by corresponding committees in other states. After careful review it approved, with certain modifications, a plan that had been developed in New Jersey. This called for the creation of a state-wide child health committee under the auspices of the State Medical Society and having in its membership representatives from the State Departments of Health and Education.

The Pennsylvania Committee decided that any program having as its purpose the protection of the health of children could be best developed by The Medical Society of the State of Pennsylvania. Consequently, they submitted their program to the trustees of our State Society, overturning them to put it into action in Pennsylvania.

While this recommendation was under favorable consideration by the trustees, a situation arose which created an opportunity for an early response to this request. The Governor of the State, who was also chairman of the State

Emergency Relief Board, was eager to see developed a procedure to protect children against the possible destructive influences of the existing depression. The Governor recognized the wisdom of having The Medical Society of the State of Pennsylvania undertake the development of such a program and invited the president, the president-elect, and the secretary of the Society, together with representatives of the State Departments of Health, Public Instruction, and Welfare, and a few individuals to a preliminary conference. At this meeting the officers of the Medical Society promised to discuss with the Board of Trustees the desirability of undertaking the development of such a program.

The trustees approved the project and appointed a chairman and proceeded with the organization of the state and county committees. After the State Committee was formed it applied to the State Emergency Relief Board for a small fund to cover certain organization and administrative costs. The only salaries provided for in this fund were secretarial services for the central office. The other items covered the cost of printed forms and office supplies. Traveling expenses were allowed for the chairman, the vice-chairman, and members of the state committee. Application was made for rental charges and for funds to be allotted to the various county committees. These latter items could not be granted under the regulations promulgated by the Federal Relief Administration.

The beginnings of the committee have been briefly reviewed in order to indicate that, even had there been no depression, it was the opinion of the Academy of Pediatrics that the plight of the children the country over demanded some form of organization in every state for the pro-

* Read before the Pediatric Section of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

tection of the health of the children, to be administered by the organized medical profession. That the officers of our State Society were of the same opinion is evidenced by the fact that they were giving favorable consideration to the overture of the pediatricians at the time that the request for an emergency committee reached them.

It has long been the feeling that health movements should be directed by the organized medical profession rather than by lay people, as has been the universal custom in the past. The usual procedure has been that lay groups started these movements and appealed to individual physicians to help them out. They have never asked organized medical groups for their advice and guidance. This was one of the features of the program that led me to accept the chairmanship of the committee when so requested by the officers and trustees of the State Society. Through the years I had had sufficient experience with the attempts of lay groups to guide committees in dealing with health problems to realize the limitations of such a method. It is very significant that there has been enthusiastic acceptance, on the part of lay people and organizations interested in the protection of the health of children, of the opportunity of working under medical leadership.

The Emergency Child Health Committee has been at work for 2½ years, and we are now in a position to judge its value.

Let us first consider what it has meant to the children of the state because, after all, the principal purpose of this effort has been to safeguard the health of children in the face of the threat of present conditions.

There has been reported the complete health examination of 90,500 children and 3673 re-examinations. In addition to this, mothers of many thousands more have been taught how to provide, on their limited allowances, foods best calculated to build up the undernourished and protect the healthy child. The long-time value of this health education is apparent.

As a result of these 90,500 health examinations 247,000 defects have been reported, and 74,500 corrections have been made—exclusive of a number in counties known to have made many thousand corrections, which have not been submitted in detail. The general term "corrections" includes preventive procedures (vaccination and immunization), medical conditions (such as heart, lungs, *etc.*), as well as tonsillectomies, dental and eye corrections, *etc.*, which constitute a large percentage of the whole.

The question naturally arises as to what the effect of these corrections has been on the health

and nutrition of children. This is illustrated by a report from one of the counties, which is characteristic of many others:

Our first examinations revealed a marked lack of vitamins necessary to the development of bone and tissue. Most of the children were being fed starches, such as bread and potatoes alone, with very little fat or protein. . . . Under our instructions mothers have now learned that vegetables, milk, cereals, and some meat products must form the child's diet. A decided gain in weight has been the outcome. . . .

By placing badly nourished children on cod liver oil we found that the little ribs soon began to be less visible, and the child's appetite and general physical condition showed marked improvement. In cases in which the child resented the oil, we instructed the mother to follow it with orange juice, which, in turn, contributed to the necessary change in diet.

Another characteristic mark of these undernourished children, which was very evident, was their pallor and lack of facial expression. They acted listless and irritable, causing much unnecessary punishment by parents of children suffering from physical defects for which the parents alone were responsible, because of their lack of care. . . . In our recent re-examinations we found that a great deal of this listlessness on the part of the child had decreased with the gradual gain in weight. And most important of all was the realization that with the removal of diseased tonsils and decayed teeth came a decided change in the upbuilding of the little bodies. . . .

The real secret of this general improvement in health and the decrease in malnutrition among the relief children seems to be the better proportioning of food values, the removal . . . of physical defects, and the stimulating benefit of the cod liver oil treatments.

What has been the value of this work to the laity?

Many hundreds of lay individuals have been participating in the work of the committees. They have learned to understand the meaning and value of health examinations. They have witnessed the discovery of innumerable defects in children who were presumably healthy. They have come to recognize the benefit to be derived not only from the early recognition but also from the correction of these defects. They have gained a better understanding of the medical profession, recognizing the value of its leadership as well as the value of coördinated effort in the working together of the medical profession, the various lay and professional organizations, and lay individuals. The information they have gained regarding the hygiene and diet of children will stand them in good stead in the supervision of the health of their own children.

Let us now consider what the physician has derived from the work of the Emergency Child Health Committees.

In the first place he has the consciousness of having rendered a high service to suffering children in a time of crisis. He has established for

himself a position of leadership in health matters. He has greatly broadened his contact with the people of his community and has been given opportunity to demonstrate to them his interest in the protection of the health of children as well as his capacity to render high-class protective service. One physician who examined a great many children reported that his practice among children in families able to pay had increased so much since he began this work that he finds his time fully occupied. Another important value to the physician has been the dissemination of indispensable information to the general public as to the value of periodic health examinations.

It seems to the chairman of your committee, and this opinion has been shared by many of the county chairmen, that if the county committees with the support of the State Medical Society and the county medical societies would undertake, in the light of the interest that has been stimulated by the Emergency Child Health Committee, a campaign for the popularization of periodic health examinations much could be accomplished in the early development of this field, which is sure to form a large part of the medical practice of the future. In many localities, and especially among the pediatricians, the practice of periodic health examinations has been very definitely established. It not only has proven an extremely interesting field, but has incidentally been of very decided economic value.

As soon as the general public can be educated to the importance of the protection of health there is instantly opened to the medical profession a very large field of opportunity, which is of benefit alike to the physician and the client. Dr. Henry F. Vaughan, of Detroit, has aptly pointed out that but 2 per cent of the population is ill at any one time, and the remaining 98 per cent needs to be kept in health.

The State Committee has urged the importance of retaining the family-family physician relationship by having those families who had formerly been the patients of a particular physician referred to his office for the health examination. This is another advantage to the physician and one which the medical profession is strongly urging the importance of at the present time.

There has been opposition on the part of a few physicians to the work of the Emergency Child Health Committee on the ground that it savored of state medicine. This viewpoint has never been comprehensible to me. As a matter of fact, if I had not had the directly contrary opinion I would never have accepted the chairmanship of the committee. Speaking before one of the county medical societies in March of 1933,

just after the committee was organized, I made the following statement: "For some years we have been fearing the socialization of medicine. It is my firm belief that if we meet effectively this obligation (the protection of the health of children in this crisis), we will have taken a long step away from social medicine."

Let us consider the situation for a moment. When this work was begun, it was reported that there were 430,000 families on relief in Pennsylvania. In these families there were almost 1,000,000 children. The Governor brought this situation to the attention of the State Medical Society and asked that it develop a plan by which the health of these children could be protected. Let us assume that the officers of the State Society had declined to accept this service. What would have been the result? Manifestly the need existed, and it was very evident that it was someone's responsibility to meet it lest we be threatened with a future generation of handicapped individuals. One of 2 things would probably have happened. Either the budget of the State Department of Health would have been enormously increased to provide salaried positions for physicians in different parts of the state to render the service the medical profession has been giving through the medium of our committees, with a consequent increase in the number of clinics; or the Emergency Relief Board would have developed a similar method.

Either one of these procedures would have meant state medicine and would have paved the way for the establishment of health insurance—an eventuality we are fighting at the present time to the utmost of our ability. The course we have followed has been a definite protection against such an outcome and has placed the medical profession in a position in which it can justifiably take a definite stand as to how the health problems of the indigent can be met in the future without the socialization of medicine.

It is my earnest hope that the State Society will appoint a committee to study carefully the work which is being done by the Emergency Child Health Committees, with a view to developing some plan by which this important service can be provided after the emergency has passed and in a manner acceptable to the profession as a whole. Other states are considering this question, and the procedure that Pennsylvania has adopted for health protection during the existing emergency has so impressed medical representatives from many states that it is being considered as a plan of procedure by them.

The Child Hygiene Subcommittee of the Committee on Public Health and Medical Education

of the Medical Society of the State of New York, together with Dr. Thomas Parran, Jr., the State Health Commissioner, is developing its program to be administered under the Wagner Security Bill. They have recently written that the program of the Pennsylvania Emergency Child Health Committee will be used as a valuable approach to this problem.

In closing, I want to pay tribute to the thousands of physicians who have participated in the work of the various county committees. Their

unselfish service, their keen appreciation of the value of the work, and the daily evidences we are receiving of their continued interest again exemplifies what has been manifested so frequently, namely, that the medical profession is always ready to render effective, unselfish service to those in need.

1822 Spruce Street.

NOTE: The discussion of the papers by Dr. Hamill and Dr. Price follows Dr. Price's paper.

WORK OF THE EMERGENCY CHILD HEALTH COMMITTEE IN ALLEGHENY COUNTY*

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The success of a county committee depends upon its organization and personnel, and Allegheny County was fortunate in attaining great success in its work through these factors.

The Advisory Committee was composed of prominent citizens of the county experienced in welfare work. The Executive Committee was composed of the officers of most of the child-caring agencies in the county.

Mrs. C. E. Lott, the vice-chairman, was in charge of a group called the Planning Committee, and it was to this group that we looked for the management of our field work.

The organization's plans radiated from Miss Martha Leslie, the invaluable executive secretary. Upon her shoulders rested the responsibility of the details of the work, and her experience as executive secretary of the Child Health Council was of incalculable value. The executive secretary was the only salaried member of our organization. Later, 4 assistants were allotted to us by the Relief Works Division through the State Committee.

As the program developed, a local committee was organized in each community and this committee was responsible for the work in its own district. There were 210 examination centers and 1560 lay volunteers enlisted to aid in the work.

It was the desire of the Central Committee to have community volunteers assist with the work in their particular districts. In this way they became familiar with their local problems. The coöperation in every instance was beyond expectation, and deep gratitude was expressed to all who contributed their time and interest.

The central office of the committee was established in the Children's Hospital, in quarters gratuitously supplied by the Board of Managers of the hospital.

On account of the magnitude of the problem, it was decided to limit the examinations to the group of children between age 2 and age 6, the most neglected age group. This service was rendered only to children in those families receiving unemployment relief.

The committee has complete records of the 7366 children examined. This number represents about 50 per cent of the children contacted, and this fact may seem to be a breakdown in our efficiency. The field work began on January 1, 1934, and carried on through a terrible winter, many insurmountable difficulties being encountered. A big factor in this apparent failure to secure a larger representation was the lack of proper clothing for the children to bring them to the examining centers. Indeed, many children brought in wore clothing of older children in the home or even borrowed from neighbor children.

No report of the work would be complete without one concrete example of coöperation. In the Elizabeth district, Mr. John Thompson, the postmaster, was the keystone of our committee. As this region is sparsely settled with a number of mining communities, he arranged to have the school busses bring the children to the central examining point and have them returned to their homes, dovetailing these trips so that there would be no interference. But the far more important service was rendered during the follow-up period, when he personally supervised the trips to individual homes which would have been practically impossible for our workers

* Read before the Pediatric Section of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

to locate or which they would have consumed many hours in finding.

Two important factors in the success of our work were the training classes of volunteer workers conducted by Dr. James K. Everhart and the organization of the physician field workers by Dr. D. Hartin Boyd. For each of the 210 examining centers, one physician was placed in charge of the group and all contact work was through this source. A total of 693 physicians contributed their services and have made a lasting and memorable contribution to this work.

The Pittsburgh Pediatric Society assumed the responsibility for the majority of the examinations in the congested city districts. In only one section of the county did the physicians fail to respond to the request of the committee, and this section was not touched in spite of considerable lay pressure being brought to bear.

Following the examinations, a number of emergency cases were found and every effort was made to care for them. Many conditions were discovered which needed attention, but since they were not considered as emergencies remedial efforts were not instituted. This necessarily left a large group in need with no facilities to care for them. Provision must be made for this work and will be made only through the collection of mass evidence, based upon facts and actual findings.

The findings of this study present many challenging problems. It is not alone to the solution or remedy of these findings that we should give all our efforts, although they must be considered. Most important is an attack upon the causes.

Three outstanding needs of this study call for immediate attention:

1. The need for the correlation of child health programs in the entire county with a definite outline of extension of activities.
2. The need for an organized nutritional service.
3. The need for additional facilities for correction of physical defects.

The main feature of this work was that 63.04 per cent of the children examined needed to be referred to the family physician for immediate care. Of the children examined 60.04 per cent were so referred. More than 80 per cent of the mothers were interviewed and given instruction by the nurse or nutritionist, or by both.

Throughout the entire period of examination, the family-family physician relationship was stressed, and many of these children were returned to their former physicians for supervision and correction of defects.

The following case report is presented as an

example of what has been accomplished with undernourished children.

Pauline, age 5½, height 46 inches, weight 30 pounds. As a result of the committee's work, the family moved from a condemned tenement house in a sunless court into a house with light and air. Regular visits were made to the family physician; dental care was provided. A nutritionist visited the home regularly, advising on the purchase and preparation of food and securing special food for Pauline. Ten months later, Pauline had gained 14 pounds, the head was held erect, and the shoulders were straight; in addition, the child was alert, wide awake, and happy.

At one of the committee meetings, the director of the County Emergency Relief Board stated, "Commendation only has been the reaction to the work of the Emergency Child Health Committee. It is the only program touching our families that has not been torn to pieces by critical groups. If only we had the same reaction to our emergency relief program as we have had to the Emergency Child Health Committee program!" He also stated at a meeting when the year's report was given, "Frankly, when this program started a year ago, I did not see how it could be carried through nor could I see how any follow-up could be secured. During the year I have followed the program with interest and satisfaction and now, today, after hearing exactly how it has been worked out and how the follow-up has been organized and all that has been accomplished, I want to say I am more than convinced and satisfied. Corrections are being secured that I never thought a year ago could be arranged."

In one district, as a result of this examination, the real need for a number of tonsillectomies was revealed, and a local hospital opened a closed ward, graduate nurses volunteered their services, and, of course, the physicians did the necessary surgical work. The hospital ward had been closed because of lack of funds for maintenance, although there were enough requests for admission to have kept this ward open and full.

The task for the year 1935 has been follow-up work. On Sept. 1 the records show that 35 per cent of the children for whom corrections were recommended have been cared for or are now under treatment.

The office received many calls during the year for statistics and findings in regard to malnutrition in various districts, so an effort was made to keep these results compiled as we moved along in order to have authentic data available at all times.

The actual picture of conditions existing in this group of children has been constructed through this study and is a piece of work that

has never been done before on such a large and comprehensive scale.

During this period, a diphtheria immunization campaign was started by the Child Welfare Bureau of the City Department of Health, under the direction of Dr. H. J. Benz cooperating with Dr. E. A. Conti, County Director of Health. The plan of operation was formulated in cooperation with a special committee from the Allegheny County Medical Society and the health departments agreed to furnish toxoid for all cases. The plan included the unique feature of the Health Department's paying 50c to the participating physician for the record of each child immunized, whether a pay or free patient, up to age 6.

The unfortunate publicity given to the controversy over a certain consignment of diphtheria antitoxin seemed to cause a collapse of the campaign, and interest has never been revived.

One of the most encouraging results of this work was the interest aroused in the county. Without solicitation, the chairman was approached by a very prominent group of young ladies with the inquiry as to where the most good could be done in our work with \$10,000. The suggestion that this money be expended in corrections recommended was happily accepted, and we are hoping that this money will be available after the new year.

Another response to this need just came to my attention a few days ago. About \$5,000 will be available to the Children's Hospital through a group of women because of their interest in the follow-up work which this hospital had been doing throughout the past year.

In conclusion, I wish to state that this is the first time in my knowledge that such an extensive health program has been undertaken with the medical profession as leaders, and it has been an astounding success as well as a praiseworthy procedure.

121 University Place.

ABSTRACT OF DISCUSSION

Of Papers by Dr. Hamill and Dr. Price

JOSEPH S. BROWN (Lewistown): My remarks will be confined entirely to leadership and coördination. In this discussion I can give you only the conditions under which we worked and the results obtained. When we attempted to organize our committee it was understood among the medical members that the personnel of the lay group should consist of those who would be interested in the community as a whole, those who would have foresight, those who would be influential, and those who would build. Through this lay committee and the medical committee, we have endeavored to maintain leadership already in existence and to enhance that leadership at each and every opportunity, but not

to a point that our activities would become conspicuous or that we should seem to be overzealous. The lay committee was always consulted, informed of our plans, and asked for suggestions. If feasible, these were adopted. In this we were successful, for when we had the lay committee interested we had an approach to the public, which was our goal. We believe, with the interest we have generated in the public through the lay committee and the undivided support of our medical organization, that we established medical leadership as it never existed before.

We encountered some obstacles. The greatest barrier to progress was the result of the "May Clinic" for the examination of preschool children. Quite a few physicians were loath to examine these children because of their former experience. They would examine children, and in many cases the parents did nothing to correct the defects found (a waste of time). In certain localities poor results were due to this lack of co-operation.

Toxoid was not the success it should have been. A prominent man in the community had been given a serum of some kind. After receiving it, he developed an arthritis of the wrist, which was reported as being caused by the serum. This report hindered the progress of the work in that community. We will have to wait for another generation before we will be allowed to give more toxoid and then only if we have destroyed all legends. In this we have not been so popular. We might take a lesson from these 2 examples—be careful of what you do and what you say.

I did not believe, when we were so advised by members of the State Committee, that funds and help would be available when needed. When an appeal was made to the various organizations in the community for aid, which was not done until we were well organized and many examinations made, the very hardest thing we had to do was to find enough children with defects to exhaust the funds subscribed and the voluntary help offered. We still have money available.

The Kiwanis Club of Mifflin County has been doing underprivileged child work. As an organization, they have sponsored the work relating to tonsillectomy, adenoidectomy, and circumcision. They feel as though they should discontinue this work and seek some new objective, because the physicians were actually doing the work gratuitously and the Kiwanis Club was receiving credit which was not due it. We should not divorce ourselves from this or any other similar organization, since that would destroy coördinate movement, the very thing we have tried to establish.

Since the organization of the committee in Mifflin County the questions and opinions asked have increased almost to the point of making us weary having visitors and answering phone calls. If this could be considered a barometer, then we have established medical leadership and have coördination of movement.

The coördinated movement of any organization, whether it be medical or otherwise, is essential to its success. Time and statistics have proved that any one-man organization is short-lived and unsuccessful. A piece of work of this magnitude requires not only the undivided support of the medical society but that of a selected community as well.

Physicians as such do not see the opportunity that exists in this and allied movements to get back that which we have lost—the position occupied by the old family physician, the leader in his community, the one whose advice was sought and whose honesty, integrity,

and character were without question. A great many of us are still in lethargy. Until each and every man in our organization makes the position of our medical organization a personal one, we have every reason to believe that in our sleep we may be swallowed by some such monster as the Milbank Foundation or other dangerous reptile. Therefore, let every man in his own community get his shoulder to the wheel of this committee and to all like organizations, and assist in every way possible. If that is done in all communities, we shall have coördination of movement, and coördination of movement means the continuation of our organization to the glory of it as such and to the benefit of suffering humanity.

CHARLES H. SMITH (Uniontown): With the medical organization behind this program it must be successful. The tremendous amount of malnutrition that has been uncovered is appalling. Unless this menace is met and corrected before the child reaches the age of puberty that child is permanently damaged. Having the mothers given the proper instruction and demonstrations in their homes regarding a well-balanced diet will almost invariably correct this menacing condition, and that is one feature of the work which has been successfully carried out in several of the counties. The figures given as to corrections of the various physical defects speak for themselves. It has been said that any physical handicap of adult life can almost invariably be traced to neglected childhood, and the correction of these defects should be imperative. John Muir said, "The longest life is the one that contains the greatest amount of time-effacing enjoyment of work that is a steady delight." The work which many committee members have done and are doing is certainly of that type, as they have given weeks and months of their time and have done it because they enjoyed helping the mothers to become more efficient in the care of their children. This program as it has been and is being carried on cannot help but be of lasting benefit to every community of this state.

ROBERT ALEXANDER (Reading): The word "pioneer" is synonymous with America. This has been true of practically every phase of American life and development. It has been especially true of the medical profession. The pioneers of our profession hold a high position in the history of our country, and the mere mention of the names Agnew, Gross, DaCosta,

Gorgas, and General Wood thrills the American physician.

Dr. Hamill is another pioneer in medicine and deserves mention with those pioneers who have preceded him. This modest man had a vision. He saw in the dark days of universal depression and poverty an opportunity for service to his fellow men and to his profession. He saw the danger of the loss of the traditional relationship between the family and the family doctor; the danger of physicians being employed on salaries by the State Emergency Relief Board, or the piling up of clinics, paving the way for the establishment of health insurance and state medicine. He states that the Pennsylvania plan of examining the children of families on relief has been a means of placing health education where it belongs, with the medical fraternity as the logical leaders; that it has educated a great many lay workers in each community to the value of health education and disease prevention; that it has stimulated new interest among the laity in the periodic health examination.

As chairman of the Public Relations Subcommittee on Periodic Health Examination, I invite members of the State Medical Society to write papers for publication in the PENNSYLVANIA MEDICAL JOURNAL, and I invite component county medical societies to devote at least one meeting during the coming year for the purpose of educating the members of the profession in this subject. Dr. Hamill aptly states that this is certain to form a large part of the medical practice of the future.

Under the Pennsylvania plan both society and the physician have been protected. Our state can well be proud of the men who planned and executed the emergency child health work. I believe that the danger of socialized practice of medicine has been postponed indefinitely.

Let us hope that the State Society will appoint a committee, as Dr. Hamill has suggested, to study carefully the work of the Emergency Child Health Committee, with a view to developing some plan by which this important service can be provided, after the emergency has passed, in a manner acceptable to the profession as a whole.

It is my hope that, as our new president—Dr. Colwell—has suggested, government, industry, and labor will supply employment for our citizens so that there will no longer be a medical emergency or danger of socialized medicine.

PROBLEM CASES IN REFRACTION*

ISAAC S. TASSMAN, M.D., PHILADELPHIA

The problem cases encountered in the practice of refraction may be considered in 2 groups: (1) Those which present difficulties in the examination in order to determine the correct glass to prescribe, and (2) those which present problems in the use of the glasses prescribed after proper and careful examination. A few of the conditions frequently encountered will be briefly considered.

Careful retinoscopy is the first essential in the examination of all cases. In those uncomplicated cases in which a cycloplegic has been used, this procedure is somewhat simplified. In presbyopic patients who are examined without the use of a cycloplegic, the retinoscopic examination is much more difficult. In a great many cases this can be carried out at a distance of 1 meter. If this is not satisfactory, the examination should be attempted at 50 cm. from the patient. The routine practice of retinoscopy in

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

these cases leads to a surprising degree of proficiency. Even though it is not absolutely accurate in all, it will be found to facilitate greatly the examination at the trial case.

In cases where a cycloplegic has been used, the retinoscopic shadow may appear so dull that it is almost impossible for the examiner to determine the direction and extent of its movement. This usually indicates the presence of a high degree of ametropia, which can be confirmed by placing a moderately strong convex or concave spherical lens in the trial frame on the patient. The proper lens will, on further examination with the retinoscope, reveal the shadow much more clearly.

When an attempt is made to improve by refraction the visual acuity of patients suffering with pathologic changes affecting the media of the eye, such as opacities in the cornea, lens, or vitreous, the appearance of the retinoscopic shadow will be altered and distorted according to the location and extent of the opacities. In some of the milder cases it may be possible to observe the movement of the shadow behind the opacity, while in those more seriously affected no satisfactory determination can be made by this method. In cases of albinism and in those with nystagmus, the retinoscopic shadow may be very faint and appear almost to blend with the general reflex, but its movement may be observed on close examination and with slow rotation of the retinoscope in the hand of the examiner. If the pathologic involvement is more pronounced, subjective examination must be depended on alone in order to determine and prescribe a lens affording the best vision obtainable. With small children careful examination with the ophthalmoscope will often assist in the determination of the character and estimation of the amount of ametropia present.

A separation or splitting of the retinoscopic shadow is often encountered in cases with irregular astigmatism because of the nature of the refractive index of the media of the eye. One segment of the shadow will be seen to move in one direction while the other moves in the opposite, with a dark area between the two. In these cases the point of reversal can be considered to occur in the meridian examined when the actual splitting of the shadow is first noted.

In patients suffering with definite ocular symptoms in the presence of a very low refractive error, the examiner must be sure of complete relaxation of the accommodation by the cycloplegic used. The effect of a 0.25 D. sphere or cylinder is often difficult to determine on subjective examination. Many such patients wear

a concave lens when a convex is indicated. The amount of astigmatism and the axis of the cylinder can be accurately determined by retinoscopy with cylinders. On subjective test or postcycloplegic examination, the axis of the cylinder should ordinarily not be changed. The crossed cylinder may be employed as an aid in the determination of the axis. In patients with a high astigmatism who have never worn glasses, it might be necessary to reduce the strength of the cylinder found in order to avoid discomfort in the beginning. Some difficulty may arise in cases with astigmatism at an oblique axis, because of the prismatic action produced. This might be eliminated by slightly lowering the centers and placing the correcting lenses closer to the eyes.

In hyperopia the examiner should not follow any set rule in deciding the strength of the spherical lens to be prescribed. The indications to be met in each individual case should be considered, careful thought being given to the symptoms complained of, the power of accommodation of the patient, whether or not glasses have been previously worn, and the patient's visual acuity, age, and occupation. The strongest possible convex spherical lens should then be prescribed.

The presence of myopia, especially in children, requires careful and repeated examination, with regulation of and attention to the amount of close work performed. In those who show an increase in the extent of the myopia on subsequent examinations, the amount of reading and close work should be restricted to actual school requirements. In spite of this regular increase noted, the condition in this class of cases appears to be what might be termed a physiologic process, unaccompanied by any serious fundus changes. The need for concave lenses of greater strength, in order to maintain the same vision, becomes much less about the time the patients reach adult life. The tendency in prescribing for these cases is to overcorrect them. It is better to order the weakest concave lens giving the best vision. In another group, a myopia of rather high degree may occasionally be found to occur in early childhood, accompanied even then by certain myopic changes in the eye. With these patients good vision is rarely obtained, especially if these pathologic changes in the eyes become more marked as time goes on. This often occurs with an increase in the amount of the myopia even though the proper correcting glasses are constantly worn. Special classes have been instituted by some school

systems for the instruction and regulation of the close work done by children so affected.

In some patients with a very high myopia and in pronounced cases of conical cornea, the use of contact lenses has been successful in improving the visual acuity. Especially with the latter, where there is a great deal of astigmatism and the vision cannot be improved with ordinary lenses, the contact lens will reduce this astigmatism almost entirely. When these are employed, it is necessary to test the patient repeatedly until the proper lens is found to suit the eye and then to have the patient practice the insertion and removal of the contact lens for about a week before prescribing. Its use should be started gradually, keeping it in for about an hour a day at first and then increasing. My experience with these cases has been that the patients seem to tolerate the lenses very well in the beginning, but as soon as an attempt is made to prolong their use for a long period, the discomfort becomes too great to bear. However, if they are used with discretion and can be tolerated by the patient, the vision in these cases can be greatly improved.

Postoperative cataract cases require repeated refraction before a lens is finally prescribed for the eye operated upon. Very often changes take place in the refraction of the eye during the first few months following operation, thereby necessitating a change in the glass already prescribed. Prescribing a correcting lens for both eyes in patients in whom only one eye has been operated upon will cause great annoyance because of the resulting diplopia unless the patient suppresses the image of one eye. It is better to prescribe only for the eye having the better vision. When discomfort and poorer vision than that obtained on testing is complained of by these patients, it is often due to improper fitting of the glasses prescribed. It is important that the glasses be fitted in the same position before the patient's eyes as were the lenses in the trial frame. With the higher power lenses used in these cases, differences in the size of the image can be caused as the lens is fitted closer to or further from the eye. If glare is a continued complaint in these cases, it is advisable to prescribe a shade of dark tinted lens sufficient to reduce the amount of the glare.

With other presbyopic patients, after the glasses have been prescribed, difficulties continue to occur in doing close work often because of improper illumination. These patients should be advised, at the same time the glasses are prescribed, concerning the intensity of light necessary to obtain better vision. Many older pa-

tients certainly require a higher intensity of light to do close work or even for ordinary reading. Ferree and Rand have shown this to be a factor in aiding the near vision of presbyopes and in increasing the range of distance in patients with bifocals.

The continued complaint of inability to do any sustained reading or close work on the part of some patients who have had the proper lenses prescribed after careful refraction should indicate the possibility of an insufficiency of convergence. This condition can often be relieved in a comparatively short time by exercises with prisms, base out. These exercises can be given with loose prisms or with the stereoscope, in the office or by the patient himself at home.

Discomfort is also caused by reading glasses that are too strong for presbyopic patients who are wearing them for the first time. It is always safer in these cases to order the weakest glass necessary to do the required close work.

If frequent and troublesome changes in the vision take place in hyperopia and myopia after the proper refraction, it should be remembered that such transient changes sometimes occur in the eyes in association with diabetes because of the variations in the refractive index of the crystalline lens. The examiner should then be led to investigate the blood-sugar concentration in such patients.

In conclusion, every refraction case should be considered as a problem. Refraction should not be considered as just a mechanical procedure, but as an important part of the ophthalmologist's examination of a patient who seeks relief from certain symptoms and complaints which might be the result of an ocular defect. Together with a careful analysis of these complaints, the accurate determination of the character and extent of the ametropia present is necessary for a correct diagnosis. The prescribing of the correction indicated, in the form of the proper glasses with the necessary advice and instruction concerning their use, constitutes the treatment of the case.

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ABSTRACT OF DISCUSSION

ALEXANDER G. FEWELL (Philadelphia): Refraction constitutes a very large part of the work done by most ophthalmologists, and our measure of success is based to a large extent on the care with which this work is done. Time and patience, as well as a thorough knowledge of the subject, are requisites of all good ophthalmologists. Fortunately, not all of our patients present problem cases in refraction. The thorough ophthalmologist, however, is more or less distinguished by his successful treatment of these difficult cases. A

careful history, detailing all ocular and physical symptoms, as well as a thorough examination of the eyes externally and intra-ocularly, should be made.

Careful retinoscopy should be done in all cases. In those under age 45, a cycloplegic should be used; for the presbyopes, that is, those over age 45, 1 drop of 5 per cent ephthamine may be used with safety, and very much facilitates the examination. The effect of this drug is counteracted by 1 drop of 1 per cent pilocarpine after the examination is completed. In children and other difficult cases, it is desirable to do 2 and sometimes 3 retinoscopies on successive days. The greatest difficulty with children and in those with nystagmus is in getting them to fix the light properly. In most cases the amount and the axis of the cylinder can be easily and accurately determined by cylinder retinoscopy.

It is important to determine the muscle balance for both far and near, the adduction, the abduction, and the accommodative power of the eye. In cases in which a cycloplegic is used, these determinations should be made both before and after. Hyperopes with high esophoria should be given more correction than those with exophoria. Myopes with high degrees of esophoria are seldom comfortable with a full correction for near work. All cases of hyperphoria of more than 1 degree should be corrected by vertical prisms. Patients with deficient adduction should have some form of muscle training. The discomfort experienced by many of the presbyopes is due to low adducting power.

In cases of irregular astigmatism caused by corneal opacities and in conical corneas, there are no definite

rules which can be followed. The retinoscope is usually of little help. I depend a great deal in such cases upon the pin-hole disk and the stenopaic slit. Usually the amount of vision of which such eyes are capable can be determined with a pin-hole disk. The stenopaic slit will give an idea of the axis of the cylinder. The proper combination of lenses must be carefully worked out, striving always to get as good vision with the lenses as was obtained with the pin-hole disk. In those patients with high myopia, unilateral aphakia, and conical corneas, especially the latter, contact lenses have a real place. In some patients with low visual acuity from various causes the telescopic spectacle will often prove of value. I have found them especially useful in old people with senile macular degeneration and in advancing cataract. Quite often these old people are able to read average size print with these lenses. Only the eye with the better visual acuity should be fitted with the telescopic lens, as it is very difficult to get binocular vision because of the wide angle of these lenses.

Dr. Tassman has not mentioned in his paper those cases which drift from one ophthalmologist to another, complaining of an inability to read for more than a few minutes at a time. We have all seen them and have been unable to give them relief. Unquestionably many of these cases are neurotic, but we should exhaust every means at our command to discover any trouble before placing them in this class. Recently much stress has been laid upon the difference in the size of the retinal images, the so-called aniseikonia. It is possible that some of these patients may belong in this category.

THE PREVENTION OF VENEREAL DISEASES IN SWEDEN

Concrete and striking evidence that syphilis has become a rare disease in Sweden was reported by Einar Reitz, M.D., health officer of Stockholm, in one of the outstanding papers presented at the recent meetings of the American Public Health Association in Milwaukee.

The principles of venereal disease control in Sweden, first embraced in comprehensive legislation in 1919, were outlined by Dr. Reitz as follows:

1. Compulsory treatment of infected persons.
2. Free medical care, free medicine, and free hospital care.
3. Notification of cases without the name.
4. Notification of sources to one health officer in each county or city.
5. Certain compulsory measures against persons who are sources or may have discontinued treatment.
6. Persons suffering from venereal disease in an infectious stage prohibited from marrying or transmitting infection.
7. Cost of venereal disease control borne by the central government.

The right to treatment is accorded as long as the disease is in the infectious stage. Costs are paid by the state and treatment is given by district physicians or, in cities with more than 20,000 inhabitants, in clinics.

Notification of and search for sources, according to Dr. Reitz, bring about two-thirds of reported sources under treatment. Search for patients who have ceased treatment, without permission from the physician, gives the same result.

Since 1919, syphilis has decreased from 6000 new

cases in a year to about 431; gonorrhea only to half of its previous figure. Thus it is seen that syphilis has become a rare disease in Sweden. In Denmark and Norway, likewise, active measures against the venereal diseases are being conducted with comparable results.

This work in Sweden has attained such success that the cost of the control measures is only one-half that of a decade ago. The fact that syphilis in reality has become a rare disease is indicated by the continued relatively high recorded prevalence of gonorrhea. In the medical schools great difficulty is experienced in finding a sufficient number of fresh cases of syphilis for clinical instruction.

Dr. Reitz stated that the difficulties in carrying out the legislation have not been great and that the results demonstrate that syphilis can be greatly reduced through application of the fundamentals of epidemiology, medicine, and public health administration.—*Health News*, Oct. 28, 1935.

PROLONGED USE OF ALCOHOL CAUSES LOSS OF INTELLIGENCE

Prolonged use of alcohol may cause actual loss of intelligence, Dr. Harry C. Mahan, of the Warren State Hospital, Warren, Pa., told psychologists at the meeting of the American Psychological Association.

The case of a highly trained professional man who had lost intelligence until he had the mind of a ten and a half year old child was cited as typical of such cases by Dr. Mahan. The patient retains his vocabulary, however, and this serves as an index to his former intelligence. His conclusions were reached from a study of 50 alcoholic patients.—*Science News Letter*, Sept. 21, 1935.

EDITORIALS

NEW YEAR'S GREETING

To some, disheartened by the failures and disappointments of the past year, New Year's greetings may be regarded as a meaningless formality, but it should not be so. Physicians can very justly disclaim responsibility for all the unhappiness consequent upon the period of business depression and unemployment, but the charitable inclination of the medical profession toward those in need has been maintained.

In these distressing times it is a great source of satisfaction to maintain membership in the county society and to participate in the activities of a profession which is continuing its steady progress towards complete understanding of and mastery over the physical ills of mankind.

In taking a retrospective view, we feel happy that the profession in the State of Pennsylvania was never better organized or more heartily interested in all that concerns its welfare. The members of our State Society have never shown a greater interest in the welfare of the people at large, or been more willing to serve them faithfully and efficiently.

HAPPY NEW YEAR!

THE ELEVENTH REVISION OF THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA

In this number of the JOURNAL, on page 254, will be found an abstract of a release by the Committee of Revision of the Pharmacopœia of the United States of America (1930-1940).

The new Pharmacopœia, Eleventh Revision, was made available Dec. 16, 1935, by the Mack Printing Co., Easton, Pa. The standards of the new Pharmacopœia *shall become official June 1, 1936*, superseding the tenth revision.

Just about the time the editorial staff of this JOURNAL becomes accustomed to the spelling of certain words, someone heaves a monkey wrench into the machinery. The following is a paragraph from the release:

Turn to the new Pharmacopœia, pages lxxviii to lxxx, and note the changes in titles. The new spelling of sulfate, sulfur, *etc.*, conforming to modern usage, may seem strange at first, but it did not take the members of the committee long to accustom themselves to it.

The latest editions of *Gould's Medical Dictionary*, *Dorland's Medical Dictionary*, and *Webster's Unabridged Dictionary*, the guides

for spelling in this JOURNAL, retain sulphate, sulphur, *etc.*

The officers and committees incident to the eleventh revision of the Pharmacopœia of the United States of America are to be highly commended for the very successful completion of a most difficult undertaking.

WILLIAM H. SCHMIDT, M.D., ASSOCIATE EDITOR, IN CHARGE OF PHYSICAL THERAPY

Dr. William H. Schmidt, of Philadelphia, has been appointed an associate editor of the PENNSYLVANIA MEDICAL JOURNAL in charge of the Department of Physical Therapy to fill the vacancy caused by the resignation of Dr. Frank H. Krusen, who is now in charge of the section on physical therapy of the Mayo Clinic, Rochester, Minn.

Dr. Schmidt is associate in physical therapy, Jefferson Medical College; roentgenologist to St. Mary's Hospital; and past president of the American Physical Therapy Association. He is a member of the American Congress of Physical Therapy, the American Academy of Physical Therapy, the Pennsylvania Physical Therapy Association, the American Radium Society, the Philadelphia Roentgen-Ray Society, and the Committee on Physical Therapy of The Medical Society of the State of Pennsylvania. He is also chairman of the Eastern Section, American Congress of Physical Therapy.

We realize that the department of physical therapy of our JOURNAL is a very important feature and we consider it very fortunate that Dr. Schmidt has been secured to assume the duties pertaining to this department. We extend a hearty welcome to Dr. Schmidt as an associate editor.

FATIGUE

Vim, vigor, and vitality are the expressions of an abundance of energy. Fatigue is a state due to the lack of energy. The lack of energy may be due to factors lurking in the physical and mental realm. For example, fatigue in the physical realm may be due to a riotous dissipation of one's energy; or a lack of rest, relaxation, and nourishing food; or the inability to engage in some hobby or play. Again, there may be a

very definite pathologic involvement such as in focal infections, tuberculosis, and the incipient stages of other physical diseases. These conditions on the physical side are quite apparent to general practitioners of medicine. Fatigue in the mental realm is not so readily recognized.

In the realm of mental factors, the causes range from simple exhaustion due to physical fatigue and physical diseases to the more serious mental disorders such as nervous exhaustion (neuroses), mental diseases due to gross organic nerve pathology, and the major psychoses. These conditions eventually manifest themselves in such clear pictures that the cause of fatigue is revealed to the physician.

The group of factors most often overlooked by the physician are those purely within the psyche. As a result many a patient has had the tonsils removed, the gallbladder drained, and the teeth extracted, with long periods of hospitalization followed by a sojourn at the seashore, the mountains, or elsewhere, and yet the cause, a complex or conflict, remains and the patient is labeled as a case of chronic fatigue, a neurotic, *etc.*

Physicians are not well versed in bringing out so-called subconscious complexes. On the other hand, many conflicts are consciously real. The individual may be fatigued through conditions purely environmental, such as dissatisfaction with his job, his co-workers, his employers, the working conditions, the neighborhood in which he lives, his marital status, his sexual life; or there may be an inferiority feeling, the fear of disease, the fear of poverty, or even the fear of death. Physically, he may be sound; he may take exercises regularly; his appetite may be good; he may spend long hours in bed. Still he is fatigued, but why? One answer is as follows: A business man wrestles with a tremendous problem for a week or a month. During this period he has a series of reactions, some healthy but most of them unhealthy. At the end of the month the problem is solved. He feels free; the load has been lifted; vigor and vim return. He tackles the next problem. A man suffering from a psychic conflict finds no such relief. Thus there is a constant strain and drag on the emotional tone. His emotions dominate the intellectual powers of reasoning. Life to him is still a conflict, a conflict that drains his nervous energy. When there is none left, he is in a state of continued fatigue.

As to treatment, although it is true that much of his environment cannot be corrected, a rapport and guidance by his physician in many instances is exceedingly helpful. He may thereby

save his teeth or possibly his gallbladder, and certainly the physician can explain to him that much of the physical discomfort is not due to any grave mental or physical disorder.

Physicians prescribe drugs and surgery in large quantities, but the best prescription for the man suffering from fatigue, due to psychogenetic factors, is a prescription of the doctor's time to be applied generously but sanely to these individuals. Goat glands are not indicated, despite the fact that the laity and some physicians have always attributed a lack of pep as due to sex indulgences or the lack of such normal functions in spheres duly recognized by society.

ANENT VACCINATION

From time immemorial the lay public had the idea that a physician could determine whether or not a woman was pregnant by examination of the urine. The medical profession laughed at this idea, but finally this dream came true. There was a story told in the mid-victorian period about a ballet dancer who was required to be vaccinated. She asked her physician how she could be vaccinated without the scar showing. He replied that the only way he knew was for her to swallow the virus.

The *Associated Press*, as of Nov. 22, gives publicity to the fact that Dr. Lloyd Arnold, University of Illinois, at a recent meeting of a group of bacteriologists of Indiana, Michigan, and Ohio, stated that the day will come when vaccination will be accomplished by the swallowing of a pill which will contain vaccine or dead bacteria. According to the report, in order that the contents of the pill may not be destroyed by digestive fluids, a pill containing biliary salts will be administered 30 minutes before the vaccination pill is taken. The inhibitory action of the biliary pill on the stomach will last for 1 or 2 hours and the vaccine will pass on unchanged into the small intestine where it will be slowly absorbed. The statement claims that Dr. Arnold has made a 15-year study of the subject of oral vaccination. He is convinced that this form of internal vaccination will cause no inflammatory reaction as produced by the present method of vaccination.

EDWARD STARR JUDD, M.D.

Dr. Edward Starr Judd, the distinguished Little Giant of Surgery of the Mayo Clinic, died of pneumonia, Nov. 30, in the Presbyterian Hospital, Chicago, aged 57. Dr. Judd was en route to Philadelphia to address a meeting when

he was stricken and died after a few days' illness.

Dr. Judd was born in Rochester, Minn., and was graduated from the University of Minnesota Medical School in 1902, and served an internship in St. Mary's Hospital in Rochester. He became first assistant to Dr. Charles H. Mayo in 1903 and the following year was appointed head of a section in the division of surgery at the Mayo Clinic. Subsequently he received the appointment of surgeon at St. Mary's Hospital, Rochester, and professor of surgery in the Graduate School of the University of Minnesota. During the World War he was director of the school of instruction for officers and enlisted men of the medical corps in Rochester.

He was a brilliant surgeon, an outstanding leader, a forceful teacher, one of the world's foremost abdominal surgeons. He was a very extensive contributor to the literature. He was a member of numerous societies and served as president of the American Medical Association in 1931-1932. It has been truly said, "Men came from the 4 corners of the world to witness him at his routine work. He was modest, sincere, and earnest—a man with beauty of character and greatness of spirit. His death fell on those who knew him like an overwhelming blow."

A widow, 3 daughters, and 2 sons survive.

CHARLES PERCY NOBLE, M.D.

Dr. Charles P. Noble died Nov. 21 at his home on Hollow Road, Radnor, Pa., aged 72. Dr. Noble until his retirement 15 years ago was one of Philadelphia's most distinguished gynecologists.

He was born at Federalsburg, Md., Nov. 15, 1863, a son of William D. and Mary A. (Houston) Noble. He was a student at Iowa Agricultural College from 1880 to 1882, when he entered the University of Maryland School of Medicine, from which he was graduated in 1884. In 1907 the latter institution conferred upon him the honorary degree of Sc.D.

He began practicing in Philadelphia in 1884 and from that date until 1889 was associated with the Philadelphia Lying-in Charity Hospital. In 1889, he was appointed surgeon-in-chief of the Kensington Hospital for Diseases of Women, Philadelphia, filling the vacancy caused by the resignation of Dr. Howard A. Kelly, who moved to Baltimore to occupy the chair of gynecology at Johns Hopkins University. Dr. Noble continued to center his activities at the Kensington Hospital until his resignation on account of ill health in 1910. He was gynecologist to the Stetson Hospital from 1889 to 1908 and was consulting gynecologist to the Philadelphia Lying-in Hospital, Woman's Hospital, and the Chester County Hospital, until his retirement.

Dr. Noble was an extensive contributor to the medical literature. He was co-editor, with Dr. Howard A. Kelly, and one of the authors of the Kelly-Noble textbook on *Gynecology and Abdominal Surgery*, which appeared in 2 volumes. Besides numerous articles in current medical literature, he made original contributions to the subjects of puerperal cellulitis, prevention and cure of postoperative hernia, visceroptosis, plastic surgery in women, fibromyomata uteri, and environmental arrest of development in man.

He was a Fellow of the College of Physicians of Philadelphia, ex-president of the Obstetrical Society of Philadelphia, Fellow of the American Gynecological Society, and a corresponding member of Die Gynaekologische Gesellschaft in Munich.

Dr. Noble was married to Miss Mira Rose, of Newark, N. J., Sept. 15, 1885, a son being born to this marriage. He was married a second time to Miss Elizabeth M. Scanlan, St. Davids, Pa., Oct. 7, 1915.

His widow and son survive.

UNITED STATES PHARMACOPŒIAL CONVENTION

Decennial Period, 1930-1940

Nov. 17, 1935.

To the Editor:

The following announcement concerning the release date and the official date for the new Pharmacopœia has just been authorized by the Board of Trustees of the United States Pharmacopœial Convention.

Please announce this news item in the next issue of your journal.

Respectfully,

WILLIAM B. DAY,
Secretary of the Board.

THE NEW PHARMACOPŒIA

The new Pharmacopœia, the Eleventh Revision, was available on Dec. 16, 1935. This date was fixed by the Board of Trustees of the United States Pharmacopœial Convention to enable the publishers, the Mack Printing Company, of Easton, Pa., to place books on sale in all parts of the country simultaneously.

As directed by the U. S. P. Convention, the Board of Trustees has also fixed the date when the standards of the new Pharmacopœia will become official, superseding the Tenth Revision. *This date is June 1, 1936.*

The following articles have been added to the Pharmacopœia: Acriflavina, acriflavinae hydrochloridum, aethylenum, aethylhydrocupreinae hydrochloridum, aethylis oxidum (solvent ether), antitoxinum scarla-

tinæ streptococcicum, bismuthi et potassii tartras, calcii creosotas, calcii gluconas, calcii hydroxidum, carbo activatus, carbonei dioxidum, chlorobutanol, digitalis pulverata (biologically standardized), emulsum petrolati liquidi (50 per cent), ephedrina, ephedrinae, hydrochloridum, ephedrinae sulfas, erythritylis tetranitras dilutus (erythrol tetranitrate), extractum hepatis, ferri et ammonii citrates virides, fluoresceinum solubile, histaminæ phosphas, hydrargyri succinimidum, iodophthaleinum solubile, liquor ergosterolis irradiati (viosterol), liquor hepatis, liquor hepatis purificatus, liquor histaminæ phosphatis, liquor parathyroidei, liquor sodii hypochloritis (4 per cent), merbaphenium, neocinchophenium, oleum iodatum, oleum maydis, oleum morrhuae nondestearinatum, oleum rosae, phenacinae hydrochloridum, phenobarbitalum solubile, pulvis chiniofoni, serum antimeningococcicum, serum antipneumococcum-I, sodii perboras, sodii stearas, stomachus, tabellae glycerylis trinitratis, theophyllina cum ethylenediamina, theophyllina cum sodii acetate, tinctura iodi mitis (2 per cent), toxinum diphthericum detoxicatum, toxinum diphthericum diagnosticum, toxinum scarlatinae streptococcicum, toxitabellae hydrargyri bichloridi parvae, tryparsamidum, tuberculinum pristinum, vaccinum rabies, vaccinum typhosum, and vaccinum typho-paratyphosum.

JAMES H. BEAL,
Chairman.

WILLIAM B. DAY,
Secretary.

THE NEW U. S. PHARMACOPŒIA, ELEVENTH REVISION

By E. Fullerton Cook,
Chairman of the Committee of Revision
(Printed in abstract)

The U. S. P. Board of Trustees has announced Dec. 16, 1935, as the date for the release of the U. S. P. XI, and June 1, 1936, as the date when its standards shall supersede those of the U. S. P. X.

In presenting this revision of the Pharmacopœia to the country the committee does so with the confident belief that its scope and standards conform to the objective established by the 1930 Pharmacopœial Convention and that it fulfills the present-day needs in its field for both medicine and pharmacy.

INTERIM REVISIONS

It is also with relief and satisfaction that the members of the Committee of Revision and the Board of Trustees accept and have announced the program of "Interim Revisions," with possibly annual supplements. They are conscious of the rapidity with which modern scientific developments are certain to necessitate new revisions in many monographs. In many cases it will be unwise to wait for another decennial revision before revising texts; in fact, during this revision, some texts were revised several times while awaiting publication.

SCOPE POLICY

The first 2 paragraphs of the preface of the first United States Pharmacopœia, written by Lyman Spalding in 1820, admirably express the principles guiding the U. S. P. Convention of 1930 and the members of the U. S. P. XI Committee of Revision. This quotation reads as follows:

"It is the object of a Pharmacopœia to select from among substances which possess medicinal power,

those, the utility of which is most fully established and best understood; and to form from them preparations and compositions, in which their powers may be exerted to the greatest advantage. It should likewise distinguish those articles by convenient and definite names, such as may prevent trouble or uncertainty in the intercourse of physicians and apothecaries.

"The value of a Pharmacopœia depends upon the fidelity with which it conforms to the best state of medical knowledge of the day. Its usefulness depends upon the sanction it receives from the medical community and the public, and the extent to which it governs the language and practice of those for whose use it is intended."

The following objective was expressed by the general chairman of the Revision Committee when addressing the members of the Subcommittee on Scope at the beginning of the revision:

"There is before the members of the Subcommittee on Scope the vast array of known therapeutic agents resulting from centuries of empiric medicine and the more recent scientific studies into the clinical and pharmacologic value of drugs. From these thousands of drugs, chemicals, and preparations, this group is asked to select 'drugs and medicines of therapeutic usefulness or pharmaceutical necessity, sufficiently used in medical practice within the United States or its possessions.'

"Our new Pharmacopœia should therefore include those therapeutic agents which the consensus of medical opinion of today accepts as of the greatest value and should represent a wide field of application so that, theoretically, there should be no justification for any physician to step outside the list of U. S. P. XI basic drugs for any treatment of disease which he may be called upon to render. Furthermore, the Pharmacopœial scope should be such that every medical school would naturally and properly use the Pharmacopœia as the basis of its teaching, so far as treatment is concerned, so that the physicians of the country would think primarily of official titles and medicines when prescribing. Its completeness as to scope and efficiency should also be such that in hospital practice few other than official drugs should be employed."

Several items, such as insulin, were admitted by vote, but patents or other factors prevented their admission. At an appropriate time the "Interim Revision" plan will admit such important therapeutic agents.

The statement has sometimes been made that the Pharmacopœia is no longer a book for the practicing pharmacist, but any pharmacist desiring to do so and finding it economically practicable will find in the U. S. P. XI the working formulas for many of the most important pharmaceutical preparations he dispenses, and the hospital pharmacist will be able to use the working formulas of the U. S. P. XI in his laboratory greatly to the economic advantage of the hospital.

NOMENCLATURE

Turn to the new Pharmacopœia, pages lxxviii to lxxx, and note the changes in titles. The new spelling of sulfate, sulfur, *etc.*, conforming to modern usage, may seem strange at first, but it did not take the members of the committee long to accustom themselves to it. Most of the changes seem logical, such as the adoption finally by the U. S. P. of the universally used "sac-

charin," the use of "posterior pituitary" in place of "pituitary" necessitated by the use today of the whole gland and of the anterior lobe.

PERCENTAGE SOLUTIONS

A new feature is the suggestion among the "General Notices" of the U. S. P. XI, page 4, that prescriptions calling for percentage solutions be prepared, when not otherwise directed, by dissolving the substance (if a solid) in accordance with the principle of "weight in volume." For instance, for a 1 per cent solution, dissolve 4.5 grains of the substance in sufficient of the solvent to measure 1 fluidounce.

This follows the custom of most pharmacists and also the precedent established by the latest British Pharmacopœia, and should establish a uniformity badly needed in prescription practice in this country.

SOME IMPORTANT REVISION CHANGES

It is impossible to enumerate the thousands of modifications in official standards throughout the Pharmacopœia, but a few of the more important changes are enumerated below:

Increased Strength of Acids.—Note the new strengths for the official "strong" acids. *Hydrochloric Acid*: 35 to 37 per cent (formerly 31 to 33 per cent). *Nitric Acid*: 67 to 70 per cent (formerly 67 to 69 per cent). *Sulfuric Acid*: 94 to 98 per cent (formerly 93 to 95 per cent).

Ether for Anesthesia and Solvent Ether.—Under the title "Ether" the Pharmacopœia is specifying that quality of ether which is believed best suited for anesthetic purposes. The packaging specification, which has been an official requirement for 10 years, is continued, namely, "*CAUTION—Ether to be used for anesthesia must be preserved only in small, well-closed containers, and is not to be used for this purpose if the original container has been opened longer than 24 hours.*" (See U. S. P. XI, page 37.)

A solvent ether is now also recognized under the title "Ethyl Oxide." This has less rigid standards for the limit of aldehydes and peroxides.

Biologic Products.—The list of biologic products has been materially extended.

Activated Charcoal.—The new official charcoal is a product from the destructive distillation of various organic materials which has been treated so as to increase greatly its absorptive power. A note is also added stating that, when carbo ligni is prescribed, carbo activatus may be dispensed.

Digitalis.—The whole or ground digitalis leaf is still official for the purpose of manufacturing the tincture, the "standardized powder" or other unofficial digitalis preparations, but whenever "digitalis" is prescribed hereafter for administration in pills or capsules or in accordance with the new National Formulary when the infusion of digitalis is prescribed, the only form of digitalis to be used is the new U. S. P. XI "standardized powdered digitalis."

Ephedrine.—Among the new U. S. P. medicinal products are the alkaloid ephedrine and its salts, the hydrochloride and sulfate. The new National Formulary will provide formulas for nasal and throat sprays and for a jelly containing this alkaloid.

Bichloride Tablets.—The large and small (Bernay's) Tablets of Mercury Bichloride as recently announced by "Interim Revision" have been retained. These monographs require that the "Bichloride Tablets" must

be of a distinctive color, *not white*, and of an angular or irregular shape, *not discoid*.

The container must be of a distinctive, angular shape, having irregular or roughened sides or edges. It must carry a red printed label bearing the word "poison."

Fowler's Solution.—This solution has been rendered practically neutral and is to be free from color. The alkalinity of the former solution caused many incompatibilities and the addition of color was originally to produce an imitation of an old proprietary product.

Antiseptic Iodine Solution.—Under the official title of "Mild Tincture of Iodine" a solution has been made official which contains 2 gm. of iodine and 2.3 gm. of sodium iodide in sufficient diluted alcohol to make 100 c.c. This tincture should find extensive use as a germicide both professionally and as a first-aid dressing for wounds occurring in the home or factory.

Tryparsamide.—This important arsenical is admitted to the U. S. P. under the trademark title with the approval of the owners, the Rockefeller Institute of Medical Research. The concurrent expiration of the patents makes possible full official recognition.

SPECIAL PROGRAM ON THE PHARMACOPŒIA REVISION

At the Philadelphia College of Pharmacy and Science on Jan. 31, a professional symposium and exhibit for the U. S. P. XI and the N. F. VI will be held for the information not only of pharmacists but also of physicians, dentists, hospital superintendents, nurses and students, and for members of executive and scientific staffs of pharmaceutical manufacturers.

In the symposium will be considered the application of the official medicines to general medical practice and to the needs of hospitals. There also will be demonstrations of the relationship of pharmacy, chemistry, bacteriology, and biology as sciences supporting medicine in its efforts to cure disease and maintain health.

The formal program for the day begins at 2 o'clock with addresses and illustrated lectures by members of the College staff. They are:

"*The Newer Chemical Aspects of the Pharmacopœia*," by Dr. Arthur Osol, director of the chemical laboratories;

"*Official Biological Products and the Official Preparations*," by Dr. Louis Gershenfeld, professor of bacteriology and hygiene;

"*Official Requirements for Vegetable and Animal Drugs*," by Dr. Marin S. Dunn, director of the biological laboratories;

"*The Pharmacy of the U. S. P.*" by Dr. Ivor Griffith, associate professor of pharmacy;

"*Motion Picture and Laboratory Demonstration of Biological Methods for Standardizing Cathartics*," by Dr. Arno Viehoever, research professor in biology.

At 4 o'clock is the dedication of the Remington Memorial Laboratories.

Beginning the evening program at 8 o'clock will be the presentation of the Proctor Award for 1936. The recipient is Dr. William Boswell Castle, assistant professor of medicine of Harvard Medical College. In addition to Dr. Castle, other speakers on the evening program and their subjects are:

"*Significant Features of the New Pharmacopœia*," Dr. E. Fullerton Cook, chairman of the U. S. P. Com-

mittee of Revision and director of the pharmaceutical laboratories;

"*The New National Formulary*," Dr. Adley B. Nichols, secretary of the N. F. Committee of Revision, and assistant professor of operative pharmacy; and

"*The Use of Official Medicines in Medical Practice*," Dr. Horatio C. Wood, Jr., professor of pharmacology.

A COURSE IN CARDIORENAL DISEASES

DEAR EDITOR:

Under the name of the Philadelphia County Medical Society Postgraduate Institute we are giving an intensive 5-day study on cardiorenal diseases and their ramifications, Apr. 20 to 25, 1936, in the Roof Garden of the Bellevue-Stratford Hotel.

This course will be open to members of the medical profession of Pennsylvania, New Jersey, Delaware, and Maryland, who will receive literature and will be invited to attend. It will be given by well-known medical teachers of Philadelphia with a few outside guest speakers. We expect to charge a registration fee and also to have exhibitors.

It is our purpose to make this course an annual affair and we sincerely trust that you will assist in encouraging the membership to take advantage of this important intensive graduate work.

Very sincerely,

RUFUS S. REEVES, M.D., *Chairman,*
Committee on Medical Education and
Scientific Program.

COMMENTS AND EXCERPTS

Gallbladder Operation for Typhoid Carriers.—

Many chronic typhoid carriers in New York State have been cured of this condition by removal of the gallbladder, according to a report of the State Department of Health. The mortality was high in the patients over age 50. It is, therefore, advised that, when contemplating a gallbladder operation on a typhoid carrier, due consideration be given to the age and health of the patient, and preliminary duodenal specimens be examined in each case to make certain that the focus of infection is in the gallbladder.—*N. Y. State J. M.*, Oct. 1, 1935.

Shall He Tell the Cancer Patient the Truth?—

A serious discussion has been going on for some months in the pages of the medical journals over this question. The very fact that the profession is debating the subject shows that it is rearranging its ideas and questioning its own former attitude. Has the time come when honesty is the best policy? The American Society for the Control of Cancer thinks that it has. In its bulletin it points to the extensive educational efforts in recent years to give the public the facts about cancer, and suggests that deception and subterfuge by the physician at the very time when cancer becomes an actuality mars and damages public confidence in all that has been taught. The fear of cancer is almost universal, and if people feel that they cannot depend on their own family doctors to tell them the truth, then fear degenerates into panic. The laity have been educated up to the point, however, where they are using their intelligence rather than their emotions, and they expect and should receive frank and intelligent treatment from their physicians. The enlightened attitude

of the laity is leading to early treatments and to more cures, and this splendid state of things should be fostered and encouraged.

Sweden has for years had the settled policy of informing cancer patients of their true condition as a routine procedure. Of course, delicacy and tact are often used in breaking the news, but eventually all are told. Swedish doctors agree unanimously on the wisdom of this course. The average citizen, they find, fights more intelligently and persistently when he knows what he has to face. Morale is high in both doctor and patient. Diagnosis is rapid and accurate. Treatments are prompt and well-attended. In short, the situation is in shining contrast to that existing in other European countries, where ignorance and fear darken the picture and hamper successful treatment.

Every rule has its exceptions, and the bulletin of the American Society for the Control of Cancer admits that in exceptional cases or peculiar situations it might be best to keep the patient in ignorance. That is for the physician to decide. But taking the public by and large, the feeling of those who have been closest to the educational campaign is that the laity have matured sufficiently to hear the truth and that to continue a policy of deception may result in the collapse of much already achieved.—*N. Y. State J. M.*, Oct. 1, 1935.

Increase in Mental Ills Is Not Due to Depression.—The number of new cases of mental disease admitted to the hospitals in New York State has increased from 6300 in 1912 to about 12,000 in 1934, a 27 per cent increase in the rate per 100,000 of population.

The increase in mental disease is not due to the mental strain and stress of the depression, however, Dr. Carney Landis, of the New York Psychiatric Institute and Hospital, said in an address over the Columbia Broadcasting System.

Only one type of mental disease has increased materially in this period, a disease which affects only persons past middle age and is due to the hardening of the blood vessels in the brain. The rate for patients sent to mental hospitals on account of this disease has skyrocketed from less than 2 per 100,000 in 1912 to over 14 per 100,000 in 1934, a jump of almost 700 per cent in 22 years.

Why are more people suffering from hardening of the arteries in the brain? We cannot blame that on the depression. It is explained by the simple fact that the United States now has many more people old enough to be subject to this disease than were living in 1912. In 1912 about one-fifth of the population was 45 years old or older. In 1934 practically one-quarter of the population was in this age group.—*Science News Letter*, Oct. 12, 1935.

Too Much Cereal May Spoil Child's Appetite.—

The preschool child who has no appetite and dawdles over his meals may be getting too much bulk in his diet, specifically too much cereal. This is the conclusion of a study made by Amy L. Daniels and Gladys Everson of the State University of Iowa.

"A diet bulky with cereals may satisfy a child's desire to eat before he has obtained all the elements he needs for growth and activity," comments the editor of the *Journal of Home Economics* (January), in which the scientific details of the study appear.

Lack of outdoor exercise and of vitamins, overfatigue, and irregularity of meal times have all been considered as contributing to lack of appetite in the run-about child under school age, but in the Iowa study

these factors were all carefully ruled out. The children all lived under the same conditions except for the kind of food they were given. Differences between the children were also ruled out by having the same child eat one kind of diet for 16 days and then switch to the other kind.

The length of time spent in eating was used as the criterion of how the diet affected the child's appetite. When the children were fed the bulky diet containing the amount of cereal usually recommended for this age group, they took much longer to eat than when they were fed the less bulky, low-cereal diet.

One child never took longer than 20 minutes to eat breakfast while on the low-cereal diet but spent as much as three-quarters of an hour over this meal when on the high-cereal diet.

The only differences in the diet were in the bulk and the amount of cereal. The high-cereal diet was almost twice as bulky as the low-cereal diet. This factor of greater bulk resulting from larger amounts of cereal is considered a partial explanation of poor appetite in children of this age.—*Science News Letter*, Apr. 6, 1935.

MEDICAL ECONOMICS

British Columbia's Health Insurance Plans Formulated.—For the purpose of collecting the opinions of the general public on the draft bill of compulsory health insurance for British Columbia issued by Dr. G. M. Weir, the provincial secretary, in March, 1935, the provincial government recently appointed a committee to hold public hearings at key centers throughout the province. Hearings have been conducted at 18 points in the province.

On the basis of the recommendations made to the provincial secretary by the hearings committee after full discussion of the suggestions made by the public, the draft bill of health insurance will be revised before it is submitted to the provincial legislature of British Columbia.—*The Modern Hospital*, Dec., 1935.

Insurance Commissioner to Control Nonprofit Associations in California.—At the last session of the California legislature, Governor Merriam signed a bill to regulate the formation and operation of nonprofit hospital service associations and to put them under the control of the commissioner of insurance. This bill was drafted by the San Francisco Hospital Conference with the support and approval of voluntary hospitals throughout the state.

The immediate result of the passage of this much discussed bill was the formation of a committee by the Association of California Hospitals to investigate and prepare plans and a report. This committee is under the chairmanship of Dr. Howard H. Johnson, superintendent, St. Luke's Hospital, San Francisco. Several sectional associations are in process of formation covering San Francisco, the East Bay counties, and Southern California.

Sacramento and adjacent towns have operated an association for the past 4 years under the name of Superior California Hospital Association, and in Santa Clara County the Associated Hospitals Service Fund has operated such a group for the past 2 years. At the instance of the committee the Santa Clara County group has extended its service to include the 4 adjacent counties, namely, San Mateo, Santa Cruz, Monterey, and San Benito. This expansion brings into the Associated Hospitals Service Fund a total of 13 hospitals from San Mateo to Carmel.

The Superior Hospital Association at Sacramento and the Associated Hospitals Service Fund have entered into a reciprocal agreement to accept members from either group for the full period of 21 days' hospitalization. It is probable that like reciprocal agreements will be arranged between the other associations to be formed throughout the state.

The annual audit of the Associated Hospitals Service Fund for its second year of business closing May 31, 1935, indicates that 50.4 per cent of its gross collections was used for hospital service for its members at an average cost of \$40.95 per member. Membership increased at the rate of one new member a day.

This slow growth is accounted for by the fact that there are no large industrial groups in Santa Clara County. This is true also of the counties of San Mateo, Santa Cruz, Monterey, and San Benito, which are now added to the territory covered by the association.

Members are for the most part employed individuals and their families. The largest group of scattered workers is the teachers, nurses ranking second, and doctors and their families third. It is anticipated that with the expansion of the association into these adjacent counties the membership will at least double in the next 12 months. The hospitals and the medical profession in these counties are keenly interested in building up membership in their communities.

Individuals and single families are accepted, the rate being \$1 a month for the first and \$0.75 a month for each additional member, with a \$1 application fee for an individual or an entire family.—*The Modern Hospital*, Dec., 1935.

A Retrogressive Trend.—Since the war the annual matriculation at medical colleges has shown a progressive increase, which threatens to undermine the important reforms accomplished by the Council on Medical Education of the A. M. A. From 18,200 in 1925, the number of medical students has grown to close to 23,000 in 1935. This figure is not far removed from the enormous enrollments of the early part of the century.

An increase on this scale, which is not justified by any public need, must inevitably entail an impairment of the standards of medical education. Matriculates are chosen with less discrimination and the student body falls short of the scholastic and personal level achieved by more restricted admissions. Fortunately, the number of schools has not kept pace with the growing matriculation and the colleges in existence are, on the whole, superior institutions; but their facilities are not equal to the sharp rise in enrollments.

Besides threatening the quality of practice, the increasing registration at medical colleges has serious economic implications. The nation already has more physicians than it needs or is able to support. To pour an ever mounting number of recruits into a field that is already overcrowded is to destroy the prospects of the newcomers as well as jeopardize those already established.

The root of the situation is of course economic. With a general drop in income from endowments and gifts, the schools are almost completely dependent on tuition fees. More pupils mean more money and standards of admission are sacrificed to financial stress. A permanent solution will not be found until the accredited medical schools of the country are placed on a stable financial basis and relieved of their dependence on student income.—*N. Y. State J. M.*, Oct. 1, 1935.

Additional Data on Medical Economics

Bucks County	p. 274
Delaware County	p. 277

MEDICOLEGAL

Employer Must Pay for Medical Service Although Employee's Claim Is Disallowed.—The New York Appellate Division, Beckman vs. Claman, 280 N. Y. S. 75, holds that the fact that the claim of an employee under Workmen's Compensation Law was subsequently disallowed by the State Industrial Board because not filed within the statutory period does not relieve the employer of his obligation to pay a third person who furnishes medical service on the employer's authorization and without knowledge of any disallowance of the employee's claim.—*Medical Record*, Oct. 15, 1935.

Inadequate Damages.—The New York Appellate Division, Mathews vs. Brooklyn etc. Corp., 280 N. Y. S. 113, held that a verdict of \$200 to a woman injured in a car accident and \$125 to her husband for expenses and loss of services were inadequate where the wife's injuries were an inflammatory condition of the bursa of the right ankle, sprained ligaments, contusions of both legs and of the muscles of the lower part of the back and right side of head, resulting in severe headaches and necessitating confinement in bed for 3 weeks, and the husband's actual expenses were over \$250.—*Medical Record*, Oct. 15, 1935.

Surgeon's Authority to Authorize Operation at Employer's Expense.—In an action by a surgeon against an employer for services rendered to a person who had been employed for 12 years by the defendant and who, 5 days prior to the operation in question, had been laid off temporarily, the New York Appellate Division, Moss vs. McCarthy, 280 N. Y. S. 137, held that the evidence sustained a finding that the plaintiff called the surgeon, who was clothed with apparent authority to bind defendant for medical services rendered to employees of the defendant, and that the surgeon, with authority to act for the defendant, authorized the operation to be performed at the expense of defendant.—*Medical Record*, Oct. 15, 1935.

Mississippi's Strong Medicine.—Driven to drastic measures by the alarming increase in unjustified malpractice suits, the Central Medical Society of Mississippi has adopted a series of resolutions stating that to carry these suits through the courts often requires the collusion of members of the legal and medical professions; it speaks of them as legalized blackmail. In order to combat this increasing tendency, the organization has forbidden every member of the society to give evidence in malpractice action unless the testimony has been examined and proved by those designated in the society for the purpose. Through various steps all the evidence is investigated and then put up to impartial medical "consultants," who then express in writing their individual opinion as to the validity of the suit. The physician will be encouraged or forbidden to testify according to the opinion of these consultants, who are considered to be absolutely fair and impartial experts. If the physician testifies without paying proper attention to this decision, he will be expelled from the society for unprofessional conduct.—*N. Y. State J. M.*, Oct. 1, 1935.

Medical Textbooks in Evidence.—The knowledge and qualifications of a witness as a medical expert may be tested as against accepted authorities on the subject testified about. And the Texas Court of Civil Appeals, Hess vs. Millsap, 72 S. W. (2d) 923, holds that the same rule should apply to a picture as to the written text. In an action for burns allegedly caused by the negligent operation of roentgen rays, resulting in baldness, while the plaintiff was being treated for favus, a picture from a medical textbook was allowed to be introduced in evidence to test the weight of the testimony of a physician, the witness on cross-examination describing the picture as showing "a moderate infection because the patient has hair scattered over his scalp."—*Medical Record*, Oct. 2, 1935.

HOSPITAL ACTIVITIES

Administrative Problems.—The depression years have been trying years for commissioners, trustees, superintendents, and administrative officers of hospitals. Trying in the sense that the hospital, despite a decrease in revenue, must remain open and be efficiently maintained, and an adequate personnel must be retained and paid a living wage.

All hospitals, large or small, have suffered, but the small hospital has possibly suffered the most. In some states federal aid has been possible. In Pennsylvania we have had to rely on the generosity of the commonwealth through its state-aided system.

Administratively, a hospital is not unlike running a machine. If the car is fairly modern, controlled by safe hands, and its mechanism kept in order, maintenance resolves itself into the cost of the operation, minor mechanical adjustments, tires, gas, and oil. In time, however, the machine collapses and accidents are prone to occur.

Many hospitals to-day are not new. The physical units are in need of repairs and adjustments. Maintenance allowance resolves itself into tires, tubes, and oil. Many are forced to use old tires with but one result, a blow-out, and a horrible catastrophe will ensue.

Particularly is this true in mental hospitals throughout the country which have not been fortunate enough to procure federal relief. Money for capital outlay is but a boy sent on a man's errand. Overcrowding and fire hazards exist, the tires and tubes figuratively speaking are worn to the thread.

The stage is all set for a catastrophe that will startle the civilized world, and beneath the smoldering embers one beholds the remains of what the world has been looking for—"the forgotten man." Fate and tragedy will have revealed him. Such possibilities make our administrative problems trying indeed.—*Mental Health Bulletin*, Oct. 15, 1935.

INDUSTRIAL MEDICINE

Lung Disease Increases With Asbestos Industry.—A serious public health problem, pulmonary asbestosis, has arisen in recent years as a result of the fourfold increase in the manufacture of asbestos products. The health hazards of the asbestos industry were pointed out to the American Public Health Association by Dr. J. Connolly, Huntersville, N. C.

Lack of protection from the inhalation of asbestos dust has been the cause of the disability of many work-

ers. Roentgen-ray films were made of 151 workers in asbestos mills; 52 films showed definite evidence of lung disease. Of the 151 workers, 86 had worked in the industry for periods varying from 4 to 20 years. In this group were found 51 of the positive cases of asbestosis, a percentage of 59.3. Only one case with positive roentgen-ray evidence of asbestosis had worked in the industry less than 4 years. The positive cases were 34.4 per cent of the total, 151. Five films of this series showed a healed tuberculosis with no asbestosis, and 3 showed a healed tuberculosis complicated by asbestosis. These workers had spent from 4 to 10 years in the industry. There was no evidence that their work tended to reactivate their tuberculosis lesions.

Asbestosis is a slowly progressive condition after it is once acquired, even though there has been cessation of exposure to the dust for extended periods.—*Science News Letter*, Oct. 19, 1935.

Propose an Institute of Industrial Medicine.

A national institute of industrial medicine to protect the health of American workers was proposed to the American Public Health Association by Dr. Henry H. Kessler, medical director of the New Jersey Rehabilitation Commission. The working group must not be looked on as a special class, for today it forms the larger part of the entire population and, since the mechanization of agriculture, includes the farmers of the country. The average worker lives 6 or 8 years less than the average member of the population, Dr. Kessler pointed out in calling attention to the need for special means of protecting this important class.

The institute as outlined would have a fourfold function. It would promote research in industrial diseases, sponsor a campaign to teach the worker how to protect his own health, promulgate legislation for the protection of the worker, and develop standards of industrial health.

An important function of such an institute would be the creation of a panel of qualified medical and non-medical experts who could be called on in litigation over industrial diseases, compensation cases, and the like, thus correcting the present abuses in law cases involving occupational disease.

The proposed national institute of industrial medicine is in line with the present trend of governments assuming more and more responsibility for the protection of life and health of individual citizens.

The 2 chief occupational diseases are silicosis in the dusty trades and skin diseases from exposure to irritating chemicals in various industries.—*Science News Letter*, Oct. 19, 1935.

New Blood Test Reveals Approach of Lead Poisoning.

A test which shows the approach of lead poisoning before the disease has actually developed was reported by Drs. Carey P. McCord and F. R. Holden and Jan Johnston of the Industrial Health Conservancy Laboratories, Cincinnati, to the American Public Health Association.

The test is particularly valuable in protecting industrial workers who are exposed to lead in the course of their work. By means of the test, which is called the basophilic aggregation test, the physician can tell whether or not lead poisoning is the early prospective lot of the individual being examined.

"In this test," Dr. McCord explained, "counts are made of embryonic blood cells, which in normal persons rarely exceed 1 per cent of the total number of red cells in the blood but which in the case of lead poison-

ing may amount to much higher percentages, such as 4, 6, or 10 per cent."

An extensive lead poisoning epidemic which took place in the automobile industry in 1934 and 1935 provided an opportunity for evaluating the new diagnostic procedure. In this epidemic 8000 tests were made with results more than 95 per cent accurate.

The epidemic resulted from the use of metallic lead in automobile body production.

Lead in the form of dust and fumes was inhaled by exposed workers, with the result that many hundreds were injured by this industrial intoxication. The total number of persons either affected with clinical lead poisoning or who evinced evidences of lead absorption is not known for the entire industry, but it has been set approximately at 4000.

This epidemic of lead poisoning has led to many changes in manufacturing processes in order to obviate repetition of this occupational disease outbreak. Already in many automobile plants control appliances and practices have been installed sufficient to make unlikely any large number of poisoning cases.—*Science News Letter*, Oct. 19, 1935.

PHYSICAL THERAPY

Light Therapy and Roentgen Therapy in Tuberculosis.—Edgar Mayer, New York (*Journal A. M. A.*, Nov. 16, 1935), points out that light therapy, both natural and artificial, is of definite value in the treatment of some forms of tuberculosis. Natural heliotherapists, especially those working in high altitudes, emphasize solar radiation and aërotherapy. On the other hand, those in cloudy climates have stressed the use of artificial lights and still others, on occasion, the roentgen rays. Benefits are undoubtedly obtained by patients suffering from tuberculosis of the bones, articulations, peritoneum, intestine, lymph nodes, and larynx when the entire body is exposed to carefully graded doses of natural sunlight or to radiation emitted by certain artificial sources of light rays. The beneficial results of such irradiation are due not only to ultraviolet rays. The visible and infra-red rays, as well as the conditions of the atmosphere, play a certain part in the therapeutic effect. In tuberculosis of the skin, lupus vulgaris alone can be said to respond specifically to light. Scrofuloderma and erythema induratum react favorably at times to general and local exposure, although not as constantly. Lupus erythematosus does not respond to and may be aggravated by light. In tuberculosis of the bones and articulations, it is generally agreed that suitable, graded exposure to natural sunlight is most effective in aiding the healing accomplished by orthopedic and other measures. Exposure to artificial sources is a second choice. Pulmonary tuberculosis is not an indication for light therapy; stationary pleural tuberculosis has often been helped by this measure. Genito-urinary tuberculosis deserves a trial of such treatment in combination with other measures. Local exposure to ultraviolet rays of circumscribed tuberculous lesions of the urinary bladder has been shown to yield favorable results, but the method requires special applying devices and, above all, skillful treatment of the bladder lesion. Ocular tuberculosis and aural tuberculosis respond infrequently to light. Oral tuberculosis is most resistant. Fistulas are often resistant to such treatment. Postoperative sinuses, in contrast, are most responsive. Intestinal, peritoneal, and lymph node tuberculosis especially indicate light therapy and often are rapidly responsive. In tuber-

culosis, overdosage has produced harmful focal reactions. Light may set up a focal reaction similar to that of tuberculin. The erythemic reaction is an accurate indicator of skin tolerance. With any form of tuberculosis, light is to be used merely as an adjuvant and should be combined with all other indicated forms of therapy. With bone and joint tuberculosis, orthopedic measures combined with light still play the major rôle. Roentgen therapy of pulmonary tuberculosis has many restrictions and important contraindications. Its healing effect in certain forms of extrapulmonary tuberculosis has been definitely established, but the limitations must be recognized, dosage carefully regulated, and treatments given only by experts in the field.

The Physical Characteristics of Diathermy and Short Wave Diathermy Machines.—In their discussion of the 2 types of diathermy machines that are used at the present time to produce high frequency electric current which will pass through the tissues producing heat but no neuromuscular stimulation, Allan Hemingway and K. W. Stenstrom, Minneapolis (*Journal A. M. A.*, Nov. 2, 1935), refer to them as the spark gap diathermy machine and the vacuum tube diathermy machine. They assert that the newer method of heat therapy, namely, the short wave diathermy, is at present in an experimental stage. Much valuable research has been done to clarify the problems involved; at the same time there are in the literature some very confusing and misleading statements in regard to the merits of this form of therapy. For a good critical discussion they would recommend the recent article by Mortimer and Osborne. In particular, they would recommend that, owing to the lack of knowledge on many phases of this work and the indications of dangerous possibilities, the newer machines be used with the utmost caution. On the other hand, conventional diathermy is an old established form of therapy about which much is known that has proved to be of definite clinical value.

PUBLIC HEALTH

Time More Than Money in Tropical Malaria Control.—Controlling malaria in the rural tropics is more a matter of time than of money, Dr. Paul F. Russell of the Rockefeller Foundation's International Health Division advised the American Public Health Association.

Continuity of effort rather than perfection is required, Dr. Russell pointed out, basing his remarks on malaria control work in the Philippines.

In these islands malaria is a disease of the foothills, but not of the coastal swamps, the lowland plains, the rice fields, or the mountains above 2000 feet.

The chief mosquito carrier of malaria in the Philippines, unlike the malaria mosquitoes elsewhere, breeds mostly in small streams where the water is fresh, flowing, and slightly shaded. The Philippine malaria mosquito never breeds in salt water, rice fields, or swamps.

Sluicing, salting, intermittent irrigation and shading are among inexpensive, natural methods by which Dr. Russell believes malaria may be controlled in the Philippines. Because malaria regions there are poor in money but rich in time, Dr. Russell explained that speed and perfection are not to be expected but continuous effort along the inexpensive lines he drew will bring malaria under control.—*Science News Letter*, Oct. 19, 1935.

Whooping Cough Vaccine Prevents But Does Not Cure.—Whooping cough vaccine is of questionable value as a cure for the disease, but when given to non-immune children sufficiently long before they are exposed it should protect 9 out of 10 of them.

This summary of the vaccine's status was presented by Dr. Louis Sauer, of Evanston, Ill., to the American Public Health Association.

The best age at which to vaccinate children against whooping cough is between 6 months and 1 year. Children over age 3 probably should be given a slightly larger dose of vaccine to protect them.

Although the protective action of the vaccine seems established, much still remains to be learned about it. Some of the factors about which little is known are what causes the failures in 10 per cent of the cases; the importance of recently isolated strains; the best method of standardization; the importance of refrigeration; the youngest age at which active immunization against whooping cough is possible; and the best sequence in which to give whooping cough vaccine, smallpox vaccine, and diphtheria immunization.—*Science News Letter*, Oct. 19, 1935.

Disease Hazards of Africa Also Menace United States.—Many of the tropical diseases which may prove the Number One enemy of the Italian army in Ethiopia are a serious hazard to life and health here in the United States. A warning to physicians and health officers, even in cities as far removed from the tropics as Milwaukee, to be on the alert for cases of these diseases was sounded by Dr. M. Fernan-Nunez, of Marquette University School of Medicine, at the meeting there of the American Public Health Association.

Patients suffering from malaria, relapsing fever, dengue fever, and from the parasitic worms of the tropics are to be found in cities all over the United States. Tapeworms, liver flukes, and malaria parasites taken from patients in Milwaukee were shown by Dr. Fernan-Nunez in an exhibit on tropical diseases, which received a certificate of merit from the Association's committee on scientific exhibits.

The tiny liver fluke which Dr. Fernan-Nunez showed under the microscope is the same disease-producing parasite that defeated Napoleon's men in Egypt. Malaria, which has already claimed a war correspondent in Ethiopia, is reappearing in northern American cities as a result of the increase in decorative rock gardens. This disease, one of the white man's chief enemies in the tropics, kills 5 million people every year throughout the world, a number equivalent to the entire population of Ireland. Over 300 million people suffer from it annually.

Raw hamburger and raw fish are another source of danger, since they may harbor tapeworms. These and other worms which scientists classify as parasites cause more disease and deaths every year than the group of organisms known as bacteria, which are responsible for diseases like pneumonia, tuberculosis, and diphtheria.—*Science News Letter*, Oct. 19, 1935.

Health Tests for Children.—Examinations of pre-school children who entered school for the first time in September were conducted under plans formulated by The Medical Society of the State of Pennsylvania, the Emergency Child Health Committee, the Pennsylvania Congress of Parent Teachers, the Department of Public Instruction, and the Pennsylvania Department of Health. It is estimated that 160,000 children were the recipients of this protective drive, which was aimed at the discovery and removal of physical handicaps, the

immunization against diphtheria, and vaccination against smallpox prior to school entrance.

The coöperative plan adopted by the agencies involved either the examination by the family physician in his own office, or group examinations held in connection with the summer round-up program developed by the parent-teacher associations, or examinations conducted under the auspices of the county emergency child health committees. Follow-up work was conducted to assure that the remedial defects had been corrected.

The end results of these combined activities literally are incalculable. Certainly the young Pennsylvania children are most fortunate in this official and community solicitude.—*Pennsylvania's Health*, Sept.-Oct., 1935.

Morbidity in Pennsylvania in October, 1935

Location	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	0	0	0	0
Allentown	12	1	7	0	41
Altoona	2	0	17	0	7
Ambridge	0	0	0	0	0
Arnold	0	0	0	0	1
Beaver Falls	0	0	7	0	0
Bellevue	0	0	0	0	0
Berwick	0	0	0	0	1
Bethlehem	0	0	0	0	0
Bradnock	0	0	2	0	3
Bradford	0	0	1	0	15
Bristol	0	0	0	0	0
Butler	0	0	0	0	1
Canonsburg	0	0	0	0	0
Carbondale	0	0	0	0	0
Carlisle	3	0	0	1	2
Carnegie	4	0	3	0	0
Chambersburg	0	1	4	0	1
Charleroi	0	0	0	0	0
Chester	0	0	5	0	19
Clairton	0	0	1	0	0
Coatesville	0	0	0	0	0
Columbia	2	0	0	0	0
Connellsville	0	0	1	0	0
Conshohocken	0	0	2	0	0
Coraopolis	0	0	1	0	0
Dickson City	0	0	0	0	0
Donora	0	1	1	0	0
Dormont	1	0	0	0	1
Du Bois	0	1	0	0	0
Dunmore	0	0	0	0	0
Duquesne	0	0	0	0	0
Easton	1	2	1	0	0
Ellwood City	0	0	1	0	0
Erie	4	3	27	0	1
Farrell	0	0	2	0	0
Franklin	0	0	0	0	14
Greensburg	0	0	0	0	0
Hanover	0	0	0	0	0
Harrisburg	0	2	0	0	0
Hazleton	0	1	3	0	5
Homestead	0	0	1	0	0
Jeannette	0	0	5	0	0
Johnstown	2	0	7	0	5
Kingston	3	0	5	0	1
Lancaster	0	2	3	0	12
Latrobe	0	0	0	0	0
Lebanon	0	0	0	0	1
Lewistown	0	0	0	0	0
McKees Rocks	0	0	1	0	0
McKeesport	0	0	7	0	0
Mahanoy City	6	0	0	0	0
Meadville	0	0	0	0	2
Monessen	1	0	4	0	1
Mount Carmel	0	0	3	0	0
Munhall	0	0	3	0	0
Nanticoke	0	0	2	0	0
New Castle	1	2	6	0	0
New Kensington	0	1	1	0	1
Norristown	0	2	0	0	2
North Braddock	0	0	0	0	1
Oil City	0	1	3	0	6
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	8	43	229	3	147
Phoenixville	0	0	1	0	0
Pittsburgh	13	16	149	0	106
Pittston	0	0	1	0	0
Plymouth	1	0	1	0	0
Pottstown	0	1	4	0	9
Pottsville	12	0	0	0	0
Reading	12	3	9	0	3
Seranton	0	0	9	0	1
Shamokin	0	0	0	0	0
Sharon	1	0	2	0	0
Shenandoah	1	0	1	0	0
Steelton	0	0	0	0	0
Sunbury	0	0	2	0	0
Swissvale	0	0	4	0	3
Tamaqua	0	1	7	0	10
Taylor	0	0	0	0	0
Turtle Creek	0	0	1	0	0
Uniontown	1	0	4	1	2
Vandergrift	0	0	1	0	0
Warren	0	0	0	0	0
Washington	0	0	4	1	0
Waynesboro	1	0	6	0	0
West Chester	0	4	2	0	3
Wilkes-Barre	7	2	10	0	6
Wilkinsburg	0	0	4	0	3
Williamsport	0	0	1	0	9
York	0	0	1	0	1
Townships					
Allegheny County:					
Harrison	0	0	3	0	0
Mt. Lebanon	0	0	0	0	0
Stowe	0	0	3	0	0
Delaware County:					
Haverford	0	0	1	0	2
Upper Darby	2	0	4	0	25
Luzerne County:					
Hanover	3	0	1	0	0
Plains	0	0	1	0	0
Montgomery County:					
Abington	0	0	2	0	3
Cheltenham	1	0	3	0	2
Lower Merion	1	0	6	0	14
Total Urban ..	76	90	614	6	493
Total Rural ..	116	149	583	38	387
Total State ..	192	239	1197	44	880

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

AT THE annual meeting of the Southern Tuberculosis Conference and the Southern Sanatorium Association, in joint session at Houston, Texas, September 16, 17, 18, the medical program was devoted wholly to a comprehensive attack upon the significant problem of tuberculosis among negroes in the South. This problem is of more than regional interest, for tuberculosis recognizes no lines of race or geography. Gratitude is due Dr. Lewis J. Moorman of Oklahoma City, who gathered the pertinent facts and abstracted the discussions.

TUBERCULOSIS AMONG NEGROES IN THE SOUTH

Briefly the deplorable situation in the Southern States comprising this conference was made manifest through the following facts. The total population of the 13 states represented is approximately 35,000,000, of which negroes comprise approximately 10,000,000. While less than one-third the total population is colored, more than half of the deaths from tuberculosis are to be found among the negroes, the average death rate from tuberculosis among negroes being almost 3 times that among the whites. The Southern States comprising this conference, possessing only 16 per cent of the national wealth, must meet the needs (social, economic, and physical) of 75 per cent of the nation's negro population.

The importance of environmental conditions, arising chiefly through ignorance, poverty, and neglect, was repeatedly stressed. The annual economic loss from tuberculosis deaths and morbidity among negroes is very great.

The significance of occupational contacts was also emphasized and attention was called to the fact that through domestic and other personal services, approximately 50 per cent of the adolescent and adult colored population is brought into close touch with white children at their most susceptible age, thus providing perpetual seeding of a most fertile soil. Recent statistical studies were presented, revealing the significant fact that school children from the homes of those who employ negro domestics show a much higher percentage of

infection as revealed by tuberculin tests than those from the homes of people who live reasonably well but who are unable to employ domestic help.

It was shown that in spite of the high incidence, morbidity, and death rate from tuberculosis in the negro, there is a serious paucity of sanatorium beds for negroes. The annual number of deaths from tuberculosis among negroes in the South is approximately 11,000 with only 2000 available sanatorium beds. The deaths among the whites approximate 10,000 with sanatorium facilities approaching one bed for every death. It was made obvious that poor housing, overcrowding in unhygienic surroundings, insufficient food, and the consequent massive infection among negroes make sanatorium care imperative.

Diagnostic Difficulties

It was pointed out that early diagnosis is often more difficult in the negro than in the white patient on account of certain racial and temperamental characteristics. There is often an utter disregard of mild or moderate symptoms, also a lack of information concerning the significance of symptoms when recognized. A sense of futility is often present, and it is not uncommon to find a willful attempt to conceal symptoms and to avoid examination. In some cases diagnosis is difficult because of certain variations, racial or environmental, in the clinical course of the disease where

the characteristic symptomatology and pathology simulate acute nontuberculous conditions.

The lack of general medical service was also stressed, revealing the startling fact that in some communities 25 per cent of the deaths among negroes occur without medical attention.

Racial Susceptibility and Pathologic Variations

Throughout the sessions, these debated questions were ever present with a heavy trend on the part of the clinicians toward environmental influences. However, as pointed out by the pathologists, it was found impossible to eliminate racial susceptibility with racial variations in clinical and pathologic manifestations. As a consequence, the discussions arising at this meeting resulted in a happy blending of racial and environmental influences. The pathologists present generously acknowledged the influence of environment as a potent factor in the wide gap between the white and colored death rates, but at the same time they presented convincing evidence of racial or biological characteristics in the pathology of tuberculosis. Fortunately, the controversy left no one in doubt as to the importance of environment in future programs for control of tuberculosis. At least environment is open to attack and subject to alteration.

Preventive and Therapeutic Measures

The obvious influence of ignorance and poverty upon the incidence, morbidity, and death rate was stressed. The need of education was repeatedly emphasized, with stress upon the importance of health education in the schools and churches and through public health agencies, with particular emphasis upon the work of the public health nurses. The need of trained colored physicians and colored public health nurses, with a discussion of ways and means of providing the same, received detailed consideration. Schools and special teaching clinics for the training of colored doctors and nurses for service in the prevention, diagnosis, and treatment of tuberculosis were advocated. It was urged that training for negro doctors should include adequate provision for fundamental instruction of undergraduates in the epidemiology, diagnosis, and treatment of tuberculosis in medical schools for negroes, also intern and resident service for negro doctors in sanatoria and in the tuberculosis wards in general hospitals.

Health education in negro colleges was suggested as a means of preparing the way for general health education, since a large percentage of college graduates become school teachers. The

desirability of providing racial leadership was emphasized. The character and quality of papers and discussions presented by colored doctors at this conference may be considered prophetic of future achievements along this line. The affiliated collateral meetings for colored people initiated at the Houston Conference also mark a resounding note of promise.

The question of sanatorium beds for negroes was discussed and a committee appointed to pursue this need. The Burr Cottage, the screened porch, and other improvised home facilities were discussed in connection with home treatment. Artificial pneumothorax in ambulatory cases among negroes was advocated as a public health measure and as being significant from an epidemiologic standpoint.

Ultimate Conclusions

This meeting made obvious the necessity of squarely facing the tuberculosis problem among negroes in the South if we hope to make further progress in tuberculosis control as it concerns the population as a whole.

Both the medical and sociologic phases of the problem received careful consideration. The program throughout was characterized by a frank expression of opinion. All questionable teachings and procedures were scrutinized with distrust, while all facts established by science and tried by experience were eagerly received. Through the discussions ran a coveted consciousness of the adequacy of medical science in the control of tuberculosis, saddened by an equal awareness of the inadequacy of its application to the problems of control. It was evident that the failure to meet social and economic needs stands prominently in the way of scientific progress.

The implications of lethargy and neglect rest upon the shoulders of both the professional and lay groups. It was agreed that there should be no passive moments, no resting on the oars, while waiting for better facilities. The resistant qualities of crass ignorance and superstition still found in the strongholds of poverty are like granite, and yield only to the perennial operation of elements which reach their destiny through gradual erosion.

The spirit characterizing true public health work was shown to be synonymous with genuine religion, and consists not in getting but in giving.

The facts assembled seemed to warrant the conviction that the crusader against tuberculosis should wear a composite garment with medical science, common sense, and measured sentiment as its chief components.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

THE 1935 SECRETARIES' CONFERENCE

The 1935 conference of secretaries and bulletin editors of component medical societies, which was held in the Penn-Harris Hotel, Harrisburg, on Tuesday, Dec. 10, beginning with luncheon at 12:30 p. m., was featured by a record-breaking attendance (110) and a happy choice of speakers on timely and interesting subjects.

The following program was carried out without interruption:

Remarks by President Alexander H. Colwell.

Remarks by President-elect Maxwell Lick.

Welcome by Chairman Edgar S. Buyers of the Board of Trustees.

The Medical Fate of Pennsylvania's Unemployed After Jan. 1, 1936, by George L. Laverty, Harrisburg, chairman, State Society Medical Advisory Committee to SERB.

The Medical Fate of Pennsylvania's Unemployables After Jan. 1, 1936, by Frederick O. Zillessen, Easton, secretary, Northampton County Medical Society.

Group Hospitalization Insurance, by Samuel R. Haythorn, Pittsburgh. (Dr. Haythorn had very recently visited Cleveland, Washington, Newark, and New York City, reviewing plans now in operation.)

Possible Effects in Pennsylvania of the Application of Medical and Welfare Benefits of the Federal Social Security Act, by Chauncey L. Palmer, Pittsburgh, chairman of State Society Committee on Public Health Legislation and of Public Health Legislative Conference of Pennsylvania.

Discussion on the above subjects opened by Rosco G. Leland, director, Bureau of Medical Economics, American Medical Association.

General Discussion.

In the few minutes remaining after the opening of the discussion, the subject of group hos-

pital insurance seemed to attract the most attention. We hope soon to publish Dr. Haythorn's paper on this subject, as well as the stenographic report of the discussion by Dr. Leland and others.

The subject of Dr. Laverty's paper, which is published in this issue of the JOURNAL, is of prime current interest to many members of each of our county medical societies. It deals with the immediate future of emergency medical relief service, and studied in connection with the resolutions of our Board of Trustees also published in this issue (see page 271), it should stimulate constant contact between representatives of county medical societies and county relief authorities in behalf of the maintenance of service as well as the principle of free choice of physician, whether the care of the indigent is to be financed in the future by federal, state, or local funds, singly or combined.

It will be noted that the list of those in attendance combines with secretaries and editors, the officers of the State Society and members of its committees on Public Health Legislation and Public Relations, which committees held meetings in Harrisburg on Dec. 9, as well as many representatives of county medical society committees on medical economics who were in attendance, in Harrisburg, on Tuesday morning, at a meeting held under the auspices of the State Society Committee on Medical Economics. Director Leland also attended this latter meeting for study and discussion of the following: Reports by directors of subcommittee activities; ways and means of facilitating same; the status of the U. S. Public Health Survey; the proposed national survey of professional incomes; county society plans—opened by a 15-minute discussion by Dr. F. O. Zillessen; the functions

of county society committees on medical economics; the Eastern Interstate Medical Economics Conference.

Forty-five component county medical societies were represented at the conference by the following:

Allegheny County—George R. Harris,¹ Walter F. Donaldson,² Charles C. Rinard,³ William H. Mayer, Samuel B. Goodstone, Chauncey L. Palmer, Samuel R. Haythorn; *Armstrong County*—Jay B. F. Wyant¹; *Beaver County*—Boyd B. Snodgrass,¹ Thomas W. McCreary³; *Bedford County*—Samuel W. Miller, Jr.¹; *Berks County*—Robert M. Alexander¹; *Blair County*—Edward F. Williams¹; *Bradford County*—John M. Higgins³; *Bucks County*—J. Fred Wagner¹; *Butler County*—Ralph M. Christie¹; *Cambria County*—John W. Barr³; *Carbon County*—John L. Bond¹; *Center County*—LeRoy Locke¹; *Chester County*—Joseph Scattergood,¹ Thomas Parke,² John A. Farrell,³ Joseph Scattergood, Jr.; *Clarion County*—Charles C. Ross¹; *Clearfield County*—J. Paul Frantz,¹ George B. Kirk³; *Clinton County*—David W. Thomas¹; *Columbia County*—Charles B. Yost,¹ Harry S. Buckingham³; *Cumberland County*—Richard R. Spahr,¹ Newton W. Hershner³; *Dauphin County*—John A. Daugherty,¹ Mathew H. Sherman,³ John A. Fritchey, A. Harvey Simmons, George L. Laverty, Henry R. Douglas, Sr.; *Delaware County*—C. Irvin Stiteler²; *Franklin County*—Ambrose W. Thrush,¹ Samuel D. Shull³; *Huntingdon County*—Walter Orthner; *Lackawanna County*—Frederic B. Davies,² William Rowland Davies³; *Lancaster County*—Charles P. Stahr,¹ John L. Atlee, Jr.,² Carl H. Hoover; *Lawrence County*—William A. Womer,¹ John Foster; *Lebanon County*—J. DeWitt Kerr,¹ John F. Loehle³; *Lehigh County*—J. Treichler Butz¹; *Luzerne County*—Lewis T. Buckman,² Charles F. Netzel, Thomas R. Gagon; *Lycoming County*—Walter S. Brenholtz,¹ Stuart B. Gibson³; *McKean County*—Persis Straight Robbins¹; *Mercer County*—J. B. Perrine,¹ J. J. Bellas, P. E. Biggins; *Mifflin County*—Joseph S. Brown³; *Montgomery County*—Edgar S. Buyers,¹ Frank C. Parker²; *Montour County*—Sydney J. Hawley¹; *Northampton County*—Frederick O. Zillesen,¹ Arno R. Zack,³ Paul Correll; *Northumberland County*—Mark K. Gass,¹ George W. Reese; *Philadelphia County*—Henry G. Munson,¹ Joseph W. Post,³ James B. Mason, John A. Sharkey, Francis F. Borzell; *Schuylkill County*—Arthur B. Fleming,¹ Lyman D. Heim, Douglas A. Decker; *Tioga County*—H. B. Knapp; *Warren County*—Hamblen C. Eaton¹; *Washington County*—Albert E. Thompson¹; *Westmoreland County*—Charles D. Ambrose.¹

In addition, the president, the president-elect, the first vice-president, all members of the board of trustees, the secretary, and the assistant secretary of the State Society were present, as were also the editor and the managing editor of the JOURNAL, Director of Emergency Medical Relief, Harold A. Miller, and Secretary J. Evans Scheehle of the State Department of Welfare.

A PRICELESS CONTRIBUTION TO OUR ARCHIVES

The membership of The Medical Society of the State of Pennsylvania is greatly indebted to its seventy-eighth president, Dr. Arthur C. Morgan, of Philadelphia, for his contribution, through our Committee on Archives, of an old bound volume, in good condition, containing the "Proceedings of the State Medical Convention Held in Lancaster, April, 1848, and Constitution of The Medical Society of the State of Pennsylvania Then Adopted," published in 1848 by order of the convention.

The volume contains also the proceedings of the annual sessions of The Medical Society of the State of Pennsylvania for the years 1849 to 1853 inclusive.

This gift of the ever alert Dr. Morgan completely rounds out the bound volumes of transactions of our State Medical Society from the year of its organization—1848—to 1896 inclusive, which transactions, since the latter year, have been preserved to date in the bound volumes of the PENNSYLVANIA MEDICAL JOURNAL.

Dr. Morgan, who purchased this volume in a book shop in Washington, D. C., in 1929, offered it promptly upon hearing the chairman of the Committee on Archives deplore the fact that the archives of our society in the fireproof and waterproof vault at 230 State Street, Harrisburg, were incomplete to the extent that the transactions contained in the newly acquired volume were missing.

Again we express to Dr. Morgan the everlasting gratitude of our membership for his priceless contribution to our archives.

THE HIGH SCHOOL DEBATES

To the informative printed material which has been forwarded in the name of our State Society to individuals requesting data and opinion on the 1935-36 subject approved for the "High School Debating League" in each of the 48 states of the Union, we have been proud to add recently a brochure, with comments, arranged by Dr. Edward L. Bortz of our Committee on Medical Economics, under the title "The Medical Profession and the Changing Social Order."

This material, indexed under 39 headings, attracted much favorable comment at our recent secretaries' conference in Harrisburg, where 100 copies of the brochure were distributed, and as a result of which many requests for copies have since been received.

¹ Secretary.

² Editor.

³ Chairman, Medical Economics Committee.

Such headings as "Excess in Medical Costs Lies Where?" "Sickness Service Anywhere Should Be a Localized Problem," and "Public Welfare at Stake," suggest the general character of the discussion of this topic, which has become of considerable import to the public since the paid executives of a number of national philanthropic foundations have so widely publicized their own personal grief over the alleged "lack of adequate medical care for the public," their worry in behalf of the public being diluted also with expressions of grief for "the underpaid physicians."

In each instance in which the request for debate material to be supplied to the high school student has come from or through a member of our society, we have urged said member to work sympathetically and in a tolerant spirit with those preparing for the debate.

This clever, artificial, but potent scheme for creating a nationwide superficial interest in the socialization of the practice of medicine will be discounted only through the articulate educational endeavors of practicing physicians—themselves informed—who will voluntarily discuss the subject with their patients and neighbors.

Regimentation of the members of our profession, and deterioration of the character and quality of the sickness service available to the public hover in the background.

DUES ARE DUE JANUARY FIRST

County medical society secretaries have been supplied with triplicate receipts for 1936 dues, and members are urged to pay promptly. Although the delinquent date for State Society dues is not until Mar. 31, much time, effort, and expense on the part of the component society secretaries will be spared if their members pay their dues early. Many may be surprised to learn that even prior to Jan. 1 several hundred members throughout the state already had paid their 1936 county medical society dues.

MEETING OF COMMITTEE ON SCIENTIFIC WORK

The Committee on Scientific Work, in charge of the scientific program for our society's 1936 session to convene in Pittsburgh next October, will hold its first meeting in Harrisburg on Feb. 4. Dr. Frederick B. Utley, 121 University Place, Pittsburgh, chairman, solicits for the consideration of the members of the committee pro-

posed offers of papers on subjects appropriate for presentation to general practitioners of medicine.

Dr. Lester Hollander, Jenkins Arcade, Pittsburgh, chairman of the Scientific Exhibit Committee, is also ready to have his committee consider the values and the appropriateness of proposed scientific exhibits.

It is hoped that proffers will be received by both Drs. Utley and Hollander from members over widely scattered sections of our state.

THE TUESDAY EVENING SMOKER

In the December issue of the JOURNAL we presented a brief excerpt from the minutes of our 1935 House of Delegates indicative of the fact that certain delegates were of the opinion that a feature of the annual session entertainment which has come to be known as the Tuesday evening smoker has in recent years become cumbersome. At the same time we promised to present a résumé of Tuesday evening social entertainments in connection with past annual sessions, and this is herewith set forth.

For instance, on Tuesday evening, May 16, 1899, at the Amicus Club, in Johnstown, the president of the State Society gave a reception in honor of the 243 members registered and their ladies.

At the 1905 session, with 504 members registered, a theater party was given on Tuesday evening during the session, "the entire house being reserved for the society and guests."

In 1910, there were 1020 members registered, and on Tuesday evening there was a "promenade concert" at 8 o'clock, with music by a male chorus.

In 1915, with 1379 members registered, the first of the Tuesday evening smokers was announced, at 8 o'clock, to be featured by motion pictures.

In 1917, the Tuesday evening entertainment, beginning at 8:15 o'clock, was characterized by a "patriotic pageant and music."

At the 1922 session, at 8:15 o'clock on Tuesday evening, a smoker for men and a theater party for the ladies were given.

This combination was repeated annually until in 1928 the first of the Tuesday evening entertainments appeared providing an early evening supper followed by the usual features of a smoker. This type of entertainment has continued practically ever since, and the financial outlay necessary has on occasion ranged from \$1500 to \$2000 or more. While it is true that

in some instances 65 per cent of those attending this affair are members of the county medical society serving as host, nevertheless, this item of expense has become burdensome, and by many members it is believed to represent an overly elaborate and unnecessarily expensive form of entertainment.

In correspondence recently with a representative officer of a component society on the subject of the Tuesday evening entertainment, the writer expressed the following sentiment:

"If I may be permitted to inject a personal opinion it would be to the effect that the policy of attempting to 'keep up with the Joneses' be abandoned by some courageous host society and the Tuesday evening entertainment be returned to its earlier form—a smoker (not a dinner or supper) beginning at 8 p. m., with musical and dramatic entertainment by local groups, followed by very light refreshments."

SECRETARY'S SERVICES SIGNALLY CELEBRATED

The 87-year-old Bucks County Medical Society recently honored itself by tendering to Dr. Anthony F. Myers, its devoted secretary since 1895, a testimonial dinner, in Doylestown, Pa. The souvenir program marking the occasion reproduced sentiments of appreciation reflecting the esteem in which Dr. Myers has long been held by his colleagues in Bucks County and throughout the state, as well as quotations expressive of the gratitude of those Dr. Myers has so faithfully served professionally during 50 years.

AMERICAN FOUNDATION STUDIES IN GOVERNMENT

The secretary has received inquiries from members of the society throughout the state relative to the above-named foundation which is writing individual letters to leading physicians requesting "informal and confidential replies" to its request for a "free expression of opinion based on your community experience as to whether or not any essential change in the present organization of medical service is needed."

To the first inquiring member we replied (Nov. 22, in part as follows):

"I believe, however, you should reply to this request more or less painstakingly. I would suggest:

"(a) That you attempt to keep in mind the question of a summary of sickness service in county, shall we say in the decade from 1920 to 1930, and from 1930 to date;

"(b) That you state your own conception of the best methods for the public as well as for those who render sickness service in your county for the long look ahead at improving same;

"(c) That you be guided as far as general principles are concerned by the accepted philosophy of the more than 100,000 members of the American Medical Association (see 10 points of A. M. A.)* that changes in the forms of delivering sickness service must not be precipitate and certainly not based on many, if any, of the accomplishments of socialized sickness service in other countries.

"I really think, if I were you, I would under (b) give considerable study to a reply which should reflect your own observations and comments as applied to a situation in the midst of which you have lived and practiced in that which is certainly a typical single-industry community with possibly one or two other industries represented in the entire county."

Later we communicated with an officer of long standing of the New York State Medical Society and quote his reply as follows:

"American Foundation Studies in Government an old reliable organization; engages in many researches and grants funds to smaller organizations for particular studies; believe they are sincere in denying preconceived objective."

Later, the chairman of the Medical Economics Committee of the New York State Medical Society, having learned that we had made such inquiry, volunteered the information quoted herewith in part:

"I would strongly recommend that no attention be given these questionnaires until the emanation, source, and so on have been personally identified and the objectives have been made more evident. I have spoken with a party in the New York office on the telephone and obtained very indefinite and evasive answers."

Your secretary is disposed to believe that the advice given to his first inquirer will not be amiss if followed to the letter. At least the preparation of a reply along such lines will result in the member making same becoming better informed and more articulate on a subject which should be on the tip of the tongue of all our members.

Since bringing the above subject to the attention of our Board of Trustees prior to its Dec. 10 meeting, we have received (Dec. 20) a communication from Secretary Olin West of the American Medical Association, which included the following paragraph:

"I am sure you will be interested to know that the president and president-elect of the American Medical Association have already visited the offices of the American Foundation Studies in Government; that Dr. Leland has an engagement to see Miss Lape, who seems to be the executive officer of the organization, in New York, within the next day or two; and that Dr. Fishbein has a similar engagement for some time within the next 2 or 3 weeks."

Inasmuch as there is no evidence that the foundation has preconceived plans for the immediate solution in blanket fashion of the much

* See page 268.

discussed subject of improved sickness service, we are inclined to urge our members who have been solicited by the foundation to make studious replies.

Can we afford to neglect to bring to such an open-minded group our own observations and comments, invited as they have been, with "free expression of opinion based on your community experience as to whether or not any essential change in the present organization of medical service is needed?"

Surely, if the scores of physicians, long in medical practice in scattered portions of Pennsylvania, who have received this letter, ignore this personal invitation from a foundation which has not been charged with being biased on this subject, it may prove a tragic neglect of an outstanding opportunity.

PLANS FOR DISTRIBUTION OF SICKNESS SERVICE AND THE 10 POINTS OF THE AMERICAN MEDICAL ASSOCIATION

While there is much current discussion in many county medical societies on the subject of distribution of sickness service, it seems timely to remind the component societies of The Medical Society of the State of Pennsylvania of the unchanged position of the House of Delegates of the American Medical Association relative to the now famous 10 points adopted at Cleveland in 1934, reaffirmed in special session at Chicago in Feb., 1935, and in regular session at Atlantic City in June, 1935.

The 1935 House of Delegates of The Medical Society of the State of Pennsylvania also approved the following recommendation by our own Committee on Medical Economics:

In order to avoid precipitate action by any county society, looking toward the adoption of any plan for the care of the indigent or those of low-income groups, it is recommended that no county society take any action toward the establishment of any plan without having first consulted the State Committee on Medical Economics. This is important since any plan that might be adopted in one county is very liable to influence conditions in neighboring counties. It is hoped that under all circumstances no plan will be considered which does not fully conform to the 10 principles laid down by the American Medical Association.

The 10 points of the American Medical Association follow:

1. All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control.

2. No third party must be permitted to come between the patient and his physician in any medical relation. All responsibility for the character of medical service must be borne by the medical profession.

3. Patients must have absolute freedom to choose a legally qualified doctor of medicine who will serve them from among all those qualified to practice and who are willing to give service.

4. The method of giving the service must retain a permanent confidential relation between the patient and a "family physician." This relation must be the fundamental and dominating feature of any system.

5. All medical phases of all institutions involved in the medical service should be under professional control, it being understood that the hospital service and medical service should be considered separately. These institutions are but expansions of the equipment of the physician. He is the only one whom the laws of all nations recognize as competent to use them in the delivery of service. The medical profession alone can determine the adequacy and character of such institutions. Their value depends on their operation according to medical standards.

6. However the cost of medical service may be distributed, it should be paid for by the patient in accordance with his income status and in a manner that is mutually satisfactory.

7. Medical service must have no connection with any cash benefits.

8. Any form of medical service should include within its scope all legally qualified doctors of medicine of the locality covered by its operation who wish to give service under the conditions established.

9. Systems for the relief of low-income classes should be limited strictly to those below the "comfort level" standard of incomes.

10. There should be no restrictions on treatment or prescribing not formulated and enforced by the organized medical profession.

Bear in mind that these 10 principles are applicable to all proposals for medical service, whether limited to employed groups (contract practice), unemployed groups, unemployables, insured groups (fraternal, industrial, hospital), or plans for budgeting sickness costs.

PUBLIC RESPECT DEPENDS UPON ETHICAL CONDUCT

Medical groups continue to discuss the problem of the control of county medical societies over members who by reason of their individual unethical practices bring discredit upon the profession and in the aggregate defeat, in the minds of the public, the purposes for which the society is organized.

In our own state there have, no doubt, been in very recent years practicing physicians—members and nonmembers of county medical societies—who have, by reason of infractions of ethical codes or of agreements between medical societies and county or state health or relief

departments, endangered public respect for the avowed high purposes of the medical society of the county and of the state.

Every physician selling his professional services to a corporation under a contract that "is harmful alike to the profession of medicine and the welfare of the people and is against sound public policy" is, we believe, a contributor to the defeat of the purposes of his own county medical society. (See below—Code amendment.)

Any physician who offends, through inadequate services or unfair practices in connection with participation in sickness service plans approved by his medical society, is also a delinquent.

There are other forms of offense, such as exploitation, but the public position taken by medical organizations in very recent years in behalf of the principle, popularized and governmentally recognized as "the free choice of physician," alone justifies more definite disciplinary planning by county and state medical societies.

The 1935 House of Delegates of the Wisconsin State Medical Society, in its endeavor to place in the hands of county medical societies a weapon to control such unethical members, added to its particular by-law setting forth the qualifications for membership in component societies, a clause which if added to Section 4 of Chapter IX of our own State Society's by-laws would make it read as follows:

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relation to each other and to the public, *and to this end each member shall conduct himself so as not to defeat or tend to defeat the purposes for which the society is organized and is operating.*

CONTRACT PRACTICE AND THE CODE OF ETHICS

The House of Delegates of the American Medical Association, in 1934, in Cleveland, amended the principles of medical ethics by adding thereto, under the general heading "Contract Practice," the following:

It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, group, or individual, by whatever name called or however organized, under terms or conditions which permit a direct profit from the fees, salary, or compensation received to accrue to the lay body or individual employing him. Such a procedure is beneath the dignity of professional practice, is unfair competition with the profession at large, is harmful alike to the profession of medicine and the welfare of the people, and is against sound public policy.

The ethical principles actuating and governing a group or clinic are exactly the same as those applicable to individuals. As a group or clinic is composed of individual doctors each of whom, whether employer, employee, or partner, is subject to the principles of ethics herein elaborated, the uniting into a business or professional organization does not relieve them either individually or as a group from the obligation they assume when entering the profession."

By the term "contract practice" as applied to medicine is meant the carrying out of an agreement between a physician or group of physicians, as principals or agents, and a corporation, organization, or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or a fixed rate per capita.

Contract practice *per se* is not unethical. However, certain features or conditions if present make a contract unethical, among which are:

1. When there is a solicitation of patients, directly or indirectly.
2. When there is underbidding to secure the contract.
3. When the compensation is inadequate to assure good medical service.
4. When there is interference with reasonable competition in a community.
5. When free choice of physicians is prevented.
6. When the conditions of employment make it impossible to render adequate service to patients.
7. When the contract because of any of its provisions or practical results is contrary to sound public policy.

Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary, or local results. The decision as to its ethical or unethical nature must be based on the ultimate effect for good or ill on the people as a whole.

LAY SUPPORT FOR BIRTH CONTROL

The question of birth control with its corollary, the question of the adoption by the state of contraceptive legislation, has harassed the deliberations of most medical organizations ever since its first sentimental proponent took issue with the physician who maintained that the involved health problem lay only between the physician and his patient.

The American Medical Association, resisting for many years the pressure brought to bear upon its House of Delegates to consider some of the liberalizing legislation approved by lay groups and at times supported by commercial interests, finally in 1935 at Atlantic City succumbed at least to the point of requesting the Board of Trustees to create a special committee "to study these related problems" and "to present at least a preliminary report at the 1936 session of the A. M. A." in Kansas City.

The Board of Trustees of The Medical So-

ciety of the State of Pennsylvania at its December meeting, when apprised of the fact that at least 2 component county medical societies had very recently endorsed resolutions sponsored by a group known as the National Medical Committee on Federal and State Contraceptive Legislation, took action requesting all county medical societies to postpone official consideration of such proposals at least until after they have consulted our Board of Trustees, or until after the next session of our House of Delegates.

THE COPELAND BILL

The Copeland or Tugwell, as it is sometimes called, Food, Drug, Therapeutic Device, and Cosmetic Bill, which passed the United States Senate, May 28, 1935, will probably find an early place on the House calendar at Washington when the Congress convenes Jan. 3.

As the bill stands at present misrepresentation in advertising and labeling may later be supported in the eyes of the law by any "numerically significant group" of "practitioners of any branch of the medical profession"—doctors of medicine, dentists, pharmacists, midwives, physiotherapists, optometrists, or osteopaths. The Dec. 21 issue of the *Journal of the A. M. A.* devotes 8 pages to the discussion of this legislation, which should, when finally passed, consider only the welfare of the public, giving full protection to health and pocketbooks.

Our State Society Committee on Public Health Legislation is requesting that the congressmen and senators from Pennsylvania be requested by their various medical constituents to follow closely the guidance of the representatives of the county and state medical societies and the American Medical Association, at least in the drug, prophylactic, and therapeutic phases of this important piece of legislation.

ROENTGEN-RAY RELEASE BLANKS

Members are reminded that the secretary of each county society, as well as the secretary of the State Society, is prepared to forward, in response to requests, a legal release blank to be used when treating fractures, dislocations, or foreign-body cases in which it is impossible for any reason to obtain adequate roentgen-ray pictures to assist in correct diagnosis and treatment. Any time within 2 years of your treatment of such a case you may be sued for alleged malpractice. Roentgen-ray records in support of your diagnosis and treatment may prove invaluable.

OUR PACKAGE LIBRARY

The Package Library Service of The Medical Society of the State of Pennsylvania was "opened for business" the first week of January, 1936.

There is a nominal charge of 25c for each package in order to cover the postage and part of the expense of collecting the material.

Your State Society officers hope that there will be a large use of the library by the membership of the society. It is your library. Use it in preparing papers and when you wish to make intensive study of a subject. You will realize, of course, that this is a new enterprise and that everything requested may not be obtainable. However, any material which the library may have on requested subjects will be sent.

Your library committee asks that you keep the library in mind and see that it gets reprints of all the papers you present at medical meetings.

LIBRARY COMMITTEE.

SOCIAL SECURITY LAWS AND HEALTH SERVICES*

In accordance with announced plans, the following members of our society attended a conference with Secretary of Health Edith MacBride-Dexter in her office on Wednesday, Oct. 2, 1935: Drs. W. Burrill Odenatt, Francis F. Borzell, William H. Mayer, Samuel McC. Hamill, James S. Taylor, Ralph M. Tyson, Chauncey L. Palmer, George L. Laverty, Alexander H. Colwell, Edgar S. Buyers, and Secretary Walter F. Donaldson.

After free discussion of various phases of health services as they may be influenced or affected by certain federal social security legislation, which was participated in by Dr. Albert McCown, consultant to the Maternal and Child Health Division in the U. S. Department of Labor, it was decided that future discussions or conferences with the Secretary of Health should be participated in by the following representative committee: Drs. Palmer, chairman, Hamill, Taylor, Laverty, Odenatt, Colwell, and Donaldson.

The following day Drs. Laverty, Palmer, Hamill, and Donaldson conferred with Secretary of Welfare J. Evans Scheehle for a like discussion and the purpose of making similar arrangements for a committee consisting of Drs. Palmer, Laverty, and Hamill to consult with him on occasion.

* See August and September JOURNALS, pages 900 and 1056 respectively.

CONGRATULATING FATHER

The bill creating the Pennsylvania State Department of Health was drawn up and introduced into the Pennsylvania legislature in 1885 by The Medical Society of the State of Pennsylvania. It was passed on May 26 without a dissenting vote, and a congratulatory telegram signed by a number of members of the legislature was addressed to the president and members of our State Society in annual session on that date in Scranton.

RESOLUTION ON EMERGENCY MEDICAL SERVICE

Dec. 10, 1935

WHEREAS, Currently publicized plans of federal and state relief authorities contemplate immediate and complete abandonment of a painstakingly developed and reasonably effective system of sickness service delivered under the free choice of physician plan, and

WHEREAS, Three years' experience in a hundred thousand health examinations of Pennsylvania children on relief by Pennsylvania physicians under the auspices of county child health emergency committees has demonstrated that delay in correcting physical defects of young children is of greater import in the development of permanent malnutrition and other chronic diseases than is insufficient food or shelter, and

WHEREAS, Two years' experience in a million cases of acute illness under the Emergency Medical Service of the Emergency Relief Board in all Pennsylvania counties has demonstrated its invaluable accomplishments in the prevention of chronic illness or of death, and

WHEREAS, Unnecessary permanent physical and mental handicaps as well as preventable suffering and death threaten more than a million Pennsylvanians through the projected abandonment of Emergency Medical Relief Service in Pennsylvania; therefore be it

Resolved, That the Board of Trustees of The Medical Society of the State of Pennsylvania (8250 members) immediately request the Federal and Pennsylvania relief authorities to abandon Emergency Medical Relief Service in the counties of Pennsylvania only as and when it is justified by stabilized reemployment of all employables and by humane service to unemployables.

EDGAR S. BUYERS,

Chairman, Board of Trustees;

WALTER F. DONALDSON, *Secretary.*

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contributions to the fund:

Woman's Auxiliary, Potter County Medical Society	\$8.00
Woman's Auxiliary, Delaware County Medical Society	25.00
Total contributions since 1935 report ..	\$679.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to December 10:

ALLEGHENY: *New Members*—Frederick I. Battaglia, 504 Locust St., Helen M. Liddle, National Bank Bldg., Anthony J. Novak, 127 7th Ave., McKeesport; Charles A. Koenig, Harry Lerner, Mayview; Wesley D. Richards, 185 Lincoln Ave., Warren R. Wilkins, 534 Lincoln Ave., Bellevue; Frank A. Leonardo, 180 Westinghouse Ave., Wilmerding; Daniel S. DeStio, Highland Bldg., Anthony B. Erlain, 5149 Butler St., I. Harold Jubelirer, Peoples East End Bldg., David H. Krochmal, 3457 Ward St., Edward J. Carroll, Jr., 5117 Liberty Ave., Pittsburgh. *Death*—Harrison M. Brown, Pittsburgh (Univ. Pgh. '04), Oct. 25, aged 60; Thomas H. Snowwhite, Braddock (Univ. Pgh. '13), Nov. 22, aged 44; Stanley S. Smith, Pittsburgh (Jeff. Med. Coll. '96), Dec. 2, aged 61.

ARMSTRONG: *Transfer*—Elizabeth S. Bauder, Kittanning, from Lehigh County Society. *Death*—Guy A. Knight, Kaylor (Jeff. Med. Coll. '05), Nov. 5, aged 54.

BERKS: *New Members*—Harry S. Good, 255 W. High St., Womelsdorf; Fred B. Nugent, 355 N. Fifth St., Reading. *Removal*—Edwin Kreuzer, from Reading to Laureldale. *Death*—Nathaniel Z. Dunkelberger, Kutztown (Med. Chi. Coll., Phila. '90), Nov. 6, aged 71; Joseph A. Stockler, Reading (Univ. Penna. '09), Sept. 9, aged 51.

BRADFORD: *Transfer*—Joseph F. Dreier, Dushore, from Luzerne County Society. *Removal*—Thomas Dimitroff, from Packer Hospital, Sayre, to 741 Delaware Ave., Chicago, Ill.

BUCKS: *New Member*—Charles A. Spangler, Perkasie.

CAMBRIA: *New Members*—Joseph William McHugh, Jr., 315 Main St., Eugene E. Raymond, 240 Market St., John William Testa, Memorial Hospital, William N. Wesner, 631 Wood St., Johnstown.

CHESTER: *New Member*—Arland A. Lebo, West Grove.

CLEARFIELD: *New Members*—Alexander P. Boag, 19 N. Third St., Clearfield; Elmo E. Erhard, State St., Curwensville; Harry J. Robb, 101 N. Brady St., DuBois; Lorenzo G. Runk, 110 E. Presquite St., Philipsburg.

COLUMBIA: *New Member*—C. W. Ashley, Bloomsburg.

DELAWARE: *New Members*—James B. Cooper, 515 E. Broad St., Edward Schwartz, 311 W. Ninth St., Frank A. Skwirut, 2121 W. Ninth St., Chester; Joseph L. Magrath, 49 Ashby Rd., Upper Darby.

ELK: *New Member*—Joseph G. Moore, St. Marys.

FAYETTE: *New Members*—Eugene R. Duggan, Second National Bank Bldg., Herbert J. Levin, Cottage St. Hospital, Connellsville; John B. Hibbs, 51 W. Fayette St., Charles W. Lewis, 128 E. Main St., Uniontown. *Reinstated Member*—William A. McHugh, Jr., 2 W. Main St., Uniontown.

INDIANA: *Reinstated Member*—David H. Buchman, Blairsville.

JEFFERSON: *Death*—Ira D. Bowser, Reynoldsville (Univ. Pgh. '06), Nov. 25, aged 52.

LAWRENCE: *New Members*—David B. Connery, Temple Bldg., New Castle; Boyd M. Lawther, 509 Lawrence Ave., Ellwood City.

LEHIGH: *Death*—Edward W. Feldhoff, Allentown (Univ. Penna. '06), Nov. 10, aged 59.

LUZERNE: *Removal*—J. W. Sarpolis from Glenn Lyon to Rinard, Ill. *Death*—Peter F. Brosius, Hazleton (Univ. Penna. '00), Nov. 4, aged 60.

McKEAN: *New Members*—Luke D. Garvin, Edward J. Lavin, Harold Shapiro, Bradford.

MERCER: *New Members*—Hugh M. Crumay, R. D. 6, Esther Silveus, Cottage-Hospital, Mercer.

MIFFLIN: *Transfer*—Henry Arden Kimmel, Lewis-ton, from Montour County Society.

MONROE: *Removal*—Nettie E. Knapp, from Mt. Pocono to Box 446, Wellsboro; Harry B. Knapp, from Mt. Pocono to Box 446, Wellsboro.

MONTGOMERY: *New Members*—Faith H. Baver, Pennsburg; Peter J. Labowskie, Conshohocken; Bror S. Troedsson, Bryn Mawr Hospital, Bryn Mawr.

NORTHAMPTON: *Transfer*—Royal H. McCutcheon, Bethlehem, from Franklin County Society.

NORTHUMBERLAND: *Removal*—Samuel L. Savidge, from State Hospital, Shamokin, to Northumberland.

PHILADELPHIA: *New Members*—David Gelfand, 718 Pine St., Jonathan Evans Rhoads, 43 W. Walnut Lane, Gtn., Norman Price Shumway, 1737 Chestnut St., Philadelphia; Norman Reeh Ingraham, Jr., 100 Summit St., Chestnut Hill; Horace Pettit, 135 Rose Lane, Haverford. *Reinstated Members*—Charles R. Bridgett, 3332 Chestnut St., Lucy E. Gulezian, 5921 Walnut St., James Collier McConaughy, 1000 Chestnut St., Charles Scott Miller, 1218 W. Wyoming Ave., Julius Winston, 5944 Chester Ave., Philadelphia; Marion Hague Rea, 141 Montgomery Ave., Cynwyd. *Removal*—Adele C. Kempker from Norristown to 1811 Classen Blvd., Oklahoma City, Okla.; Virginia E. Lane from Ballston, Va., to State Hospital, Fergus Falls, Minn.; Ethel C. Russell from Norristown to New Paltz, N. Y.; Thos. K. Rathmell from Philadelphia to Norristown State Hospital, Norristown. *Death*—Albert E. Roussel, Philadelphia (Jeff. Med. Coll. '82), Nov. 2, aged 72; John R. Forst, Philadelphia (Univ. Penna. '93), Nov. 1, aged 65; Allen G. Sampson, Philadelphia (Med. Chi. Coll., Phila., '01), Nov. 22, aged 57.

SCHUYLKILL: *Removal*—J. Pierce Roberts, from Shenandoah to 900 Mahoning St., Punxsutawney.

SOMERSET: *Reinstated Member*—Herbert P. Meyers, Confluence. *Removal*—James S. Spencer, from Jenners to Somerset.

VENANGO: *New Member*—Ronald L. Redfield, Pleasantville.

WESTMORELAND: *New Member*—Thomas G. MacGregor, Ligonier. *Reinstated Member*—Robert J. Hunter, Greensburg.

YORK: *Removal*—William L. Bird, Red Lion to New Hansen Bldg., Greenville, Michigan.

Nov. 16	Mercer	1-2	37-38	\$15.00
	Venango*	55	8129	7.50
	Delaware	1-4	39-42	30.00
18	Indiana*	48	8130	7.50
20	Fayette*	110-113	8131-8134	30.00
21	Somerset	3-5	43-45	22.50
22	Elk	1-5	46-50	37.50
	Lawrence	1-2	51-52	15.00
23	Cambria	1-4	53-56	30.00
25	McKean	1-3	57-59	22.50
26	Chester	1-4	60-63	30.00
29	Bucks	11-13	64-66	22.50
	Allegheny	27-45	67-85	142.50
30	Fayette*	114	8135	7.50
21	Montgomery	1-2	86-87	15.00
Dec. 1	Clearfield	1-2	88-89	15.00
	Westmoreland*	165-166	8136-8137	11.25
3	Clarion	1-6	90-95	45.00
5	Philadelphia	7-11	96-100	37.50
	Philadelphia*	2152-2157	8138-8143	45.00
6	Montgomery	3-13	101-111	82.50
7	Columbia	1-15	112-126	112.50
	York	1-15	127-141	112.50
	Clarion	7-9	142-144	22.50
	Elk	6	145	7.50
	Clearfield	3-4	146-147	15.00
12	York	16-30	148-162	112.50

*1935 dues.

EMERGENCY MEDICAL RELIEF IN PENNSYLVANIA

HAROLD A. MILLER, M.D., *Director*
Harrisburg

BILLS MUST BE SUBMITTED WITHIN 30 DAYS

Recently the State Emergency Relief Administration found it necessary to require that all physicians, dentists and nurses submit their bills, for services rendered to relief clients, within 30 days from the date of the last compensable visit. In accordance with this regulation, bills not submitted within the time limit will not be honored for payment, and the person submitting such bills will not be paid for the services rendered.

This ruling was made necessary in order to ascertain within the shortest possible time all commitments under our medical program. In all other forms of relief, orders are issued for a definite amount, enabling the Financial Division to record expenditures immediately, as well as furnish a basis for future allocations. In medical, dental, and nursing orders the amount cannot be written into the order, and our outstanding obligation is not known. In many instances the physicians, dentists, and nurses who are participating in the medical program of the Relief Administration fail to render their bills promptly. This makes it difficult to estimate commitments, prepare budgets, and allocate funds.

In inaugurating this policy, we feel that we have allowed ample time for medical participants to review their accounts and prepare statements, and we sincerely hope that the members of the medical profession will realize the position of the Relief Administration and lend to it their hearty support in the enforcement of this regulation.

PAYMENT OF PER CAPITA ASSESSMENT

The following payment of per capita assessment has been received since November 11. Figures in first column indicate county society numbers; second column, State Society numbers:

Nov. 11	Monroe	1	22	\$7.50
	Monroe*	27-28	8125-8126	15.00
12	Lycoming	1-4	23-26	30.00
	Bucks	1-10	27-36	75.00
14	Berks*	168-169	8127-8128	15.00

OBSTETRIC ORDERS WILL REMAIN COMPENSABLE

Obstetric cases begun under Emergency Medical Relief for which medical orders have been received will remain compensable even though the usual relief activities should cease.

County Society Reports

ALLEGHENY

Nov. 19, 1935

The meeting was held at the Hotel Schenley, the scientific program being devoted to a symposium on the common cold.

"Bacteriology of Common Colds" was presented by Ralph R. Mellon, who called attention particularly to a change in the conception of the common cold following the influenza epidemic of 1918. Prior to that time there had been recognized a varying bacterial flora, to the several types of which were attributed different symptom complexes. During the epidemic, the recognition of a common group of symptoms resulting from widely different organisms stimulated the thought that perhaps a preceding factor might be acting as a common pacemaker. In spite of much experimental work, a responsible filtrable virus only comparatively recently has been discovered by Laidlaw and his co-workers in the study of distemper in dogs. The work of Dochez was also cited in developing the fact that secondary organisms are increased in number and occasionally in virulence after inoculation of the host with the virus and are involved chiefly in complications. Supplementary action between the influenza bacillus and the virus has been found necessary in the production of influenza in hogs. Immunization to be successful should include both factors. The filtrable stage in the course of bacterial development should not be confused with the recognized filtrable virus. The latter has been recovered in crystalline form and is capable of chemical multiplication by its catalytic influence as against biologic reproduction in living organisms.

A paper on "Sinus, Ear, and Mastoid Infections Following Common Colds" was read by Erhart Ruedemann, who called attention to the widely varying complications of the common cold as found in the same and different epidemics. He laid stress particularly on such complications as acute pharyngitis, follicular tonsillitis, retropharyngeal abscess, middle ear infection, mastoiditis, acute sinusitis, and chronic rhinitis.

In discussion N. Arthur Fischer emphasized the importance of expert surgical judgment in the treatment of such complications.

"The Treatment of Common Colds" was presented by Charles J. Bowen, who urged for the patient subject to repeated colds a complete physical survey and the elimination of factors interfering with the best general condition. In addition, the usual measures for the promotion of good hygiene were advocated, such as suitable clothing, rest, adequate diet, regular meals, baths, etc. The value of vaccines is held in some doubt, the stock types being apparently of occasional benefit. Therapeutically, the acute cold having developed, rest in bed, light diet, catharsis, and local analgesics were sug-

gested. Codeine and papaverine in combination seem to be highly effective. A minimum of tampering with the inflamed mucous membrane was also urged.

In discussion Samuel H. Adams emphasized the importance of isolation in preventing the spread of infection, and I. Hope Alexander cited personal experience with the inefficacy of inoculation of certain troops during the World War.

A paper on "Dust Respirators" was presented by Mr. H. H. Schenk of the U. S. Bureau of Mines, in conjunction with a very complete exhibit of various types of apparatus. He discussed types of respirators, both chemical and mechanical, and the methods of development and testing used in each instance. He also presented certain standards by which manufacturers are guided and controlled in the production of industrial respirators.

As an innovation, a short period of open forum discussion of miscellaneous subjects was introduced into the program. During this period Charles C. Rinard, chairman of the Economics Committee, presented the thought that the function of the committee is held to be the collection of pertinent facts and their presentation to the body rather than the offering of any particular plan for the conduct of the profession. As an example of work to be undertaken by the committee, he cited a survey to be conducted on the relationship of the hospital to the profession, particularly in reference to hospital insurance. He also stated that this is but 1 of 6 such surveys contemplated by the committee.

HAROLD P. HOOK, *Reporter.*

BERKS

Nov. 12, 1935

The meeting was held at Medical Hall, Reading, with President William L. Krick presiding; 70 members and guests were present. Two new members were elected: Fred B. Nugent, Reading, and Harry Good, Womelsdorf. J. Parsons Schaeffer, director and professor of anatomy, The Daniel Baugh Institute of Anatomy, Jefferson Medical College, Philadelphia, gave an address on "Human Constitution and Some of Its Practical Problems." Dr. Schaeffer said in part:

Human constitution, or the science of individual man, is the morphologic, physiologic, and psychologic resultant (variable in each individual) of the properties of all the cellular and humoral elements of the body, and of the combination of these in a special cellular state having a balance and functional output of its own, a given capacity for adaptation, and a mode of reaction to its environmental stimuli. In addition to the foregoing from Pende, the immunologic factor would appear to influence the resultant.

Although Galen's 4 temperaments—melancholic, phlegmatic, choleric, and sanguine—were long ago discarded as baseless, they have been revived in recent years in a new sense in the efforts to show how endocrine glands regulate personality. The hereditary constitution may limit this influence.

Concerning phrenologic thought, it was learned that cranial protuberances are no index of the brain within. Lavater advanced the cause of physiognomy, a definite advance over phrenology. These theories, the former baseless, the latter quasi-scientific, exerted a great influence for many years and even today they are in

popular favor. Interesting in the latter connection is the effort which is being made at the present time, and not without some basis of fact, to relate personality types to bodily structure—the athletic, the slight, the plump, the muscular, the lateral, the linear—in other words, the physical basis of personality.

We must never make experiments to confirm our ideas, but simply to control them. Concepts and hypotheses must be subjected to experiment and observation and proof established before they dare to be taken seriously in the practical field of medicine.

There is a growing trend toward a more progressive and fundamental conception of our duty in recognizing and utilizing human differences in education and medicine. Certain it is that medicine is more and more coming to recognize that a patient may have a very common disease in a personal way. As another puts it, "It is more important to know what sort of a patient has a disease than what sort of a disease a patient has."

Certain systems and organs exercise a controlling, activating or perhaps synergizing action on other organs and systems, and environmental conditions, whether exteroceptive or interoceptive, constantly affect these mechanisms.

Although man may be a machine, he is not built of strictly standardized parts and these are not always assembled so as to give precision of function. The interrelations of the organs and systems of the body are profoundly affected by morphologic variations. One of the chief obstacles in the way appears to be the imponderable quality, and one cannot help but wonder whether mathematical methods and formulae ever can be devised to interpret and evaluate it.

It is becoming more and more important that the inherited type forms be recognized early in life. Much may be done to correct tendencies, thus avoiding some of the inevitable results of conforming to averages. Often where constitutional deficiencies exist, something may be supplied to help out.

The hypersthenic types, with broad thorax, capacious upper abdomen, and liver, stomach, and colon located high, are prone to develop cardiorenal disorders. The asthenic types, with slender, narrow thorax, small upper abdomen, and stomach and colon low, are more prone to develop pulmonary disorders.

Not only is it found that certain diseases tend to make their appearance in individuals possessing similar types of physical constitution, but also that the psychologic tendencies are remarkably constant for any given physical type. If it is correct to assume, as it certainly is, that physical (anatomic) types are transmitted from parent to offspring, it is justifiable to expect that psychic and psychopathic tendencies will behave in the same way. Often the morphologic or physical type, determined by a careful analysis and measurement, will give the clue to the physiologic, psychologic, and immunologic aspects. All these will, of course, be influenced to a greater or less degree by environmental influences so that variations will only partly be attributable to hereditary factors. Then, too, the ontogenetic patterning of infant behavior is important.

There are also qualitative differences among the children of the same parents. The importance of hereditary gland defects in producing personality types and the periodic changes in personality, the result of cyclic glandular changes, must be recognized. The endocrine aspects of the human constitution are gradually taking shape.

Morphologic individualism has to do with the phylogenetic or ancestral and the ontogenetic or individual derivations—the interaction between germ cells and the interaction between heredity and environment. These factors may result, and variously so, in normal development, in the reappearance of ancestral characters, and in the formation of congenital developmental errors. Apart from these, there are the ever-recurring normal variations in the gross, and probably in the minute as well, type of an organ or system, the result of rudiment potentials.

The hereditary constitution may always limit the extent to which modifications can be established by environment and other factors in certain individuals. This depends upon the nature of the hereditary plan. Certain morbid conditions are inherited and transmitted in the Mendelian sense or as familial traits.

A few outstanding personal characteristics now established as aiding in the identification of the individual are: (1) Dactyloscopy—or the science of finger prints; (2) Bertillon system of personal measurements; (3) poroscopy—a new science of pore patterns, where only extremely small areas of finger prints are available; (4) physiognomy or character-reading by noting facial contours and the combining of morphologic features; (5) configuration and interrelationship of the paranasal sinuses, as determined by careful roentgenographic studies.

Dr. Schaeffer showed lantern slides illustrating how variations in the morphologic constitution affect diagnosis, treatment, and prognosis.

PEARL E. HACKMAN, *Reporter.*

BUCKS

May 8, 1935

The meeting was held at the Fountain House in Doylestown; President Linford B. Roberts presided and 37 were in attendance. Walter Marshall Smith, of Richlandtown, became a member by transfer from the Carbon County Medical Society. Edward Everett Koonce of Ottsville, University of Pennsylvania School of Medicine, 1931, was elected to membership. J. Fred Wagner, of Bristol, was elected a delegate to the State Society meeting with Clairmont A. Kressley and Claude L. Taylor as alternates.

Following a recess for dinner, the meeting convened at the Court House where Arthur C. Christie, of Washington, D. C., gave an address on "The Doctor and Social Insurance." The public was invited to this meeting and preceding the talk the Doylestown High School Band played.

Dr. Christie said in part: Great masses of the people cannot provide for the necessities of life, including medical care. Every right-thinking person wants to see that everyone is able to secure the necessities at all times. The cause of inability to provide the same goes back to the last quarter of the eighteenth century, when the world was becoming industrial and industry failed to pay enough to provide all the necessities. Medical attention is just one aspect of the problem of social security.

Germany established sickness insurance in 1883. Later, England established health insurance. Sickness insurance is the better name. It was supposed to be a health measure—to reduce sickness. The opposite is true—sickness has increased. A considerable percentage of people take advantage of the insurance laws to get

medical care for minor conditions and are placed on the sick list for things not requiring it. A great class of neurotics is built up. The cost of medical care is increased by sickness insurance for 2 reasons: (1) It actually increases sickness; (2) a tremendous bureaucracy is necessary to administer the system. The state is divided into districts with supervisors and assistants, and the districts are divided into local areas with their heads and assistants.

How is social insurance to be paid for? Bills that provide for health insurance or employment insurance provide first that a certain percentage of the pay of the wage earner be contributed—usually 3 per cent; the employer will contribute $1\frac{1}{2}$ per cent, and the state $1\frac{1}{2}$ per cent of the payroll. This amounts to a wage tax. In Germany the wage tax is 20 per cent.

The majority of the members of the medical profession are in a general sort of way opposed to health insurance. They base their opposition upon a conviction that under a health insurance system we are bound to have a deterioration in the quality of medical service rendered. Along with this there will be a continuous deterioration of the medical profession itself. This cannot be in the line of good public policy.

The medical profession has been particularly interested in scientific aspects and has made great advances. The social aspects have been neglected. No one plan is applicable everywhere and the problem is not easy. We must coöperate with the social workers and public-spirited citizens of the community. We do not need state control. In many communities plans are in operation that have been started by the medical profession. The members of the medical society must work in harmony and must coöperate with other people who deal with medical care.

Sept. 11, 1935

The meeting was held at the Grand View Hospital, Sellersville. Luncheon was served to the physicians and their wives; 41 physicians were present. President Linford B. Roberts presided. A motion prevailed that our delegate to the State Society meeting introduce a resolution in the House of Delegates that a committee be appointed to draft a bill to be presented to the next legislature to make compulsory the inoculation of school children for the prevention of diphtheria. Anthony F. Myers, Blooming Glen, and Levi S. Walton, Jenkintown, have been in practice 50 years and are to be honored at the Councilor District Meeting at Reading. Dr. Webb spoke on the new regulations of the Emergency Medical Relief. The society's attention was called to the new state law regarding sedative and weight-reducing drugs. Applications for membership were received from William Ireland Westcott, Doylestown, and Elvin Willes Gilchrist, Richlandtown. John Norman Rich, Doylestown, was elected to membership.

The scientific meeting consisted of a program on "Cerebral Injuries," presented by members of the staff of the Grand View Hospital. Herman C. Grim said in part: Alterations in the skull are relatively of minor concern. Changes in the brain and blood vessels are important. During the acute stage the physician must know how fully nature is compensating for the increased intracranial pressure and when a serious state of distress is being reached demanding treatment. This is based on (1) state of consciousness, (2) restlessness, (3) involuntary micturition or defecation, (4) respirations, (5) pulse rate, (6) temperature, (7) blood pressure. Deepening coma is a bad sign. Restlessness is a

warning that coma is near at hand, and to subdue it with morphine is as hazardous as masking pain in abdominal lesions. Incontinence is another bad sign. The pulse and respiratory rates increase and become irregular with breaking compensation and the temperature rises. The latter should be taken every 15 to 20 minutes during the period of danger. Compensation is being maintained when the rectal temperature remains below 101.5 or 102° F. Blood pressure rises and pulse pressure increases as a break in compensation approaches, but the speaker has found this an index of little value.

In the treatment of craniocerebral injuries the attitude of the physician must be one of watchfulness. Efforts to standardize the treatment bring out the general principles involved, but cannot be expected to meet the varied conditions including complications. Treatment must first be directed toward shock, including stimulation and fluids if necessary. Cerebral edema is combated by the use of enough ice bags to encase the head; some patients however will not tolerate them. If it demands a continual struggle, do not use them. Rest is all-important, but mechanical restraint should not be used unless it cannot be avoided and then should include both upper and lower extremities. Morphine is used too much but when necessary should usually be given in one-eighth or one-sixth grain doses, rather than one-fourth; it masks oncoming coma, contracts the pupils, and is a respiratory depressant. More frequently the patient can be controlled with sodium luminal, chloral, or allied drugs.

During the past decade arguments have been advanced against the use of hypertonic solutions in treating cerebral edema. The speaker believes that the use of hypertonic glucose has saved many lives and has reduced the necessity for decompressive operations. Each case must be individualized. Fifty c.c. of 50 per cent glucose intravenously is most often used. Limitation of fluids is essential for a considerable period even after the symptoms of acute edema have subsided.

Cerebrospinal puncture is not necessary in all cases but it is the best index of the degree of intracranial pressure and to determine whether the fluid is clear or bloody and if it contains living organisms.

A bleeding ear should be loosely packed with sterile cotton and nothing else done. Even inspection of the drum carries some hazard of infection. Hyperthermic states are combated by the liberal use of ice bags over the great vessels and an ice water enema.

Roentgen-ray pictures should not be taken while the patient is in profound shock or very restless. They reveal depressions not otherwise found and whether a linear fracture has crossed a meningeal groove. From a medicolegal standpoint roentgenograms are essential.

Depressed fractures with bone fragments driven should be operated upon, also practically all depressed fractures, for it is not possible to tell whether the dura has been torn without inspecting it. The frequency of posttraumatic epilepsy would thus be lessened.

Three types of hemorrhage are found. Extradural hemorrhage is frequently seen following a free interval. Operation with removal of the clot and stoppage of the bleeding point is necessary, but do not try to remove all the clot adhering to the dura for fear of starting a fresh hemorrhage. Subdural and subcortical hemorrhages if large enough to give localizing symptoms should be explored. Repeated lumbar punctures with slow removal of fluid are of value in treating generalized intracranial hemorrhage.

Complications include meningitis, chronic subdural hematoma, traumatic pneumatocele, and arteriovenous aneurysms.

Great tact is necessary in attempting to prevent post-traumatic neuroses. The physician must create and maintain in the patient the desire for recovery, and this must be greater than the desire for gain.

Clairmont A. Kressley and Clyde R. Flory presented cases. Otto H. Strouse demonstrated radiographs of fracture of the skull.

Oct. 9, 1935

The meeting was held at Washington's Crossing Inn. Luncheon was served to 49, including members of the Woman's Auxiliary. H. Doyle Webb, first vice-president, presided.

The scientific program was a symposium on "The Secondary Anemias." Gulden P. Mackmull, of Langhorne, gave an introductory talk and discussion on diagnosis. Dr. Mackmull said in part: The application of the fundamentals of hematology removes a great deal of guesswork from general practice. Some of the remarks may act as a stimulus for more thorough blood counts. Anemia may be described briefly as the imbalance between blood formation and blood destruction. The simple estimation of hemoglobin and the determination of the number of red blood cells, if properly interpreted, give invaluable information. There are several methods of estimating hemoglobin content. The Tallquist method is too unreliable to use. The Wintrobe hemometer is the simplest and most accurate obtainable, combining the accuracy of the Sahli with the permanency of the Dare. Because hemoglobin varies with age and sex it is better to estimate it in grams, rather than percentages. There is also an age and sex difference in the red blood cell count; at birth it is 7,000,000, falling rapidly until the fifteenth year when the counts are 4,500,000 to 5,000,000 for women and 5,000,000 to 5,800,000 for men. Normal increases occur during residence at high altitudes, after short strenuous exercise, after hot or cold baths, massage, or fasting. Normal decreases occur after meals, from psychic states as anxiety, fright, or worry, during menstruation, at childbirth, and during lactation. Given the hemoglobin content and the red blood cell count an idea can be had as to the amount of hemoglobin in each cell and its relative size. To get the color index divide the percentage of hemoglobin by the first 2 figures of the red blood cell count multiplied by 2. Since the color index practically parallels the volume index or size of the cell, it can be said that a patient with a low hemoglobin, low red blood cell count, and color index below one has too few cells, too small a cell, and too pale a cell. If the color index is over one, the cells are too large and have too much hemoglobin per cell. The exact diagnosis of the anemia depends on a study of the stained blood film. Polychromatophilia, or dual staining, represents immaturity of the cell and indicates an attempt at regeneration, not necessarily a disease. Another indication of normal blood regeneration is the presence of reticulocytes, red cells with a fine blue filament after the supravitral staining. Their normal percentage is 0.1 to 2 per cent. They are invaluable in estimating response to therapy and prognosis, especially in pernicious anemia. Basophilic stippling, unless due to chronic lead poisoning, indicates a serious blood condition, with a bone marrow stimulus of such a nature that depletion and exhaustion of this vital tissue will occur. It may also occur during remissions in per-

nicious anemia, after liver diet, and after 2 or 3 days of iron therapy. Changes in shape of the red cell are informative—pear-shaped cells indicate normal regeneration, sickle-shaped cells sickle cell anemia, and ring shapes are found in chlorosis.

There should be more frequent blood examinations in order to direct therapy along more scientific and, incidentally, more effective channels. Hemoglobin determinations should be recorded in grams if the record is to mean anything to the physician, the patient, or to posterity. A simple analysis of the blood count, hemoglobin determination, and an idea of the size, shape, and staining of the blood film will often aid in diagnosing a beginning serious disease before the patient is in such a state that he resorts to the preagonal ministrations of the cultist and chiropractor.

Redding H. Rufe, of Chalfont, in discussing the symptoms and classification, said: The symptoms of shock and collapse immediately following an acute hemorrhage are due to a deficit in the volume of the circulating blood and not to lack of hemoglobin. Slight grades of anemia are usually symptomless. Even a moderate grade of anemia may cause little more than a feeling of weakness and easy fatigue. Marked anemia causes definite symptoms referable to the circulatory system, the central nervous system, and the gastro-intestinal tract. The first includes shortness of breath, tachycardia, palpitation, hemic murmurs, arrhythmia, and edema. The second includes headache, faintness, dizziness, insomnia, and emotional instability. The third includes anorexia, nausea, and constipation. He classified and discussed the secondary anemias as follows:

In *acute posthemorrhagic anemias* signs of blood regeneration begin to appear after 10 to 12 hours and reach their height 8 to 10 days after the hemorrhage. The blood reaches normal in about a month.

In *chronic posthemorrhagic anemia* the cause is frequently overlooked, particularly when it is in the gastro-intestinal tract. Roentgen-ray studies and occult blood examinations should be made when there is any suspicion. Conditions to be considered are malignancy, benign ulcers, polyps, hemorrhoids, bleeding from the urinary tract, and from the uterus. The reaction at first is similar to that in acute hemorrhage, then there is hyperplasia of the red marrow, and later, as increasing demands are made, the anemia becomes aplastic.

Anemias due to blood destruction include paroxysmal hemoglobinuria which may be due to syphilis, reaction to blood transfusion, certain infections as malaria, certain poisons as from snake bite, and extensive burns.

Anemias due to deficient blood formation include terminal stages of other secondary anemias, severe infections (especially streptococic), roentgen ray and radium, poisoning from benzene compounds, terminal myelopathic anemias, and poisoning from barbiturates and amidopyrine.

Anemias due to toxic and infectious substances include focal infections, chronic pyogenic infections, specific infections, tuberculosis, bacterial endocarditis, arthritis, nephritis, and parasites. The 2 types of anemia of pregnancy are included in this group—the one comes with the pregnancy, the other is a preëxisting anemia aggravated by the pregnancy. Neoplasms and chemical poisoning are also included.

Anemias due to dietary deficiency are becoming more common, especially with the high cost of meat. Children on an exclusive milk diet, without the necessary vitamins, develop anemia.

Under the *endocrine anemias* the most common is that accompanying myxedema.

Many *idiopathic anemias* occur in women and are difficult to treat, probably because the causative agent is not understood. Some patients diagnosed as psychoneurotics have anemia and will improve markedly if treated.

Walter J. Hendricks, of Perkasio, summarized the treatment. In acute hemorrhage it consists of securing hemostasis and control of the ooze, injection of whole adult blood (in hemorrhage of the newborn), and treatment of shock. The latter includes rest, morphine sulphate given judiciously, bandaging of the extremities, lowering of the head, no stimulants, restoration of blood volume by transfusions of whole blood, of citrated blood, or (in Russia) of cadaver blood, or by infusions of hypertonic saline, 1 to 15 per cent. Drugs are of little value in the treatment of acute hemorrhage.

In chronic hemorrhage, use whole liver which stimulates the formation of red blood cells, and massive doses of iron which stimulate the formation of hemoglobin. One-quarter to one-half pound of whole liver is used because the secondary fraction, 3 per cent of the liver, is of value in secondary anemia. The dosage of iron should be 60 to 90 grains or more daily because the excess stimulates the bone marrow. Iron given by mouth is better than given intramuscularly or intravenously because enough cannot be administered by the latter routes. Inorganic iron is preferable to the organic and is less expensive. Use reduced iron, Bland's, or iron-ammonium citrate. Repeated small transfusions of 50 to 100 c.c. are of value for initial stimulation of foreign blood. Ultraviolet radiation in massive doses increases red blood cells and reticulocytes but not hemoglobin. The diet should contain meats, fruits, vegetables, and vitamins.

J. Fred Wagner, delegate to the State Convention, gave a report. Three new applications for membership were received and the following were elected to membership: Elvin W. Gilchrist, Richlandtown; William I. Westcott, Doylestown; and Paul M. Nase, Souderton.

Nov. 13, 1935

The meeting was held at the Fountain House in Doylestown, with 43 in attendance. President Linford B. Roberts presided. Luncheon was served.

P. Brooke Bland, Philadelphia, professor of obstetrics at Jefferson Medical College, read a paper on "Uterine Hemorrhage." Uterine hemorrhage, either menorrhagia or metrorrhagia, is highly suggestive of trouble, especially in those who have reached the eve of life. Organs anatomically sound never give rise to symptoms or bleed. The first move of the doctor frequently determines the fate of the patient. Determination of the cause of the bleeding is all-important, and here a careful physical examination ranks supreme. The technic of a vaginal examination includes orderly study of all the organs, expedition without haste, and gentleness. When profuse, immediate control of the hemorrhage is brought about by rest in bed, restoration of blood loss by transfusion, and drugs. The multiplicity of drugs used shows that none is entirely satisfactory. Next, treat the cause. Drugs, with the possible exception of the luteinizing hormone of the anterior pituitary, are not directed at permanent control, and Dr. Bland's experience with hormone therapy has been uniformly unsatisfactory. Surgery, radium, and roentgen ray are used for permanent control. Surgery is used in treating large fibroids, and

lesions of the fallopian tubes and ovaries. Carcinoma of the body of the uterus is treated by removal of all the pelvic organs. Benign cervical lesions are treated by cauterization or repair; benign endometrial lesions by dilatation and curettage; fibrosis uteri by dilatation and curettage and 800 to 1200 milligram hours of radium; fibroids of moderate size by roentgen ray or radium. Cervical cancer is treated by 2400 to 3600 milligram hours of radium.

Histories were presented of 7 patients attending an imaginary clinic, demonstrating bleeding of adolescence, ectopic pregnancy, threatened abortion, hydatidiform mole, fibroid uterus, carcinoma of the cervix, and carcinoma of the body. In the discussion the subject of habitual abortion was considered. There is often an endocrine factor and good results are obtained frequently by giving small doses of thyroid and reducing the diet while increasing the vegetables.

The following amendment was made to the constitution: The officers of this society shall consist of a president; 2 vice-presidents; an honorary secretary; a secretary and treasurer; an assistant secretary; a reporter; 3 censors; and an editor.

Four new members were admitted to the society: William Bonney and Charles Spangler, Perkasio; Arthur Wise, Souderton; and Joseph Pasceri, Bristol.

The election of officers resulted as follows: President, H. Doyle Webb, Bristol; 1st vice-president, Jesse E. Packer, Newtown; 2d vice-president, Clairmont A. Kressley, Sellersville; honorary secretary, Anthony F. Myers, Blooming Glen; secretary-treasurer, J. Fred Wagner, Bristol; assistant secretary, Mary E. Lehman, Bristol; reporter, Mary E. Lehman, Bristol; board of censors—William C. LeCompte, Bristol; John A. Weierbach, Quakertown; and Herbert T. Crough, Doylestown; editor, Otto H. Strouse, Perkasio.

In nominating Dr. Myers as honorary secretary, Frank Lehman spoke of Dr. Myers' 40 years of faithful, untiring service as secretary of the society. To honor Dr. Myers, the society has tried to create an office, but in reality the man had been created for the office. Dr. Myers in responding said that as he looked back to the time when he joined the society 48 years ago, he found not another name on the roll.

Dr. Myers was elected to life membership, and it was approved that the society have a testimonial dinner in his honor.

Frank Lehman reported for the Toxoid Committee that the state furnishes Schick test material only in 50-test vials. As supplies can now be purchased for this purpose for less than 6 cents per child, it was suggested that the members buy their own supplies. Toxoid continues to be supplied by the state. Dr. Lehman asked that reports be sent him of the number of children immunized in the county during the year 1935.

A special meeting will be held on Dec. 11 at 3 p. m. at the Fountain House, without dinner.

MARY E. LEHMAN, Reporter.

DELAWARE

Nov. 14, 1935

The meeting was held at the Chester Hospital, President John S. Eynon presiding.

John B. Klopp presented the society with 6 framed pictures of famous men of medicine: Hypocrates, Harvey, Pasteur, Lister, Roentgen, and Reed. These will be placed on the walls of the society's meeting room.

A resolution prepared by the Committee on Birth Control was presented. The resolution is to the effect that physicians should be permitted by law to give contraceptive information when, in their opinion, such information is necessary. The resolution was adopted and the secretary was instructed to send a copy of the resolution to the American Medical Association.

No formal scientific paper was presented.

At the October meeting the Delaware County Welfare Council and its component organizations had presented papers to this society. These papers were referred to a committee for study and for recommendations as to the society's attitude on the subjects presented. The report of this committee is important and comprehensive and is, therefore, given in its entirety.

REPORT OF THE COMMITTEE

To the President and Members of the Delaware County Medical Society:

Your committee met and discussed the papers presented by the welfare organizations regarding welfare in Delaware County.

The dominant note in all of these papers deals with the securing of patients for clinics. If all social service workers were placed on the same remunerative basis as the physicians in the clinics, there would not be any clinics. The workers probably would lose incentive as their salaries vanished.

It is evident that those agencies, from the tone of the papers presented, are not satisfied with caring for the indigent, for which they were primarily organized, but desire to include the low-income group, which comprises a large percentage of the average doctor's clientele.

This committee feels that a survey of all clinics in the county should be made by the county society to determine the character of patients, how they came to the clinic, and their financial status. This survey would necessarily take a long time, but the committee feels that the results would justify the efforts and provide a working basis for further recommendations.

In regard to toxin-antitoxin administration, the committee feels that it is of paramount importance that the Delaware County Medical Society advocate a plan similar to the one operating in Northampton County whereby the county society and its component members are in complete control of the situation.

Haverford Township Board of Health at the present time is immunizing all children who apply regardless of circumstances, but states in a recent letter "that they will be glad to discontinue immunizing children as soon as the county society offers a plan relieving them of the responsibility of immunization."

The committee discussed each paper separately, and also discussed a questionnaire received from Mrs. Emilie B. Myers, executive secretary of the Delaware County Welfare Council.

Mrs. Myers in her letter has requested our help in certain matters specifically enumerated and we shall proceed to reply to these questions in the order in which they are presented.

Question 1. Referrals: In connection with persons who cannot pay full fee, in order to eliminate the necessity of going from one physician to another.

Answer: The committee after consideration has concluded that such a patient should consult his or her family physician, who will attend to the patient and, if hospitalization is indicated, will attend to this procedure.

Question 1-a. To whom shall a client of the family

society needing medical care be sent if said person has no family physician?

Answer: The committee is unanimous in the opinion that the nearest physician should be consulted. As many of these cases are on relief, there is no reason why the recipient of relief could not obtain a medical order for services to present to the doctor of choice.

Question 1-b. To whom shall a person, known to a nursing service and who has no family physician, be referred to receive maternal care?

Answer: It is the opinion of the committee that of all problems arising the one of obstetrics is paramount, and that the patient should have the benefit of complete early prenatal care. Therefore, it recommends that the patient should be referred to the nearest physician for prenatal advice and maternity care. In this way the physician-patient relationship will be maintained. If it so happens that the physician consulted does not practice obstetrics, he no doubt will refer the patient to a physician who does this work.

Question 1-c. To whom shall persons on relief needing medical care be directed?

Answer: Persons on relief are entitled to a medical order for services and the free choice of physician.

Question 2. Conduct of well baby clinics.

Answer: This subject was discussed completely, and the unanimous opinion of the committee was that the term is a misnomer and that well babies have no place in any clinic. The danger of transmission of contagion and infection under such circumstances is not warranted, and such babies could receive much better care in the office of a physician. Existing hospital clinics are well able to care for the sick babies of the indigent. The committee wishes to go on record as condemning the practice of advertising the clinic in the papers with the names of the doctors in attendance.

Question 3. Immunization of children.

Answer: The committee is of the unanimous opinion that no immunizations should be performed in any clinic or school unless the recipients of such treatment are either on relief or are indigent. In this connection we wish to propose that the Delaware County Medical Society adopt a plan similar to the one adopted by the Northampton County Society whereby the control of this work is vested in the county society which controls all such activities.

Question 4. Would it be possible for doctors to determine what they feel is an approximate minimum income of a client to permit the receiving of clinical treatment, and what method of referral can be provided for immunization of children of families just above this minimum and for the regular weighing and measuring of babies of such families?

Answer: We feel very strongly the need of maintaining the physician-patient relationship in all cases, especially in the matter of weighing babies, as we believe this can be better done in the office of the physician even if the physician does this gratis. We also contend that all persons not on relief should consult their family physician who will attend to their needs according to their circumstances. The committee condemns the activities of visiting nurses in soliciting babies as clinic patients and for immunization. This has been a common complaint among physicians and steps should be taken to stop such pernicious activities.

President Eynon requested that the society discuss the report, taking each question separately.

Question 1. Referrals. The recommendations of the committee were unanimously adopted.

Question 2. Conduct of well baby clinics. This question aroused considerable discussion. It seemed to be the consensus of opinion that the well baby clinic as controlled in Chester is satisfactory but the other well baby clinics throughout the county are not and should be either radically changed or abolished. It was suggested that some means of censorship be instituted against those physicians who permitted their names to be used in what seems to be a method of advertising in connection with the well baby clinics. The recommendation of the committee was adopted.

Question 3. Immunization of children. This question provoked considerable discussion. The consensus of opinion was that all physicians immunize their own patients as infants and that schools, well baby clinics, *etc.*, should not be permitted to do this work. The recommendation of the committee was approved.

Question 4. Recommendations of the committee were unanimously adopted.

The entire report of the committee was adopted by the society and the secretary instructed to send a copy of the report to the State Medical Society and to the American Medical Association.

On motion the committee was requested to continue to function and at some subsequent meeting to present a definite plan for the society's action in connection with all activities of welfare organizations. The motion was unanimously adopted.

A buffet supper was served.

E. ARTHUR WHITNEY, *Reporter.*

ERIE

Oct. 29, 1935

The meeting was held at Hamot Hospital Auditorium, Arthur G. Davis presiding.

William D. Stroud, Philadelphia, discussed "Coronary Disease." Dr. Stroud stressed the fact that we as physicians, or as patients, must assume an optimistic attitude in regard to coronary disease. Physicians should not tell the patient that he has angina pectoris, for that tends to leave the patient on the edge of a precipice with a constant fear of impending death. However, if the patient insists on a statement as to the diagnosis, simply say that a temporary anoxemia of the myocardium exists. Likewise, we must not or rather should not come out bluntly and acquaint the patient with the fact that he has a coronary occlusion or a coronary thrombosis, but rather let him rest more at ease with the simple statement that a permanent anoxemia of the myocardium is present. Then proceed to explain to some responsible member of the family the exact nature of the case with the advice that with proper rearrangement of the patient's mode of living he may live comfortably for a number of years.

Coronary occlusion and coronary thrombosis quite frequently follow angina pectoris but the latter does not necessarily precede the former. These 2 conditions are quite distinct: Angina pectoris is due to a spasm of the cardiac muscle whereas coronary occlusion is thought by many to be due to a collection of cholesterol in the intima of the coronary vessels which results in the formation of a noninfectious abscess; this later ruptures into the vessel thus giving rise to the development of a thrombus.

It was the general idea formerly that age 40 was the danger line for coronary disease, but it has been definitely proven that this disease occurs in patients as young as age 19 and even age 7.

The sympathetic nervous system is probably the seat of the problem, an intense nervous tension being a factor in the causation of angina pectoris.

Frequent emotional upsets, infections, insufficient intestinal and renal elimination, excessive use of nicotine, coffee, tea, *etc.*, obesity and diabetes, and excessive physical efforts, together with a long history of nervous tension, mental concentration, and inadequate vacations favor the development of coronary sclerosis, coronary occlusion, and thrombosis. Meat in the diet apparently has little or no effect on the development of coronary disease.

In the case of the patient with diabetes complicated by coronary disease it is thought to be inadvisable to reduce the blood sugar to the previously normal level. The heart muscle needs sugar and in the case of coronary disease the nutrition to the heart muscle is already diminished so that a higher concentration of sugar is advisable. For this reason it is thought inadvisable to lower the blood sugar below 160 to 190 mg. per 100 c.c.

In families with a history of a degenerative type of cardiovascular disease as the usual cause of death, an individual is born with a hyperirritable vasomotor system. Such an individual is said to have a spasmodic aptitude.

If the history of the patient together with the physical findings points to some coronary circulatory disease but the electrocardiogram is normal, be guided by the history and findings, for though the electrocardiogram is normal today the patient may die of a coronary occlusion tomorrow. The electrocardiogram during an attack is usually diagnostic.

Take time with the patient presenting symptoms of coronary disease and investigate his home conditions, his environment, his business, his working conditions, and his recreation and vacations; then direct the treatment toward relieving the tension on the nervous system. Advise a change in working conditions and a change of exercise.

The use of phenobarbital in quarter to half-grain doses 4 times a day, where there is no idiosyncrasy, is recommended for sedation. Nitroglycerin administered during an attack of angina is advisable, with a warning not to prolong its use. The use of coronary dilators (euphylline, theophylline, metaphylline, theobromine, or theominal) is advisable. Theobromine in 5-grain capsules is quite helpful. Digitalis is contraindicated in angina pectoris and coronary occlusion except where congestive heart failure exists.

The surgical treatment of coronary disease has been approached in 3 ways: (1) Removal of the cervical sympathetic ganglia and nerves (this method has been discarded); (2) injection with alcohol of the thoracic paravertebral sympathetic ganglia or the thoracic nerve roots; this method at present in the hands of a skilled operator gives the most favorable results; (3) total removal of the thyroid gland as advocated by some is still debatable as to benefit derived. The results obtained are thought to be due to the removal of the cervical sympathetic nerves. Surgery in the treatment of coronary disease is to be resorted to only after long-continued rest and medical treatment have proven valueless.

In discussing Dr. Stroud's address Palmer Tredway, Erie, stated that with the vascular changes that inevitably develop after age 40, there should be a corresponding slowing down of the everyday activities, not only physical, but mental and emotional. The hereditary tendency to coronary disease has been recently emphasized by the observation of this disease in 5 patients

whose fathers had died of it; in each case the onset of coronary symptoms was about one decade earlier than it was in the parent.

Coronary occlusion is accompanied by cyanosis and continuous pain in contrast to the pallor and spasmodic pain of an upper abdominal tragedy.

Dr. Stroud was asked to outline in greater detail spasmogenic aptitude. In his opinion the sympathetic system is in a state of tension under the control of the various glands of internal secretion; this is not a clearly understood relationship. Excessive stimulation for a few seconds or minutes results in wide-spread body reactions, as noted in fright and anger, for instance. A prolonged stimulation is considered by many to be a substantial cause of such diseases as hyperthyroidism, duodenal ulcer, and now coronary disease. There may be recurrent or continuous stimulation of the cerebral, coronary, or renal vessels to give one of the varying pictures of hypertensive cardiovascular disease.

Nov. 6, 1935

The meeting was held in Hamot Hospital Auditorium, Erie, Arthur G. Davis presiding.

Sumner Koch, Chicago, was the guest speaker for 2 sessions, one at 4 o'clock, and one at 8 o'clock, and honor guest at dinner at the Erie Club.

Dr. Koch discussed the subject of the treatment of injuries of the hand, with especial regard to tendon and nerve surgery and reconstructive surgery. In the afternoon meeting, he outlined the treatment of hypothetical cases; in the evening, he delivered a formal discussion of the subject. His talks were amply illustrated by lantern slides of cases and diagrams.

Injuries of the hand are important because of their increasing frequency due to automobile accidents and because of the many unsatisfactory results so commonly seen from careless medical attention. Hand and wrist lacerations demand immediate attention by one skilled in the knowledge of anatomy and surgical technic. It would be preferable for the intern to learn thoroughly this phase of traumatic surgery than to be saturated with a knowledge of abdominal and other major surgery, most of which is not emergency in character. The general practitioner has a serious responsibility before him when confronted with a laceration involving important structures of the hand or at the wrist.

First aid to the lacerated hand should include only the placement of a sterile or clean dressing over the wound. The properly equipped operating room is the place for further attention; control of bleeding, and treatment of shock may be paramount issues. General anesthesia is commonly employed. Thorough cleansing with soap and water, using benzene as a grease solvent when necessary, represents the basis for an attempt at asepsis. In Dr. Koch's experience, chemical antiseptics have proven of no value, and theoretically at least it is reasonable to assume that they may cause increased tissue damage. It is tissue damage that is to be avoided as much as is possible. The wound is meticulously scrubbed, gently, and with due regard to adjacent important structures.

After scrupulous cleansing, the separated structures are sutured, and the wound closed, providing certain conditions have been fulfilled. The hand and wrist must have been clean, and severed by a tolerably clean instrument; first aid must have been clean, and not meddlesome, of a character to have introduced potential infection. The time period after the injury should have been short; risk of infection is much less if asepsis is

accomplished within a few hours. Adequate facilities for repair must have been available.

If these conditions were not fulfilled, and it is uncertain as to whether or not infection is likely, the wound can be closed and repair done at a later date after the danger of infection is past; or, the wound can be packed open with vaseline gauze, and the reconstructive procedures done after 48 hours if there is no infection. A wound that has occurred over 8 hours should never be subjected to tendon or nerve suture until the risk of infection is over. The presence of suppuration demands careful day-by-day dressing of the area, hot wet dressings proving best when frequently changed (several times daily).

Given a clean wound, damaged tissues should be excised and the severed structures sutured. Here comes the need for detailed knowledge of anatomy of the part. In a wrist laceration, the median nerve is the most commonly cut. Its function can be tested by ability of the patient to place the thumb on the dorsum of the flexed little finger; by the recognition of sensation on the volar surface of the thumb, index, middle, and half the ring fingers. The ulnar nerve supplies sensation for the remaining fingers, and causes adduction and abduction of the fingers from the midline. In testing tendon activity, the fingers should be closed, the thumb should be flexed at the interphalangeal joint and the index finger at the distal interphalangeal joint. Tap or faucet injury usually includes cutting of the flexor of the thumb or index finger. A tendon, shiny on cut surface, should be recognized from a nerve, which is darker, with less sheen, and pouches out slightly at the cut end.

Fine silk is employed for suture, catgut being prone to sponsor low-grade infection. Only the epineurium is caught when a nerve is sutured, employing stitches close together. Nerve and tendon alike must be dissected free for some distance to allow for proper alignment of the 2 ends. A longer wound heals as quickly as a shorter wound.

The part should be immobilized in relaxation by splinting. It is true that occasionally, torn extensor tendons will heal without suture, if the hand is held for a few days in sharp dorsoflexion. If a permanent deformity is anticipated, the hand should be placed in the position of function, as demonstrated years ago by Kanavel—as in grasping a ball, the hand is semiflexed, with thumb separated from and facing index finger, and the wrist is dorsoflexed and supinated.

Secondary repair and closure should be done as soon as possible, when but a few bacteria can be demonstrated on smear. If delayed too long, excessive granulation may appear; this is best controlled by sponge pressure for a few days, a procedure proven effective in treating granulations of old varicose ulcers.

Tendon grafts from the long extensors of the foot are occasionally necessary and prove quite effective; adipose tissue may be added to give the semblance of a sheath and thus aid in gliding of the tendon when healed. To close the defect, intermediate-thickness or full-thickness skin grafts may be employed, depending on the need. For large areas with loss of considerable depth of tissue, the pedunculated graft is extremely valuable; the removal of such a large piece of tissue usually necessitates later closure of the defect from which the graft was removed. Pressure dressings are maintained for several days, and primary union anticipated.

A bloodless field is used in reconstructive surgery, utilizing the cuff of a sphygmomanometer. With the

hand elevated, 240 mm. of pressure is applied to the arm, and the operation followed out through the dissection to the point of suture. The cuff is then released and bleeding vessels caught. The cuff is again inflated until the suturing is completed and wound closed. The operation is made easier, and healing more prompt because of diminished oozing.

A scar should never be cut through, and the part stretched; greater scar and more retraction will be the result. Scar tissue should be excised, and the area grafted carefully, with a pedunculated full-thickness graft. A widely burned area should never be put on the stretch, as, for instance, an extensive axillary burn. The more the stretch, the more will be the tissue damage and the more the resultant scar. The arm in such a case should be in adduction. Grafting should be done as early as possible to diminish the risk of infection and more tissue death. The third-degree burn, because of shock and pain, must usually be treated with tannic acid, which can later be cut away to allow débridement.

In conclusion, Dr. Koch emphasized his belief that the first physician to see the patient with a laceration of the hand, or a bad burn, has the greatest responsibility; he must institute proper treatment immediately. Secondary plastic operations have their place; they would not be so frequently needed with better immediate care.

RALPH D. BACON, *Reporter.*

FRANKLIN

Nov. 19, 1935

The meeting was held at the Chambersburg Hospital. Joseph C. Hudson, of Chambersburg, read a paper on "Heart Injuries." After hearing this paper by one of its members, this society is of the opinion that it is neglecting a very fertile field of information by not encouraging its own members to read papers. Perhaps this is based somewhat upon the old thought that a prophet has scant honor in his own bailiwick. However, there is reason to believe that hereafter local talent will be called upon to furnish the programs.

Dr. Hudson said in part: In recent years much ado has been made, in spectacular fashion, of repairs of the heart, because it has been or still is a topic which makes lay folks sit up and gasp at the medical audacity of suturing a beating heart. There is likelihood that this very feeling on the part of the lay world has also entered to some extent into the medical field. It is indeed difficult for any one not to stand in some awe at the prospect of performing such work, trained and courageous though he may be.

The etiology of injuries to the heart fall into 3 groups: (1) External injury, i. e., stabs, bullet wounds, automobile injuries, and fractures of the bony chest wall; (2) foreign bodies, which may pass through the esophagus, the stomach, or the bronchi into the cardiac or contiguous tissues; (3) therapeutic puncture. This last one carries but moderate danger, in striking contrast to the other 2 classifications.

Group 1 contains the most common etiologic factors. We are prone to believe that trauma of the heart invokes immediate demise, but that is not at all the case; considerable damage to the heart and its covering may occur and the patient remain in fair condition for hours. This is the time when cardiac surgery should be performed—after every means has been employed to diagnose the case as accurately as possible; meanwhile the wounded patient should be sustained by

the usual means. We must admit that often sheer luck seems to attend efforts at repair and cases that appear most desperate recover, whereas seemingly trivial wounds cause prompt death.

The more common route of surgical approach is by splitting the sternum from the ensiform appendix and rolling it back on both sides. This uncovers the pericardium and allows surgical manipulation by direct vision. However, at times pressure of fluid in the sac may be embarrassing by crowding forward into the operating space and interfering with the operation.

Recent investigation has shown that foreign bodies may enter the great veins and pass through the vascular system, through the heart, and be lodged in the lungs. At such times the heart seems wonderfully tolerant of the passing bodies. It seems impossible that bodies so large could pass the valves as they do.

Simple diagnostic punctures of the heart itself have caused sudden death. This unhappy result depends upon the particular part of the heart that is injured rather than the amount of the trauma if the latter is within reasonable extent.

All heart surgery requires extreme care and precision of technic. Every effort should be made to avoid injury to the pleura. The internal mammary vessels, the coronary vessels, and the heart wall are to be guarded scrupulously. The operator must have a thorough knowledge of cardiac anatomy.

Rather curiously it appears that instantaneous death due to a severe injury to the nervous mechanism is rare. However, it has followed a blow over the heart without outward visible signs of sufficient injury to have caused death. This may be due to traumatic shock which so completely upsets cardiac function that it is stopped permanently. Although it is possible that such a death might be avoided were a physician ready with his instruments and medicaments to care for the case, in ordinary conditions that does not obtain and the patient passes on from unconsciousness into death.

Dr. Hudson quoted Elliott C. Cutler, of Cleveland, saying that the indications for cardiac surgery are trauma (of vastly varied kind), drainage of pus, release of adhesions, or rarely removal of the bony framework about the heart in chronic adhesive pericarditis. Lately and in very carefully selected subjects, angina pectoris and the reduction of the amount of obstruction in mitral stenosis have been added to this field of surgical endeavor. So far the results have not been very satisfactory, although the future may see the development of considerable success in this venturesome field.

In 1884 Rose proposed the idea of heart tamponade, the basic factor of which is founded upon the lack of distensibility of the pericardium, which usually contains some 25 c.c. of straw-colored fluid that seems to function as a nonfrictional liquid in about the same manner as does normal pleural fluid. When a large amount of fluid is poured quickly into the pericardium, it will not dilate and the heart function is embarrassed more or less, depending directly upon the amount of liquid. Conceivably it may be sufficient to cause prompt death. However, in slow filling effusion the heart case will expand to hold as much as 3 or 4 liters.

Excess fluid in the pericardial sac produces a fall in arterial pressure and a rise in the venous pressure, due to the obstruction to the filling of the heart, as the intrapericardial tension rises finally to exceed the venous pressure. In such a circumstance the heart rate increases, pulse pressure drops, and the patient becomes cyanosed. It should be observed that the speed with

which the intrapericardial pressure rises is an important element in determining the degree of tamponade. Therefore, even if the heart action is very feeble and the blood pressure extremely low, the surgeon should operate at once.

Mention should be made of the advantage which perhaps may accrue from making a parasternal incision, with osteoplastic flaps and intercostal incision, if it is thought advisable to deal with combined cardiac injury and damage to the left pleura. Although this method gives a less satisfactory exposure of the heart proper, it is quicker than to split the sternum.

It is obvious that there will not be a wild scramble to become cardiac surgery specialists; consequently, Dr. Hudson opined that there will be sufficient time to become more or less expert. It does follow, however, that owing to the increasing frequency of heart trauma it should be considered by all, for at some time life may be saved by skill and daring. These cardiac cases are always desperate affairs; hence, we may console ourselves with the thought that although the risk is enormous, the risk involved without the aid of modern surgery may be far greater.

FASSETT EDWARDS, *Reporter.*

LACKAWANNA

Oct. 15, 1935

The meeting was held in the auditorium of the Scranton Chamber of Commerce; President Raymond J. Garvey presided. Clarence J. Patten, of Philadelphia, professor of nervous diseases in the Graduate School of the University of Pennsylvania, addressed the society on "Porencephalic Cysts." His talk, illustrated by drawings and roentgenograms, considered a comparatively rare condition, only 9 cases having been seen at the Graduate Hospital in the past 3 years.

Oct. 22, 1935

President Raymond J. Garvey presided. James W. Esler, of Washington, D. C., associate professor of medicine, Georgetown University School of Medicine, read a paper on "Recent Trends in Cardiology." Dr. Esler said in part:

Up to the turn of the century, most of the research in heart disease centered upon cardiac pathology. Advances were very slow. At that time, heart function had been studied for 30 years with the polygraph. In 1900, Mackenzie went to London and there stressed the great importance of ability to do work as a prime determinant of cardiac function. Efficient activity is the crucial point of this determination.

The heart has a certain amount of reserve. As long as the load placed upon the heart remains within these limits of reserve power, there are no symptoms, regardless of murmurs and other noted pathologic or clinical conditions. An overload will give symptoms such as anginal pain or congestive failure.

Angina pectoris is a symptom complex of 1 or 2 modes by which the heart fails. In congestive failure with its attendant edema, dyspnea, ascites, hepatic engorgement, *etc.*, cardiologists early proposed the "back pressure" theory of failure, that is, with left-sided failure of the heart, there is venous engorgement of the lungs, while in right-sided failure, liver engorgement, edema, and ascites ensue. Cohnheim in the eighties brought out a theory of back pressure plus forward failure, or the loss of some driving power. Mackenzie and Lewis also stressed this, as did most of the

cardiologists who studied under them. Five or 6 years ago, Harrison and Soma-Weiss began physiologic studies on this point. The English and American schools were strongly behind the forward pressure theory, while the continental group of clinicians still supported the theory of back pressure. Harrison and Soma-Weiss have recently demonstrated quite definitely that the "back pressure" concept is correct.

Herrick in 1912 and 1918 published papers on coronary occlusion and thrombosis as entities. But it was not until 1923 that it became generally recognized that many cases of coronary occlusion were being diagnosed angina pectoris. The most accepted concept of angina pectoris is based upon a major premise of coronary sclerosis producing a gradual narrowing of the coronary vessel and thus providing an insufficient circulation to cope with physical or emotional strain, requiring an increase in blood flow. However, there is no change in cardiac structure at the moment of anginal pain. In occlusion, because of sclerosis and a roughened intima, a clot is formed and blockage results; infarction taking place, the normal muscle is replaced by fibrous tissue—a definite structural change.

The pain in coronary occlusion and angina quite frequently has the same location and general distribution. Angina pectoris generally occurs after exertion or emotional strain, while coronary occlusion may occur while the patient is at rest, usually in the middle of the night. Anginal pain lasts for minutes, that of coronary disease for hours. If the anginal attack lasts over a half hour, coronary occlusion should be suspected. Angina is relieved by nitroglycerin, which has no effect in coronary disease, the pain of the latter being relieved only by morphine. Because of the structural changes in coronary occlusion, there is a moderate fever of 99 to 102° F., a moderate leukocytosis to 15,000, and the blood pressure drops markedly after the attack, at times as much as 100 mm. Finally, a day or so after the attack of coronary occlusion, a pericardial friction rub may be heard.

Certain types of angina suggest an early blockage or presage one in the near future. Ordinarily, angina begins insidiously, increasing in intensity. The patient with angina of effort of recent and sudden origin often has occlusion of a small coronary branch, which may be followed by massive coronary occlusion.

Coronary occlusion was not diagnosed as such until 1925, but now the tendency is to place almost any chest pain in that category. Albutt claimed that all angina was of aortic origin while Mackenzie localized the condition in the coronary system. Angina is, at times, seen associated with syphilis and marked aortic insufficiency. It has been recently established that angina is coronary in origin. In syphilitics, there is a decreased coronary flow because of atheromatous changes constricting the openings of the coronaries. Poor filling of the coronaries is responsible for inadequate coronary circulation in cases of advanced aortic insufficiency. The actual pain of angina is due to lack of oxygenation, similar to that of intermittent claudication.

There is no longer justification for the term "pseudo-angina" and "anginoid" pain. They formed an escape mechanism for the physician, who, if the patient lived 20 years, emphasized the "pseudo-," and if the patient died in the next week, stressed the "angina." The laity knows too much about angina.

Chest pain in functional heart disease is comparatively easy to differentiate in 90 per cent of cases. The

pain of angina is substernal. In effort syndrome, pain centers about the apex and is referred to the left axilla. The pain of angina coincides with sudden emotion or excitement, that of functional disease follows it. Anginal pain lasts minutes, that of functional heart disease, hours. Anginal pain is gripping and squeezing; functional pain is a dull ache or a fleeting momentary state of pain. Anginal pain is most frequently seen in the elderly, functional pain in the second and third decades.

Dissecting aneurysm of the aorta, by and large, is diagnosed coronary occlusion. The background in this condition is arteriosclerosis, not syphilis. The site of these aneurysms is almost always the first ascending portion of the aorta. In this condition, 20 per cent rupture back into the lumen and recover, but 80 per cent die. Differentiating: The patient with an aneurysm is struck suddenly with excruciating pain and collapses. In angina, the pain slowly increases over the precordium without such a degree of shock. Any differences in blood pressure or pulse should be noted in both arms or both legs, because of the pressure of the aneurysmal bulge upon the aortic branches.

Pulmonary embolism is frequently diagnosed coronary occlusion. The electrocardiogram often may be similar. With recovery, the prognosis is excellent in pulmonary embolism, if there is no subsequent blockage, as compared with coronary occlusion.

In the past 5 years, surgery of the heart has made many advances. In chronic adhesive pericarditis, constricting bands of adhesions have been removed. But surgery of the heart has been mainly along the line of anginal relief. Cervical sympathectomy has been done by removal of the superior cervical ganglion but only in cases of angina with 10 to 20 attacks daily. A highly specialized technic for the injection of the posterior spinal roots with alcohol has been perfected. Total ablation of the thyroid gland for the relief of angina or congestive failure has been performed. The rationale of such treatment is that total removal lowers the basal metabolic rate with a consequent lowering of the cardiac work requirement. There have been some good results in congestive cases and definite improvement in many cases of angina, but it is too early to judge the results from such an operation.

The mercury diuretics are used more than ever to reduce edema. Salyrgen does not have the deleterious effect upon the kidneys that was first expected. It may be used freely, except with advanced nephritis. It is well to combine ammonium chloride with salyrgen in slowly increasing dosage. Coramine is more a respiratory than a cardiac stimulant. Given in dosage of 20 to 30 minims by mouth, it is definitely a help in the group of so-called "cardiac asthmas." The use of oxygen is more generally understood and more frequently provided. In the acute stages of coronary disease, it has a very definite value, if used early and in high concentration. As to digitalis, standardization has done much to improve its efficient use. However, there is no good argument for the use of the tincture, when the leaf preparations are better standardized and more dependable. The dropper dose of the tincture is inconvenient and at times not dependable.

Oct. 29, 1935

President Raymond J. Garvey presided. W. Wayne Babcock of Philadelphia, professor of surgery at Temple University School of Medicine, read a paper on "Carcinoma of the Intestinal Tract." Dr. Babcock said in part:

The spread of carcinoma of the bowel is so slow that even after a year of growth, surgical removal may be feasible and quite successful. In many clinics, 60 per cent of these patients come in early enough so that there is a definite chance for resection. The outlook for freedom from complication after successful surgical removal is better than that for any other site in the body.

One-quarter of all of the deaths from cancer result from malignant growths of the intestinal tract, 97 per cent being found in the large intestine. In addition to acidity, a high concentration of digestive secretions, an abundant bacterial flora, and a high roughage of material content must be considered in the etiology. Only 30 per cent of these growths in the large colon are found above the sigmoid. Carcinoma of the sigmoid and pelvic colon represent 70 per cent of cancers of the large bowel; of these, 80 per cent may be reached by the examining finger or by proctoscope. Only 16 per cent require roentgen-ray examination as an aid to diagnosis.

Scirrhus carcinomas cause constipation, meteorism, visible peristalsis, and intestinal obstruction. Generally, small constricting growths of the "napkin-ring" type in the narrower portions of the bowel are the most common cause of obstruction in the elderly. This blockage may come on instantly like a strangulated hernia.

Adenocarcinomas are large fungating growths which cause a bloody, mucoid diarrhea and, less frequently, obstruction. They grow in the expanded portions of the colon—the cecum, ascending colon, and ampulla of the rectum.

Papillary adenomas and carcinomas are fairly rare in occurrence and are least malignant. They are accompanied by profuse watery and mucoid dejections—at times, several pints of colored, watery material may be passed daily. These growths become quite massive and may be extruded through the rectum.

Other factors which may be considered in the etiology of this condition include heredity, sex, and chronic irritation incident to adenomas, polyps, ulcerative colitis, proctitis, diverticulosis, constipation, and diarrhea. Papillomas are frequently precancerous. Lymphogranulomas are a common cause of rectal stricture.

Symptomatology of cancer of the large bowel may include palpable or visible tumor; melena; constipation; diarrhea; early anemia, if cecal in location; pain from complications; and, the terminal symptoms of asthenia, wasting and cachexia.

Diagnosis of the condition may be made by a careful, detailed history of the habits of eating and elimination; inspection and proctoscopy; rectal and vaginal examination; abdominal palpation; and roentgen-ray examination, if indicated. In taking the history, 50 per cent of those with intestinal cancer give a history of change in bowel habits, 12 per cent will give a history of an obstructive type of constipation. Diarrhea is a presenting symptom in 35 per cent of clinic cases. Profuse diarrhea in the morning indicates a rectal growth. Mucous diarrhea often results from adenocarcinomas and papillomas. Rectal tenesmus may indicate an anal growth. There is not always diarrhea alternating with constipation and, contrary to the general belief, ribbon-like stools are seldom seen. Only too frequently, bleeding and anal irritation are passed off lightly, without examination, as "piles."

The surgical treatment of these conditions should be: (1) Radical—the growth and the involved lymphatics should be widely removed in one stage; (2) aseptic—

the bowel must not be entered, crushed, or sectioned until the peritoneum has been closed; (3) without permanent colostomy; (4) without dead space—no drains or packs; (5) with adequate anal opening.

FREDERIC B. DAVIES, *Reporter*.

LUZERNE

Nov. 6, 1935

The meeting was held in the Medical Building, Wilkes-Barre, President Joseph P. Dougherty presiding. Edward Custer, of White Haven, was elected to membership.

Harry A. Smith and Louis W. Jones, both of Wilkes-Barre, presented the subject, "Kirschner Wire Traction in the Treatment of the Long Bones."

Dr. Smith said, in part, that the paper would include fractures of the tibia and fibula, humerus and femur. They have been using the wire traction in certain types of fractures since 1932 in 45 cases. The older method with the use of the Steinmann pin is practically the same except the pin is larger in diameter than the wire used. There is always danger of infection in making a wound but they have had good results and only one infection.

In some cases gas is used and in others local anesthesia. In the early days with the use of the wire they made an incision before inserting the wire but now the wire is drilled through the bone without an incision. It is not painful and the patients seem more comfortable than with the use of the adhesive tapes as used formerly. If the wire is not used, then some pain will be experienced.

In fractures of the fibula and tibia, retain the normal anterior bowing of the tibia. The latter transmits nearly all of the body weight from the femur to the astragalus. Isolated fractures of the shaft of the tibia are not rare. Those of both bones of the leg are usually of a compound type. The displacement depends on the cause of the fracture as the muscles of the leg produce only a shortening or overriding. The latter may vary from one-half to 2 inches or more. The diagnosis is easy, as there is nearly always shortening and angulation of the leg or rotation of the foot. Do not be rough in setting the fractures. Determine if possible the amount of shortening and the displacement of the fragments, and the condition of the nerves and vessels. Gangrene may develop if the posterior tibial artery is severed. The prognosis in uncomplicated cases is good. Union occurs in from 6 to 8 weeks.

The object of treatment is to restore the normal alignment of the leg, to secure union, to restore normal length of the leg, to prevent equinus, and to secure anatomic reposition of the fragments. The leg must not be manipulated until after callus is well formed, which should be in from 3 to 4 weeks.

In order to use the wire, the patient is placed in bed and a Thomas splint or other apparatus applied, with the knee slightly flexed or to 45 degrees. The ankle and foot are carefully prepared, cleansed with soap and water, followed with alcohol and ether, and painted with 7 per cent iodine. The wire is placed against the skin and drilled through the os calcis one inch below the tip of the external malleolus and posteriorly one-half inch. The wire wounds are dressed with gauze, the clamp attached to the wire, and made tight. Twenty to 30 pounds of weight are used. In 4 to 5 days the position is checked by roentgen ray.

Dr. Jones followed the paper with a lantern demonstration of the cases, giving their history and the final results, which in all cases were excellent.

In discussion, Frederick W. Heyer, Nanticoke, said that there are cases which are most difficult to treat, and these were the kind presented by the essayists. All cases are an emergency and require hospitalization at once. When there is no swelling and a patient is seen early, a proper diagnosis is made promptly and easily. Set the parts at once, if possible, and determine the position by roentgen ray. The use of the wire is one of the best procedures in treatment of displacement of fragments. The Steinmann pin still has its field of usefulness and can be applied with only a little more difficulty than the wire. They used it for a long time with good results. Joseph A. McNelis said that the wire has its limitations because of the possibility of infection and overcorrection of fragments. It should not be used in all cases nor by all persons. B. Franklin Griffith stated that overcorrection is not a drawback to its use. Samuel P. Mengel considers that the results reported by the essayists are the best he has seen, even in the severest cases. Thomas J. Wenner asked the incidence of pressure necrosis in the cases. Lachlan M. Cattanaach said that since 1929 wire has been used in the Beakman Street Hospital. It seems to be a better method than the pin. The latter causes pressure necrosis and is painful. John Howorth said that he had had excellent results with the pin and had no necrosis or infection.

Dr. Smith, in closing, said it is true that the fragments are separated much by the use of the wire. After 4 to 5 days the weights must be reduced some and so the amount of separation is lessened. Roentgenography should be done often enough to know how conditions are proceeding. They do not have pressure necrosis in their cases. The wire may become slightly loose, but not enough to bend it unduly.

Dec. 4, 1935

The meeting was held in the Medical Society Building, Wilkes-Barre, with Joseph P. Dougherty presiding.

The meeting was a joint one with the Luzerne County Dental Society. James Cameron, professor of oral surgery, Temple University Dental School, read a paper on "Osteomyelitis." Dr. Cameron said in part: Early diagnosis of this condition is desirable and, when established and early surgery is performed, recovery is assured. Grave systemic symptoms are experienced if there is delay. A streptococcal infection may cause widespread destruction, and mixed infections are more malignant. In children from age 3 to 9 the prognosis is very grave.

Osteomyelitis is usually due to trauma. The bacteria enter through a wound, the lymphatics, or the blood stream. Certain fevers such as scarlet fever, malaria, influenza, and syphilis tend to cause an osteomyelitis if there is pus in the mouth or injury to the gums. No extensive dental extractions should be done during a pneumonia illness.

The symptoms of osteomyelitis of the mandible are chill, fever, and being acutely ill. An abscess is present, uniform swelling and tenderness, and a violent, boring pain extending to the ear. Tapping over the mental foramen will cause pain in the ear. The soft parts become discolored and edematous, with pus present and loosening of the teeth. A subperiosteal abscess forms which ruptures either externally or internally. Roentgen ray aids in making a differential diagnosis.

The treatment consists in prompt and proper drainage of the bone, with frequent irrigations of the wound through perforated rubber tubes. One tooth may be extracted if there is no trauma, but no more, because of the danger of spreading infection. Inadequate treatment and applications of heat will spread the infection. External heat is very dangerous and should not be used in all cases. Too general use of it has caused much suffering and deformity.

Chronic cases are due to inadequate care of fractures, inadequate early care, and no early and proper drainage. The dental office or home is no place for correct care. The patient should be hospitalized. Chronic cases need frequent watching with roentgen ray so as to remove the sequestrum at the proper time. A well-balanced diet, fresh air, and sunlight are needed.

Too much surgery has been done in the past few years. Surgery cannot be taught by so-called short courses. The parts can be mutilated if the operation is not performed properly. Curettement of bone sockets is unnecessary after extractions.

Often early malignancy is mistaken for osteomyelitis; curettement is the worst procedure, as the glands become involved and there is much spread of the condition. If there is any doubt, do a biopsy.

In discussion, Dr. Vastine, dentist, Bloomsburg, said that diabetes is a factor in osteomyelitis; avitaminosis is another; trauma is a third factor. Specific hemotherapy, especially for streptococci and Vincent's organisms, is of value. Glucose or saline wet dressings are of aid in inflammation. The removal of an impacted third molar tooth often aids in the treatment. Robert R. Janjigian, Forty Fort, asked what percentage of cases develop osteomyelitis. What are the causative organisms? Dr. Beck, Wilkes-Barre, asked what the procedure would be in the case of a patient with an impacted third molar which did not give trouble. Is there danger in the use of ethyl chloride for different age groups?

Dr. Cameron, in closing, said that in the presence of pus or swelling treatment should be given before a tooth is extracted. He could cite no percentages of osteomyelitis cases, but there are now 10 or 12 cases under treatment in the Pennsylvania Hospital and one-half of these are traumatized cases. Impacted third molars without symptoms should be let alone, but sooner or later extraction will be necessary. For example, a woman, age 73, had sciatica and a swelling of the mouth. The roentgen ray showed an impacted third molar, but it had been determined 10 years before that she had it. Now it had to be removed. Ethyl chloride for inhalation is seldom used and then mostly topically.

Lantern slides supplemented the lecture.

MARJORIE E. REED, *Reporter.*

LUZERNE (HAZLETON BRANCH)

Oct. 23, 1935

The monthly meeting was held in the Corrigan Maternity Hospital, Hazleton. John J., James A., and Lawrence F. Corrigan were hosts to the members at a supper following the scientific program. The guest speaker was Thaddeus L. Montgomery, of Jefferson Medical College, who spoke on "Gynecologic Problems of Interest to the General Practitioner." A compendium of his remarks follows:

Regarding *Trichomonas vaginalis*, which is generally very resistant to the various treatments advocated, they

have developed at Jefferson a desiccation method of treatment, the results of which are to be published later. The vaginal tract is first cleansed mechanically with sodium perborate solution. Desiccation with a hot air blower is then carried out for 20 or 30 minutes. An ether swab is used against the cervix and urethra. Antiseptic powder is used as the final step. Good results are obtained in one week, the character of the discharge changing from marked purulent to slight mucoid.

A case of menorrhagia was described, in which duration of the flow was 6 weeks or more. This developed at the menopause. It was urged that such a case be submitted to diagnostic dilatation and curettage to exclude malignancy, and then receive radium therapy. Good results should be obtained. Too many general practitioners are using glandular products in menstrual disorders, without pelvic examination or diagnostic dilatation and curettage, whereas such examinations are certainly necessary.

Early toxemia of pregnancy is best treated by bed rest, the use of cacao butter suppositories containing 3 grains of luminal, every 8 hours, and small amounts of carbohydrate frequently throughout the day. In many cases this will decrease the vomiting, allow the patient to get rid of acetone and diacetic acid in the urine, restore fluid, and enable her to gain weight. Occasionally glucose by vein is also needed.

The best way to diagnose ectopic pregnancies, before rupture and operation are: (1) By frequent pelvic examinations during the early weeks of pregnancy; (2) by the Aschheim-Zondek test to exclude pregnancy when ovarian cysts or pelvic inflammatory disease are suspected; (3) by remembering that menstrual disorders in the child-bearing period are most often due to pregnancy.

The presence of jaundice in pregnancy is most important as a forerunner of possible acute yellow atrophy of the liver. The liver should be percussed, and the diagnosis suspected if its size is smaller than normal. Patients can be saved if the condition is recognized early. Treatment includes glucose by vein frequently, and then termination of the pregnancy by the vaginal route (multipara) or by abdominal hysterotomy (primipara).

Heart disease in pregnancy need not be an indication for termination, unless there are signs of decompensation, or electrocardiographic changes suggesting myocardial degeneration. Termination in such cases should be by section, under local anesthesia. When cardiac patients are allowed to go to term, it is most important to guard against shock from hemorrhage in the third stage. Dr. Montgomery's preference in analgesics in obstetrics in the home is morphine with or without scopolamine, plus ether later. Nembutal and amylal are not liked because 1 out of 6 patients may become maniacal and wild under their effects. Gwathmey's method is not liked because the ether may give too deep a sleep, and the morphine and magnesium sulphate may narcotize the child.

In discussion, John J. Corrigan stated that the speaker's ideas on analgesia bear out the experience of several years in the Corrigan Hospital. Dilaudid is also used there at times in conjunction with morphine. It acts more promptly, allows perfect orientation, and leaves no "hang-over" after-effects. Dilaudid, morphine, with or without atropine, and ether are the analgesics of choice. Prenatal care is most necessary and important if the high national mortality from toxemia of pregnancy is to be reduced. The Corrigan

Maternity Hospital sees very few cases of eclampsia, which low incidence must be due to adequate prenatal care.

Lawrence F. Corrigan asked the significance of puffiness of the eyes and feet in primipara with normal blood pressure and urine. Joseph A. Alexis inquired as to how much weight gain is too much for pregnant women between prenatal visits, especially with eclampsia in mind. George W. Taggart stated that he used antuitrin-S in young women with menorrhagia with good results. Pelvic examinations were done, but not diagnostic dilatation and curettage. Dominic D'Angelo asked the significance of low blood pressure in pregnancy. John R. Dyson asked whether the speaker thought pregnancies had injurious effects on hearts in compensated heart disease.

In conclusion, Dr. Montgomery stated that from reports dilaudid is probably a little better than morphine, although he has not used it. Puffiness and edema of the eyes are indicative of nephritis or toxemia, but also may be due to warm weather in addition to the increased blood volume of pregnancy and the increased permeability of the capillaries of pregnancy. This condition is relatively of little importance if the blood pressure and urine are negative. The weight gain of pregnancy should be: First 3 months, none; third to ninth month, 20 to 25 pounds at the rate of 1 to 1½ pounds per week, or 4 to 6 pounds per month. He could not answer whether pregnancy will further damage a diseased heart. Perhaps 1 or 2 pregnancies will leave the heart no worse, but many more than 2 will add to the general strain of the woman's life, as well as cause undoubted strain on the heart, and thus prove aggravating to the heart disease. In menstrual disorders of any age, if the symptoms are severe enough to require treatment, the patient should have a diagnostic dilatation and curettage, for in many of these cases it may have to be done later if and when medication fails. Blood pressure generally falls 10 to 15 points in pregnancy, due to relaxation of the vascular tree. A blood pressure even as low as 80 or 90 systolic is not of any significance unless there is heart disease or anemia.

JOHN M. DYSON, *Reporter*.

MONTGOMERY

Nov. 6, 1935

There were present 55 members and 3 visitors; 5 new members were admitted. The scientific paper was presented by a member of the society, Edward B. Krumbhaar, professor of pathology, University of Pennsylvania School of Medicine, who spoke on "Progress in Our Knowledge of Cancer." Referring to the importance of this disease group, he called attention to the decrease in infectious diseases and the improvement in diagnosis as largely explaining the increase in the cancer rate. Believing that the eventual solution of the cancer problem will follow the gradual accumulation of knowledge on the subject, he reviewed the progress made, especially since the beginning of the biological approach to cancer study. This covered comparative oncology, the discovery of the transplantability of animal tumors, various methods of procuring malignant tumors artificially (Fibiger's production of gastric carcinoma in rats, Bullock and Rohdenburg's sarcoma of the cat's liver, and the production of skin cancer by the application of tar and other chemicals).

The possible significance of the chemical similarity of carcinogenic coal-tar products to estrin, bile acids, and

vitamin D was pointed out. The influence of heredity, as indicated by the work of Maud Slye, Little, and others, can now be appreciated in experimental studies. In the field of biochemistry, Warburg's demonstration of the unusual glycolytic metabolism of tumor cells is illuminating, as is Harrison's and Mills' demonstration that certain substances will destroy that ability of the cancer cells without preventing their growth potentiality. The few microorganisms that are generally accepted as being connected with the growth of tumor form no basis for a bacterial theory of cancer in the sense of any one organism being the cause of cancer. Such unsupported claims as Glover's spore-bearing organism, and Connell's ensol, a so-called specific proteolytic enzyme for cancer tissue, do more harm than good in the search for a solution of the cancer problem, especially when prematurely announced through improper channels.

The relation of filtrable virus to cancer has recently assumed great interest. Following F. Peyton Rous's fowl sarcoma, reproducible by Berkefeld filtrates, in recent years Shope has described fibromas and epitheliomas of rabbits which show properties indicating that they are due to filtrable viruses. Dr. Lucke's recently found adenoma of the frog's kidney also appears to be caused by a filtrable virus. This is good evidence that in 3 widely different zoological classes virus is a causative factor presumably in its rôle of chronic irritant. This in no way indicates that all cancers are due to filtrable viruses.

In regard to clinical phases of cancer progress, the improved methods and details of diagnosis, especially the more frequent and proper use of biopsies, was referred to. In the field of treatment the better results of early diagnosis and early radical treatment by surgery or radiation were illustrated by tables of 5-year cures in various types of cancer, selected from the recent symposium in *Surgery, Gynecology and Obstetrics* (Feb. 13, 1935) on the curability of cancer.

WALLACE W. DILL, *Reporter*.

PHILADELPHIA

Oct. 23, 1935

MEDICOLEGAL SYMPOSIUM

"The Municipal Court of Philadelphia—a Machine for the Study and Prevention of Delinquency" was presented by Daniel J. McCarthy. This was a discussion of the relation of the Municipal Court to the modern system of the education of youth. The school board, according to law, has complete authority over the child from age 7 to 16. It practically has control of the child from preschool age to the time the boy or girl is sent into the world to meet its problems. The problems of this period, therefore, rightly belong to the educational system, except in the case of idiots and those incapable of any education, who belong directly to the state. The feeble-minded child, the backward child, and the moron all need special education, so planned as to adapt its recipients to society at large, or, on the other hand, to prove conclusively that they are completely unadaptable. Institutional schools often are required to meet this demand. A constructive educational system faces also a major problem in guiding youth through this dangerous adolescent period and in preventing the development of that large group of adolescent insanities. The Municipal Court is concerned with the much larger group who never arrive

at a definite psychotic stage but who present various types of conduct disorders that either bring them in conflict with the law, or who, when this does not obtain, present problems in the Domestic Relations Court or the Dependents Court for the care and education of their children. The essayist emphasized the stresses of adolescence and the detrimental influence of concomitant lowered physical health and showed that the teacher, in an ideal system, would appreciate this relationship and be prompt in recognizing problems depending upon its disturbance. The system of education should aim to secure through this period an even more severe mental discipline. The function of education should be to discipline the mind and sharpen that instrument for its future work. Mental discipline is largely inhibitory. Primitive minds move in the lines of least resistance, while the trained mind moves in a straight line to its purpose, notwithstanding obstacles and disagreeable situations. It was around this general theme that Dr. McCarthy built up his paper and the general contention that offenses committed by those under age 16 coming under the consideration of the Municipal Court had their origin in the failure of the educational system to provide adequate mental discipline in the curriculum. Following up this thought he cited various enterprises, such as the Big Brother movement, the Municipal Court Social Service, and others that supplemented the educational system in this regard.

"The Prevention of Delinquency" was the title of the address by Charles W. Burr. The changing industrial conditions play a great part in diverting youngsters from those channels for which they were intended by nature. Thrusting them into cultural fields creates havoc with their appreciation of normal ethical relations. If education be the fitting of a man to take his place in society, to do his work at that level of civilization to which his people belong, it becomes questionable whether our modern system of education fits the average boy as well to fight the battle of life as has that existing in the primitive races surviving today. Several instances were mentioned showing the devastating effect of the modern conception of educational responsibilities. He particularly stressed the lessening of discipline and especially of home discipline as factors in producing delinquency. Several zoölogical references were cited to show that only in his ability to become emotional does man distinguish himself from the lower animals. The big thing in the prevention of crime is to teach and educate the boy to control his emotions—what the physician would call the power of inhibition. Outstanding in this address was the plea for greater opportunity for vocational training of the boy who is not obviously destined for scholarly pursuits. The scholastically minded boy may become a criminal, but he must have some mind to become so. Most boys of criminal tendencies acquire these by reason of faulty training in the fundamentals of character building, prominent among which this speaker placed religious training.

"The Relative Responsibility of Boards of Education and the Courts in Truancy and Delinquency" was discussed by Judge Charles Brown, President Judge of the Board of Judges. This was for the most part a recital of the comprehensive activities of the Municipal Court, but more particularly as they concerned juvenile offenders and delinquents. His principal point was that truancy cases belonged to the department of education and were a part of their natural expense, but that they had been diverted to the domain of the Mu-

nicipal Court in this county, thus increasing the financial burden of that court. Not only the expense but the control of these cases belongs in the department of education. The advantage of keeping children away from the court is obvious. Judge Brown agreed with the preceding speakers as to the fundamental cause of these derelictions but spoke highly of the palliative corrective measures in operation in and around the city. He also emphasized the plea for greater vocational training.

"Increased Level of Forced Education in Relation to Delinquency" was presented by William Drayton. This paper, while merely a preliminary report regarding the relation of truancy to delinquency, did show a weakness in our educational system inasmuch as adequate provision had not been made for those illy adapted to the educational program as outlined. The forcing of misfits was responsible for much delinquency. He offered the suggestion of more intensive psychologic analysis in these groups and the creation of more trade schools with less rigid requirements for the entrants and those participating in their work.

"Juvenile Delinquency and Education" was read by Samuel Leopold. He stated that the schools should focus their attention on the earlier recognition of the failure of a child to adjust himself to a school situation before antisocial attitudes are fixed. Failure in studies is not the first sign. Overt behavior, laziness, excessive shyness, lack of interest, *etc.*, are major signs of impending trouble. There is a definite relation between the failure of a child to behave or to be interested in his school and his physical and psychic environment. Dr. Leopold believes that amplification of the facilities for vocational work would go far towards correcting the problems in this field.

A careful analysis of the papers read at this symposium reduces the subject matter to 2 main thoughts: (1) The educational system is out of tune with the requirements of child life; (2) instead of being subordinated to the cultural subjects, the mechanical subjects should be given greater consideration, since the great majority of the children in these densely populated districts are poorly fitted psychologically to assimilate the subjects now embraced in the school curricula.

Nov. 13, 1935

PUBLIC HEALTH NIGHT

Frances F. Borzell, chairman of the Committee on Public Relations, opened the meeting with a greeting to the representatives of the several allied health agencies attending and briefly reviewed the functions and responsibilities of his committee. He mentioned that the Philadelphia County Medical Society is prepared, through its speakers' bureau, to provide instruction and information on medical subjects by competent authorities and that this service is available to all ethical groups that desire to avail themselves of it. The plans for a more extensive Health Day program for next year were referred to as well as the comprehensive plans of the State Society for this year. The value of the Public Relations Committee in this regard also was cited.

James M. Anders, the father of the Health Day movement, spoke regarding the city ordinance concerning unnecessary noise. Mention was made of the support this movement had received from the present mayor, Mr. J. Hampton Moore, and of his desire to cooperate with a committee from this society with a view towards obtaining broader legislation covering

this subject. The following committee was appointed: James M. Anders, Charles W. Burr, David Riesman, E. J. G. Beardsley, Clarence A. Patten, Ross V. Patterson, Donald C. Smelzer, Nathaniel W. Winkelman, Daniel J. McCarthy, and Baldwin L. Keyes.

"The Effect of Noise Upon the Human Organism and Its Treatment" was presented by Clarence A. Patten. The impossibility of obtaining an agreement upon the definition of noise was cited. This is because of the different reactions of individuals to sound. For this occasion noise may be defined as a confusion of sound, generally irritative to the nervous system, and usually considered unnecessary and useless. Obviously some noises cannot be eliminated regardless of their deleterious effects, but the unnecessary ones can be. People react differently to the same sound. What is music to one may be noise to another. Reference was made to Schopenhauer's "Essay on Noise"; his denunciation of the noise made by carters' whips in his day would call for a revision of his classification of the noises of a modern city in 1935. It is interesting to note that the concern for quietude in the earlier days was largely out of consideration for the concern of the soul. Perhaps it was due to the realization of the soul's need for peace and harmony that monasteries were constructed in solitary spots in such a manner as to eliminate noise almost entirely. Modern metropolitan churches either by accident or design appear to have been relieved of this character. Schools, likewise, appear to have usurped noisy locations. A confusion of sounds results in a confusion of mental impressions. Being exposed to noise over a long period, human beings become accustomed to it and are not unusually annoyed by it, but it is questionable whether the harm it produces at the first reaction is not accumulative. Schopenhauer mentioned some as having brain texture so coarse as not to be disturbed by the dissonant sounds termed "noise."

Sounds are not in themselves pleasant but appear to be selective to certain individuals. Musical sounds are pleasant to musicians, but discordant sounds are noise to them. Both may be noise to one not a musician. To the musically inclined, music imparts rhythm to the muscles, but noise creates contractions and strain. The response to music accounts for the ability of soldiers to march for long stretches while singing or to the music of a band. Lack of muscle tension increases endurance. Sound reaction may be classified in 3 ways: (1) Emotional reaction; (2) irritative emotional response; (3) indifferent feeling. The sympathetic nervous system is never influenced by the will but always responds to the emotions of the individual. It is on this part of the nervous system that noise exerts its deleterious influence. These manifestations are innumerable. Not only may the subject become neurotic, but the physical resistance may become greatly impaired. The bad effects of too much noise should be appreciated just as the results of too much light are recognized. The essay concluded with several references to the city dweller's reactions to noise as well as categorical summation of the activities in other states looking forward to ameliorating these distressing conditions. The New York report was especially interesting. Suggestions for the elimination of certain of our noises were included.

"Legislative Problems Affecting the Medical Profession and the Public" was discussed by Chauncey L. Palmer, of Pittsburgh, chairman of the Committee on Public Health Legislation of The Medical Society of the State of Pennsylvania. After complimenting the

State Committee on Public Relations and the State Committee on Medical Economics, the speaker launched into an account of the activities of the Committee on Public Health Legislation during the past year. These embraced 4 special types of legislation—sickness insurance, workmen's compensation, medical licensure, and drug regulation. The 2 bills covering sickness insurance were opposed because they contained all the faults of the European system and were not adaptable to our conditions. Free choice of physician is the dominating theme of American practice, and this was absent in all the bills presented. The improved Workmen's Compensation Bill was supported but met with disastrous opposition. The committee still supports the beneficent features of this bill. Dr. Palmer was emphatic in his demand for leadership of the profession in matters pertaining to public health. He also stressed compliance on the part of those dealing with the care of the sick to the provisions of the Medical Practice Act and its amendments since it is sufficiently comprehensive to afford the public the protection to which it is entitled. The chiropractic situation in the state was carefully reviewed. The high standards of this state are maintained for the protection of the public. The status of the osteopaths was also mentioned. They are permitted to engage in operative surgery under certain conditions. The act regulating the sale of the barbiturates was discussed. The adaptation of the Social Security Act to our commonwealth will call for additional legislation in which the medical profession may be involved. The health survey proposed by the federal government is not regarded as necessary at this time. Reference also was made to sterilization and contraceptive legislation.

"Apathy of the Medical Profession Towards Medical Legislation" was presented by Joseph A. Daly, chairman of the Committee on Public Health Legislation of the Philadelphia County Medical Society. The essayist commented upon the accuracy of his assumption on beginning his committee assignment that the profession in general was apathetic towards public health legislation. He emphasized the obligation of the rank and file of the profession to be alert and to cooperate with the special committee. Dissatisfaction with the leadership of the county medical society could not be accepted as a justification for indifference to the vital problems confronting the entire profession. There are conditions within the organization that call for correction as well as abuses related to medicine existing outside of the organization, but the latter are more comprehensive and fundamental. The reforms within the society may be readily corrected by more frequent attendance of the members at the business meetings and the election of candidates suitable to the dissenters. Criticism has its place, but so has work within the organization. Dr. Daly referred to the marked increase in interest, within the last year or so, of the great body of physicians in matters affecting their economic interests. The bills introduced into the last legislature were the reflections of the modern thought of the laity regarding the medical profession. The essayist analyzed the modern socio-economic trends in the several divisions of industry and labor with the conclusion that before a change for the better takes place in this disordered world, there must be a change in the heart and mind and soul of every individual, no matter what legislation is enacted. The grave social problems which confront us today did not arise overnight and even an imperfect solution will require time. The medical profession was eulogized as the only agency fitted by train-

ing, experience, and tradition to guide and direct legislation in the field of social and health reforms. Sick-ness insurance, medical emergency relief, and kindred topics were ably discussed from the practical standpoint of the physician in the field. The factors leading up to the organized protest of physicians before the legis-lature were cited. In closing he pleaded for continued coöperation of the rank and file, not only in making known their wishes to their respective legislators but in studying the many-sided social problems, as well as educating their patients concerning their true solution.

SAMUEL HORTON BROWN, *Reporter*.

WARREN

Nov. 18, 1935

Thirty-two members were present at the meeting held at the Conewango Club, Warren. Twenty members have enrolled in the graduate course to be held soon. F. Glenn Templeton was elected to membership. The guest speaker was Harold W. Jones, associate profes-sor of medicine, Jefferson Medical College. His sub-ject was "Some Phases of Pernicious Anemia."

After classifying the anemias into the hyperchromic macrocytic type and the hypochromic microcytic form, he showed that there is still little knowledge about the main factors in the causation of anemia. There is the intrinsic factor or stomach, the extrinsic or food, and the liver active principle, which is stimulated and which enters the circulation and maintains the proper balance between red blood cells, hemoglobin, *etc.*

Nothing is definitely known about this liver principle, and there is no proof that a lack of vitamin B₁ or B₂ is an extrinsic cause.

Some experiments were cited to show that, if yeast cells are activated by normal gastric juice, they cause the same result in some anemias that liver extract or ventriculin causes—a reticulocyte reaction between the

third and tenth day. The intramuscular injection of liver extract is the best and cheapest way to use the remedy in pernicious anemia—2 to 3 c.c. given once a month for several months and then at longer intervals indefinitely.

The toxemia of pregnancy and its attendant anemia may be of a nutritional nature. It is not necessarily physiologic, and proteins should not be restricted. Plenty of freshly prepared iron (Blaud's mass) in an acid media will frequently prevent toxemia.

The effect on the reticulocytes is important not only in the matter of treatment, but as a means of diagnosis. Tests should be made with liver extracts at onset of treatment, and quite frequently, especially between the third and tenth day.

By proper and early treatment of pernicious anemia, serious cord degeneration can be prevented.

John E. Thompson, J. Theodore Valone, Charles H. Vernilyea, and A. Follmer Yerg entertained the mem-bers at dinner.

MICHAEL V. BALL, *Reporter*.

FOURTH COUNCILOR DISTRICT COMMISSION MEETING

Nov. 21, 1935

The Fourth Councilor District Commission meeting was held at the Berwick Hotel, Berwick, Trustee and Councilor E. Roger Samuel presiding.

After a luncheon, the meeting was of the "round-table" type. The members of the various medical so-cieties discussed subjects of interest to the profession and to their respective societies.

Some of the subjects discussed were the health sur-vey, medical economics, the patronizing of advertisers in the JOURNAL, membership, the distribution of the counties into districts, and other subjects of interest and importance.

E. ROGER SAMUEL, M.D.,

Fourth District Councilor.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

A MESSAGE FROM THE PRESIDENT FOR THE NEW YEAR

The year begins with great promise of activity throughout the state. The several auxiliaries have accepted the challenge and are hard at work. The questionnaires, always a *bête noire*, have in most instances been faithfully returned and they reflect an eagerness that gives your president a new impetus. There are many prob-lems confronting us, some easy of solution, others puzzling in the extreme, such as the rehabilita-tion of some auxiliaries which for geographic reasons have been compelled to abate their ac-tivities. The president-elect, Mrs. David W. Thomas, is doing nobly in this respect, rehabili-

tating some and hoping to organize auxiliaries where none have existed.

The itinerary for November included Norris-town, a large group of auxiliary-minded women; then Allentown, where a like group has the dis-tinction of being the oldest organized auxiliary in the state; then Philipsburg, on the way to Chicago for the National Board meeting, re-turning for a 2-day visit in Pittsburgh. The visit to the Clearfield-Center group, with its 2 meetings yearly, revealed a maximum amount of earnestness and enthusiasm. The board meet-ing in Chicago was one of profit to your presi-dent, and in Allegheny County she found active plans well formulated for the state meeting in

October, a large group well organized and with a most substantial increase in membership. If the counties visited are any criterion, it is safe to assume that the membership is increasing, and too, as we would wish, benevolence goes hand in hand with every endeavor. Philadelphia (reported elsewhere) staged an ambitious program with Dr. John Rathbone Oliver, who spoke on "The Ordinary Problems of Everyday People." Scranton, at this writing, only a few hours away, promises an enthusiastic meeting, and thence with a message to Stroudsburg.

Please remember that your publicity chairman, Mrs. George C. Yeager, is eager for news. She can function only with your help. A report of your activities should be in her hands by the tenth of the month.

Your state treasurer, Mrs. E. Kirby Lawson, has sent word of the change of the fiscal year. We are sure that you will make her labors lighter by giving your speedy cooperation.

What your president takes to each county will be largely what you give her to carry. What you have achieved may be a goal for others. What you wish to achieve may be inspired by the message she hopes to bring. Interest and enthusiasm are fostered by an exchange of ideas and experiences. The county auxiliary is the basic unit. The success of the State Auxiliary is predicated on the success of the component parts. No matter how good the plan, if a president fails to interest her county auxiliaries and secure their cooperation the plan will not work.

MRS. W. BURRILL ODENATT,
President.

COUNTY AUXILIARY REPORTS

Allegheny.—The auxiliary met in the William Penn Hotel, Pittsburgh, on Nov. 19. Mrs. W. Burrill Odenatt, state president, was the guest of honor.

Dr. Richard J. Behan, president of the Allegheny County Medical Society, brought greetings.

Mr. Elmer Steffan, art director in the Pittsburgh public schools, spoke on "Special Education for the Talented Child." He said that in special training of the child a generation of art-minded citizens will be developed. Although only a small percentage will be creators, the rest will be more appreciative. In caring for all children interested in art, the potential artists of the future are being aided.

There were vocal selections. The Hobby Exhibit proved to be a very interesting experiment. Tea was served.

Butler.—The auxiliary and representatives of out-of-town auxiliaries were guests, Oct. 23, at tea in the home of Mrs. Robert S. Lucas, in Butler. A musical program by local artists featured the afternoon.

Chester.—The meeting was held at the Coach and Four Inn in Coatesville, Nov. 19. Luncheon was served.

Four new members were introduced. Mrs. Howard Mellor, president, presided.

Dr. Joseph Scattergood, Jr., gave a talk on the "Socializing of Medical Care."

Dr. Samuel J. Dickey, supervisor of county health, spoke on "The Importance of Personal Hygiene."

One hundred dollars has been contributed to the Medical Benevolence Fund.

The chairman of the *Hygeia* fund was authorized to order 15 subscriptions for 9 months, to be placed in such schools and public libraries where they would be of the greatest value.

Mrs. Howard B. Davis gave an outline of the work she has done in obtaining medical men to speak before different clubs and associations; 24 such meetings were arranged.

Dauphin.—The doctors of Dauphin County were the guests of their wives at a buffet supper, entertainment, card party, and dance on Dec. 18. This was in the form of a Christmas party and is an annual affair sponsored by the auxiliary.

There is a total of 130 members. The constitution and by-laws have just been revised and the fiscal year will conform with the State Auxiliary fiscal year.

At the November meeting, Miss Alice R. Eaton, city librarian, gave a book review, which was followed by a musical program.

Delaware.—The meeting was held at the Chester Hospital, Nov. 14. A book review of *Asylum*, by William Seabrook was given by one of the members and this was followed by an impromptu auction sale of homemade jams, jellies, pickles, cookies, and other good things to eat.

On Nov. 18, a benefit card party was held at the Media Inn for the Benevolence Fund. Much enthusiasm was shown over the prizes, as they were packages with Christmas wrappings.

Mrs. Walter E. Egbert, the president, entertained the executive board at luncheon on Nov. 22. Following the board meeting a demonstration was given by the Bond Bread Company to the members of the auxiliary and their friends. This proved a very easy and successful way for the finance committee to raise funds for the philanthropic work of the organization.

Erie.—On Nov. 4, the auxiliary met for luncheon in the Pussywillow Tearoom, with 65 members present. A review of Ellen Glasgow's *Vein of Iron* was given by one of the members. On Nov. 20, the Executive Board met at the home of the president, Mrs. Frank B. Krimmel, to discuss plans for the welfare work of the year, including the annual donations of toys, jellies, etc., made to the Municipal Hospital for the children who are storm-stayed over the holidays, the generous baskets which are packed by the auxiliary for worthy families nominated by the members, and for the benefit party given in the spring of every year. At this party funds are raised to provide eyeglasses for underprivileged school children. Special stress was laid upon the obligation to contribute generously to the Medical Benevolence Fund. Tea was served.

On Dec. 2, the auxiliary, with 55 members present, met at the home of Mrs. James D. Stark to sew for St. Vincent's hospital, and to pack the hamper for the Municipal Hospital Christmas basket.

The auxiliary also has entertained the members of the Erie County Medical Society at a dinner-dance at Erie's new Athletic Club.

One of the charter members, Mrs. Hugh M. Moorehead, died on Oct. 22.

Indiana.—On Oct. 10, the auxiliary entertained the Indiana County Medical Society with a White Elephant party. One new member was presented. Mrs. William F. Weitzel gave an interesting report of the Harrisburg meeting. The following officers for 1935-36 were elected: President, Mrs. C. Paul Reed; president-elect, Mrs. George C. Martin; first vice-president, Mrs. James C. Glasser; second vice-president, Mrs. Charles H. Bee; secretary, N. Marguerite Coe; treasurer, Mrs. Florence Boden; directors, Mrs. Frank B. Stevenson and Mrs. Warren L. Whitten.

On Nov. 14, a business meeting of the auxiliary was held at the home of Mrs. Todd R. Boden, when the programs for 1936 were presented and explained. One new member was welcomed. There was instrumental music, and refreshments were served.

Lackawanna.—The auxiliary entertained at luncheon at the Hotel Jermyn, Scranton, on Dec. 10, honoring Mrs. W. Burrill Odenatt, of Philadelphia, the state president. Entertainment furnished by members included vocal numbers, piano selections, and recitations.

Mercer.—On Oct. 9, the auxiliary met with the medical society at the Mercer Sanitarium as guests of Dr. and Mrs. William W. Richardson. Luncheon was served to 75 guests, and a musical program was given. Mrs. Harvey E. Massey presided.

The chairman of the Committee on Public Health and Relations reported that 13 children had been examined and 3 had received their glasses. These glasses are given the children by means of the Fund for Underprivileged Children, which has been maintained by the auxiliary to furnish glasses for rural school children in Mercer County. The fund was created as a nucleus for philanthropic work.

Mrs. Dan Phythyon was appointed to act as auxiliary representative on a committee to judge the health posters which are drawn and painted by the seventh and eighth grade students in the Mercer County schools. Great interest has been shown each year in making these posters. A financial recompense is received by the winners, and much good is derived from the information given the public through the posters. The county society and the auxiliary are sponsors of this project.

Mrs. Burton A. Black, of Grove City, gave a résumé of the activities of the State Convention. She wanted the auxiliary members to know that Dr. Walter F. Donaldson, the secretary of the State Medical Society, felt that the existence of the auxiliary was fully justified by their contributions to the Medical Benevolence Fund and by the "color" which is in evidence when the auxiliary members are in attendance at the physicians' meetings. This should be an incentive to increase the contributions to this worthy fund.

Montgomery.—The auxiliary attended a luncheon at the home of Mrs. Edgar S. Buyers on Nov. 6. The guest speakers were State President Mrs. W. Burrill Odenatt and Mrs. Milton F. Percival, president of the Philadelphia County Auxiliary. A review of Marie Dressler's autobiography "My Own Life" was given. Future arrangements were announced.

Northampton.—The meeting of the auxiliary was held Nov. 14, at the Easton Hospital, with 13 present. The day was spent in making surgical dressings for

the hospital. A motion was passed to canvass for membership physicians' wives not belonging to the auxiliary. Mrs. Carl F. Welden described the meeting of the Lehigh County Auxiliary in Allentown, honoring the new state president. In reference to the new fiscal year, it was announced that the officers will serve until May instead of December.

Schuylkill.—The auxiliary held the November meeting at the Necho Allan Hotel; Mrs. Ivor D. Fenton presided. Trustee and District Councilor E. Roger Samuel, of Mt. Carmel, gave an address.

Miss Mary Kurchinsky, directress of nurses at the Pottsville Hospital, was the hostess for the meeting of the auxiliary, Dec. 10, at the Nurses' Home, Rosa Santee, vice-president, presiding.

There was a musical program; cards were played; and luncheon was served. A fair sum was donated by the members for the Children's Christmas Gift in the various hospitals in the county.

York.—A meeting of the auxiliary was held in the Professional Building, York, Nov. 7. Mrs. William H. Treible, the retiring president, gave a report of the State Convention held in Harrisburg. The following officers were elected: President, Mrs. Pius A. Noll; first vice-president, Mrs. W. Frank Gemmill; second vice-president, Mrs. Robert E. Lau; recording secretary, Mrs. William R. Morgan, Jr.; corresponding secretary, Mrs. Raymond M. Lauer; treasurer, Mrs. Paul M. Reigart; directors, Mrs. Ada E. Snyder, Mrs. James F. Wood, and Mrs. William H. Treible. A social hour followed and refreshments were served.

A meeting of the auxiliary was held in the Professional Building, York, Dec. 5. The newly elected president, Mrs. Pius A. Noll, presided. Mrs. Mary F. Mann was elected chairman of the Health Institute Committee, which will plan to hold the Health Institute next spring. Mrs. Edward J. Fisher, of Dallastown, was elected chairman of a committee to encourage the distribution and use of the *Hygeia* magazine throughout the county. Toys were donated by the members of the auxiliary to be distributed in the children's ward of the York Hospital at Christmas time. Bridge was played and refreshments were served.

Medical News

Births

TO DR. AND MRS. THOMAS K. LARSEN, of Warren, a son, Nov. 4.

TO DR. AND MRS. SAMUEL T. BUCKMAN, of Wilkes-Barre, a son, Nov. 17.

TO DR. AND MRS. ISADORE KATZ, of Philadelphia, a son, Allan, recently.

TO DR. AND MRS. JAMES R. HART, of Erie, a daughter, Janet Myra, Nov. 8.

TO DR. AND MRS. S. LEON ISRAEL, of Philadelphia, a son, Robert, recently.

TO DR. AND MRS. FRANCIS CARDOT, of Erie, a daughter, Sally Louise, Nov. 13.

TO DR. AND MRS. KENNETH S. TREIBER, of Erie, a son, Theodore Richard, Nov. 10.

TO DR. AND MRS. THOMAS J. CUSH, of Johnstown, a son, Nov. 14.

TO DR. AND MRS. RALPH D. BACON, of Erie, a daughter, Meredith Elaine, Nov. 13.

Engagements

MISS ANNE BARBEE HINCHMAN and Mr. F. W. Elliott Farr, son of Dr. and Mrs. Clifford B. Farr, all of Bryn Mawr.

MISS KATHARINE ANN BORDEN and Dr. Jennings Sudler Hood, both of Lansdowne. Dr. Hood is now affiliated with the Johns Hopkins Hospital, Baltimore.

Marriages

MISS MARY S. BUTZ to Dr. C. Merrill Leister, both of Allentown, Nov. 9.

MISS CATHERINE STACKHOUSE to Dr. Joseph M. McHugh, both of Johnstown, Nov. 30.

DR. MIRIAM REWALT POLK, of Harrisburg, to Dr. Benjamin Halporn, of Oberlin, July 11.

MISS ERMA ARLENE GREENAWALT, of Reading, to Dr. Ernest H. Dengler, of Pottstown, recently.

MISS MIRIAM STOTSKY, of Lancaster, to Dr. Israel O. Silver, of Steelton, Nov. 24, in Philadelphia.

Deaths

FRANK T. ANDERSON, Philadelphia; Jefferson Medical College, 1882; aged 78; died suddenly, Nov. 25, from heart disease. He is survived by his widow.

IRA D. BOWSER, Reynoldsville; University of Pittsburgh School of Medicine, 1906; aged 52; died Nov. 25. Dr. Bowser was a member of his county and State medical societies and the A. M. A.

EVERELL VERNI CHADWICK, Eldred; George Washington University School of Medicine, Washington, D. C., 1917; aged 43; died Aug. 18, at Camptown, Pa. Dr. Chadwick served during the World War, and was formerly connected with the U. S. Public Health Service and the U. S. Veterans' Bureau.

NATHANIEL Z. DUNKELBERGER, Kutztown; Medico-Chirurgical College of Philadelphia, 1890; aged 71; died Nov. 6. He was a member of his county and State medical societies and the A. M. A.

JOSEPH DAVIDSON FARRAR, Moorestown, N. J.; Jefferson Medical College, 1890; aged 67; died Nov. 12. Dr. Farrar conducted an office in Philadelphia for some time previous to moving to Moorestown. He was a lieutenant colonel in the Medical Reserve Corps, U. S. Army, and was in active service during the World War. He was a member of White-Schantz Post No. 376, American Legion, and of the Old Guard. He is survived by his wife.

EDWARD WILSON FELDHOFF, Allentown; University of Pennsylvania School of Medicine, 1906; aged 59; died Nov. 10, after a lingering illness. Dr. Feldhoff was born July 16, 1876, in Doylestown, Pa. He was graduated from Shamokin (Pa.) High School, attended Chambersburg (Pa.) Academy, and graduated from Mercersburg (Pa.) Academy in 1897. He received his B.A. degree from Franklin and Marshall College in 1901. He served an internship in the Allentown (Pa.) Hospital from July, 1906, to July, 1907, upon the termination of which he began the practice of medicine in Allentown. For several years he was roentgenologist to the Allentown Hospital and for 15 years was on the surgical staff of this hospital as associate of Dr. Robert L. Schaeffer, chief surgeon. Dr. Feldhoff discontinued practice in 1924 on account of illness.

Dr. Feldhoff was a member of his county and State medical societies and a Fellow of the A. M. A., also a Fellow of the American College of Surgeons. He is survived by an aunt and an uncle.

HIRAM Z. FRISBIE, Elkland; Jefferson Medical College, 1894; aged 68; died Oct. 11, following an extended illness. Dr. Frisbie was a member of his county

and State medical societies and the A. M. A. He is survived by his widow and a daughter.

TILLMAN WESLEY GEE, Philadelphia; University of Pennsylvania School of Medicine, 1932; aged 30; died Oct. 9, of hypertensive cardiovascular disease.

ALFRED C. HERITAGE, Jenkintown; Hahnemann Medical College and Hospital of Philadelphia, 1884; aged 77; died Dec. 11, at his winter home in St. Petersburg, Fla., from bronchial pneumonia. He is survived by his wife.

GUY AUGUSTUS KNIGHT, Kaylor; Jefferson Medical College, 1905; aged 54; died Nov. 5. He was a member of his county and State medical societies and the A. M. A.

CUVIER ROBB MARSHALL, Bellevue Hospital Medical College, New York, 1885; aged 73; died Nov. 16. Dr. Marshall, who had retired from general practice, was a graduate of Lafayette College. He came to Philadelphia in 1889 and resided there until he became associated with Parke Davis & Co., Detroit. He is survived by his wife and 2 brothers.

WILLIAM JOHN McGEARY, Allison Park; Bellevue Hospital Medical College, New York, 1893; aged 68; died Oct. 2. During the World War Dr. McGeary was an examining physician for the draft board in his district. He was a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by his widow and one son.

ALLEN G. SAMPSON, Philadelphia; Medico-Chirurgical College of Philadelphia, 1901; aged 57; died Nov. 22, at the Graduate Hospital, of heart disease. Dr. Sampson was born in Cressona, Schuylkill County, Pa. For many years he had been in charge of the roentgen-ray departments of the Bell Telephone Company and Western Electric Company. He was a member of his county and State medical societies and the American Roentgen-Ray Society, and a Fellow of the A. M. A. He is survived by his widow and 2 sons.

STANLEY SINCLAIR SMITH, Pittsburgh; Jefferson Medical College, 1896; aged 61; died Dec. 2. Dr. Smith was born in Warren County in 1874. He was formerly associate professor of ophthalmology in the University of Pittsburgh Medical School and was recently appointed professor to succeed Dr. William W. Blair. He was a member of his county and State medical societies, the American Academy of Ophthalmology and Oto-Laryngology, the American Board of Ophthalmology, a Fellow of the A. M. A., and a Fellow of the American College of Surgeons.

THOMAS H. SNOWWHITE, Braddock; University of Pittsburgh School of Medicine, 1913; aged 44; died Nov. 22. He was a member of his county and State medical societies and a Fellow of the A. M. A.

JOSEPH MACHESNEY SPANG, Pittsburgh; Hahnemann Medical College and Hospital of Philadelphia, 1908; aged 55; died Aug. 15, in the Homeopathic Medical and Surgical Hospital.

Miscellaneous

DR. FRANK C. PARKER, Norristown, has been appointed consulting ophthalmologist to the Memorial Hospital, Roxborough.

DR. GEORGE J. WRIGHT, has been made professor of neurology at the University of Pittsburgh School of Medicine, succeeding the late Dr. Thomas M. T. McKennan.

A SECOND NATIONAL LEPROSY CONFERENCE was held at Canton, China, Nov. 8 to 10. The scientific papers dealt largely with the pathologic and clinical aspects of leprosy.

DR. ERNEST E. AEGERTER, a graduate of the University of South Dakota and of the School of Medicine of the University of Pennsylvania, has been appointed instructor in pathology at Temple University School of Medicine.

DR. HAVEN EMERSON, New York City, was awarded the William Thompson Sedgwick medal for distinguished service in public health by the American Public Health Association at its annual meeting in Milwaukee.

DR. SIGMUND S. GREENBAUM, chief of dermatology at Mount Sinai Hospital, Philadelphia, was recently appointed professor of clinical dermatology and syphilology at the Graduate School of the University of Pennsylvania.

DR. LAWRENCE F. FLICK, founder of the Free Hospital for Poor Consumptives and the White Haven Sanatorium Association, has resigned as president of the organization. Dr. Frank A. Craig has been elected his successor.

THE TRUSTEES AND STAFF of the Allentown Hospital gave a testimonial dinner in honor of Dr. Robert L. Schaeffer, chief surgeon at the hospital, Oct. 31, celebrating the twenty-fifth anniversary of his association with the institution.

DR. THOMAS FITZ-HUGH, JR., Philadelphia, associate professor of clinical medicine in the University of Pennsylvania School of Medicine, spoke on "Recent Advances in Clinical Hematology" before the Kansas City Academy of Medicine on Oct. 18.

AT THE MEETING of the Pathological Society of Philadelphia held Dec. 12, the Annual Gross Lecture was delivered by Dr. Peyton Rous, member of the Rockefeller Institute for Medical Research, on "The Relation of Viruses to Tumors."

DR. EDGAR E. SHIFFERSTEIN, chief surgeon of the Coaldale State Hospital, tendered his resignation as of Dec. 10. Dr. Louis C. LaBarre, superintendent of the Locust Mountain Hospital at Shenandoah, has been appointed to succeed Dr. Shifferstein.

AT THE MEETING of the Section on Medical History of the College of Physicians of Philadelphia held Dec. 9, Dr. Wilmer Krusen delivered an address on "The Doctor in Literature," and Dr. Ivor Griffith discussed the subject of "William Penn's Dispensary," with exhibition of book.

THE CANCER RESEARCH LABORATORIES of the Graduate School of Medicine of the University of Pennsylvania have been transferred to the Franklin Institute and will be continued under the name of Biochemical Research Foundation. Dr. Ellice McDonald will continue as director, with 42 research workers on the staff.

THE AMERICAN BOARD OF OPHTHALMOLOGY will conduct the 1936 examinations at Kansas City, on May 11, and at New York City, in October. All applications and case reports must be filed at least 60 days before date of examination. For further information, write at once to Dr. Thomas D. Allen, 122 South Michigan Ave., Chicago, Ill.

A COMMITTEE OF PHILADELPHIA PHYSICIANS, of which Dr. James M. Anders is chairman, was formed to study reducing the city's noises. This committee recently had a conference with the mayor who suggested that they draw up a new anti-noise ordinance, conduct a public meeting to discuss it, and submit the measure to City Council.

THE *Medical Bulletin* of the Lycoming County (Pa.) Medical Society has a pretentious Merry Christmas front page in the December issue. It also contains in its historical department a write-up of the members joining the society since the publication of the county society's history; this society is to be congratulated upon this very altruistic work.

A MÜTTER LECTURE of the College of Physicians of Philadelphia was delivered Dec. 4 by Dr. Harris P. Mosher, Walter Augustus Lecompte professor of otology and professor of laryngology, Harvard University School of Medicine. The title of his subject was "A Study of the Histology and Pathology of the Esophagus with Clinical Applications."

DR. JOHN F. ERDMANN was honored by the New York Post-Graduate Medical School and Hospital, New York City, when the new auditorium, a gift from the board of directors, the faculty association, and the professional staff of the hospital was named Erdmann Auditorium. A bust of Doctor Erdmann, a gift of the faculty association, was installed in the auditorium. —*The Modern Hospital*.

THE JAMES M. ANDERS LECTURE of the College of Physicians of Philadelphia was delivered Nov. 6, by Dr. John L. Rice, commissioner of health, New York City. His subject was "Looking at Tuberculosis, Cancer, Diabetes, Heart Disease, and Syphilis from the Public Health Point of View."

DR. EDWARD B. KRUMBHAAR, of Philadelphia, and Dr. Howard Dittrick, of Cleveland, were appointed by the Department of State of the United States Government as delegates from the United States to the Tenth International Congress of the History of Medicine at Madrid, Sept. 23-29, 1935. They with Dr. Henry E. Sigerist, of Baltimore, also served as delegates of the American Association of the History of Medicine at the same Congress.

THE HARRISBURG ACADEMY OF MEDICINE held its annual banquet, Nov. 13, at the Penn-Harris Hotel. There was also dancing and a floor show. Dr. Constantine P. Faller was the winner of the biennial Seibert prize of \$500 for study in Europe, which was awarded at the banquet. Dr. Faller was awarded the prize largely because of his outstanding work in initiating the idea of graduate medical assemblies in the community.

THE FOLLOWING COMMITTEE representing the American Medical Association has been appointed to study contraceptive practices and related problems: Drs. Carl Henry Davis, Milwaukee, chairman; George W. Kosmak, New York; W. A. Coventry, Duluth, Minn.; Richard J. O'Shea, Seattle; John Rock, Boston; Willard Richardson Cooke, Galveston, Texas; and Everett D. Plass, Iowa City, with Drs. James R. Bloss and W. C. Woodward, ex officio.

THE FORTY-NINTH ANNUAL DINNER of the Association of Ex-resident and Resident Physicians of the Philadelphia General Hospital was held at the Art Club, Philadelphia, Dec. 3. The guest of honor was Dr. B. Franklin Stahl. Clinics were given by the following members of the association at the Philadelphia General Hospital during the afternoon: Drs. George E. Pfahler, E. J. G. Beardsley, Daniel J. McCarthy, Kenneth Lynch, Philip F. Williams, and David Riesman.

OLIVER-REA SCHOLARSHIPS AT THE NEW YORK POST-GRADUATE MEDICAL SCHOOL, COLUMBIA UNIVERSITY.—A limited number of scholarships for well-qualified graduates in medicine who desire to do graduate study are available at the New York Post-Graduate Medical School, Columbia University. By the terms of the endowment agreement, applicants from Allegheny County, State of Pennsylvania, other circumstances being equal, will be given preference. Application should be made to the Director of the Medical School, 303 East 20th St., New York.

RADIUM GIVEN TO BOHR TO HONOR HIS FIFTIETH BIRTHDAY.—As a gift upon his fiftieth birthday, Professor Niels Bohr, leading Danish scientist, one of the creators of the new physics and Nobelist, was presented with one hundred thousand kroner (\$22,500) for the

purchase of half a gram of radium. The element will be used by Professor Bohr in his private scientific research upon the constitution of matter. Eight industrial firms and 10 scientific foundations of Denmark joined in making the gift. Bohr's achievements are epoch making and have had an outstanding effect on the advance of physics. The Bohr Institute is the world center of modern atomic research.—*Science News Letter*, Oct. 19, 1935.

A HANDBOOK ON NURSING INFORMATION, entitled *Some Facts About Nursing*, has been published recently by the Nursing Information Bureau, 50 W. 50th St., New York. The handbook—the first of its kind to be prepared in the field of nursing—contains in condensed and tabular form the results of many years' study of the social and professional aspects of nursing and should prove a useful reference work for speakers and others. It should be welcomed especially by the rapidly increasing number of persons concerned with extending and improving existing nursing services.

The book contains much essential material for those who have occasion to deal publicly with the problems of the nursing profession.

SCHOOL AID SOUGHT AS CURB ON DISEASE.—The health of the school child is one of the primary concerns of the Pennsylvania State Department of Health. Medical school inspection, diphtheria immunization, sanitation, housing, and many other public health problems are involved in the situation. Dr. Edith MacBride-Dexter, secretary of health, has announced that representatives are conferring with school boards throughout the state in an effort to control communicable diseases among school children. She believes that the control of communicable diseases to some extent at least is a matter demanding the intelligent coöperation of teachers. Further, that teachers have the authority to exclude children from school when there are suspicions of symptoms of acute disease.

A MEDICAL SUPERINTENDENT of a county hospital in a mid-western state brought suit against a married couple for \$25,000 damages owing to a hernia which he charges followed an automobile accident. The doctor testified before a jury in the Superior Court that his earning capacity of \$35,000 a year had been lowered because he was unable to remain on his feet for long intervals owing to the hernia. The defense attorney will endeavor to prove that the force of the collision was not sufficient to cause the injury asserted by the plaintiff.

The first thought that comes to mind is that the Collector of Internal Revenue of the district will naturally look up the returns of the physician in this particular instance to see if his income tax return coincides with the earning capacity claimed.

FIRST INTERNATIONAL CONFERENCE ON FEVER THERAPY.—The first international meeting on fever therapy will be held in New York City, September, 1936. The use of fever induced by physical and other agencies as a therapeutic procedure has received universal attention in the past few years. The conference will aim to collect and crystallize available data in this field. Therapeutic, physiologic, and pathologic phases of fever will be discussed.

Five national conferences have been held in the United States of America.

It is planned to translate abstracts of all the papers into French, English, and German. In order to make the printed copies of the transactions available for the conference, it is necessary that manuscripts and abstracts be sent in not later than June 1, 1936. Those interested in participating are requested to make early application.

Further information concerning the conference may be obtained from the secretary, Dr. William Bierman, 471 Park Avenue, New York City.

DR. LAWRENCE WELD SMITH has been appointed professor of pathology at the Temple University School of Medicine to fill the vacancy caused by the death of Dr. John I. Fanz.

Dr. Smith is a graduate of the College Department of Harvard University and of the Harvard Medical School. He was instructor in pathology at Harvard, professor of pathology and bacteriology in the University of the Philippines, later assistant professor of pathology at Harvard, and subsequently associate professor of pathology at Cornell University Medical School, having resigned from the latter to accept the appointment at Temple.

Dr. Smith studied abroad with Erdheim in Vienna, Madsen in Copenhagen, Friedemann in Berlin, and Schmorl in Dresden. He is a member of the American Medical Association, American Association of Pathologists and Bacteriologists, American Society of Experimental Pathology, American Society for Cancer Research, American Society of Tropical Medicine, New York Pathological Society, Massachusetts Medical Society, New York Academy of Medicine, Society of Experimental Biology and Medicine, Harvey Society, and the International Society of Medical Museums.

THE AMERICAN ASSOCIATION for the Study of Goiter again offers the Van Meter Prize Award of \$300 and 2 honorable mentions for the best essays submitted on the goiter problem. This award will be made at the discretion of the society at the next annual meeting to be held in Chicago, Ill., on June 8, 9, and 10.

The competing manuscripts, which should not exceed 3000 words, must be presented in English and a type-written double-spaced copy sent to the corresponding secretary, Dr. W. Blair Mosser, 133 Biddle St., Kane, Pa., not later than Mar. 1, 1936. Manuscripts received after this date will be held for competition the next year or returned at the author's request.

The association will publish the manuscript receiving the prize award in its annual proceedings and reserve a place on the program of the annual meeting for presentation of the manuscript by the author if it is possible for him to attend. This will not prevent its publication, however, in any journal selected by the author.

THE SIXTH ANNUAL GRADUATE SEMINAR was held at the Easton Hospital under the auspices of the board of trustees and the staff, Oct. 23. Mr. David B. Skillman, president of the board, explained the newly inaugurated group hospitalization plan that is being sponsored by the Easton Hospital.

Dr. Walter C. Alvarez, of the Mayo Clinic, presented a paper entitled "Helpful Hints in Handling Indigestion." Dr. J. Eastman Sheehan, professor of surgery at the New York Post-Graduate Medical School and Hospital, read a paper on "Modern Methods in Reparative Surgery." Dr. Alexander O. Gettler, toxicologist, Medical Examiner's Office, New York City, discussed "Toxicology in the Medicolegal Necropsy." Dr. Frank H. Lahey, of the Lahey Clinic, Boston, Mass., read a paper on "Some of the Newer Developments in Thyroid Disease and Hyperparathyroidism." Dr. Rosco G. Leland, director of the Bureau of Medical Economics of the A. M. A., gave a talk on "Changes Confronting Modern Medicine."

"TUBERCULOSIS PREVENTION AND CONTROL IN RELATION TO INDUSTRY" and "The Contribution of School Authorities in Tuberculosis Control Measures" will be the subjects for the 2 main sessions of the 44th annual meeting of the Pennsylvania Tuberculosis Society, which will be held at the Americus Hotel in Allentown on Feb. 25 and 26.

Speakers will include Dr. Kendall Emerson, managing director of the National Tuberculosis Association; Dr. William A. Sawyer, Rochester, N. Y.; Dr. Haynes H. Fellows, Metropolitan Life Insurance Company, New York City. Dr. F. Maurice McPhedran, of the

Henry Phipps Institute, Philadelphia; Dr. George Morris Piersol, medical director, Pennsylvania Bell Telephone Company; Dr. H. D. Lees, University of Pennsylvania; and William G. Moorhead, State Department of Public Instruction.

Special sessions are being arranged for physicians and nurses, these plans being in cooperation with the Lehigh County Medical Society and the Pennsylvania Organization for Public Health Nursing.

Immediately after this conference the Pennsylvania Conference on Social Welfare will hold its annual meeting.

ACCORDING TO THE *Cleveland News*, Nov. 16, a Common Pleas Judge has ruled that the new McIntyre law, which places responsibility for the care of insane persons on the state rather than on county commissioners, is a nullity because the legislature forgot to provide a means for raising the necessary funds for its administration.

His decision, which came in a taxpayer's suit arranged as a test of the commissioners' right to eschew the problem, meant victory for the taxpayer and defeat for the county commissioners.

Verbally spanking the legislature for its lapse, the judge said: "What a predicament! Hundreds of persons are adjudged insane almost every month by Cuyahoga County probate court, and there is no place to put them! Was it the intention of the legislature that these persons should be shot in cold blood? Or did the legislature intend that the county should build a fence around them and huddle them in, like cattle? Or was it intended they should be allowed to roam the streets?"

The county, prior to passage of the bill, had to figure on spending approximately \$1,000,000 a year for care of the insane.

THE RECENT ILLNESS of some 147 persons in Philadelphia who had eaten pastry containing a cream filling from one bakery was without a death. The Department of Health of Philadelphia has finally attributed the cause to the *Staphylococcus aureus*. It was ascertained that 2 employees who made the cream filling used in the pastry had sore throats and one of them in addition had a boil on his neck. Germs probably were carried from the infected areas to the pastry filling by the bakers' hands. As a result of the epidemic, City Council will be asked to pass an ordinance calling for more strict regulations for bakeries making cream pastries. The suggested ordinance would require all employees in bakeries to wear white sterilized gloves and compel pastry bakers to have a company physician to make frequent examination of employees. It would also require bakeries to make reports and submit to examination by city health authorities 3 or 4 times a year. At present, inspections are made every 6 months by the Bureau of Foods and Chemistry of the State Department of Agriculture.

ACCORDING TO NEWSPAPER PUBLICITY, doctors in Germany, many of whom are graduates of renowned universities and have international reputation, are being required to take certain graduate courses to acquire the Nazi slant on conditions. It has been decreed by the Interior Ministry that between Nov. 1, 1935, and Apr. 30, 1936, the younger medical group must take especial short courses in eugenics, racial matters, and Nazi social policies. The announced purpose is to insure a younger generation schooled in such subjects, who later will join health bureaus charged with carrying out the Nazi racial ideology. Other courses in unannounced subjects are being conducted for the physicians in communities of less than 100,000 population, so arranged as not to interfere with their practice.

It is averred that these courses are intimately connected with Germany's rearmament and that the doctors are being instructed as to their duties in event of war.

A third series of compulsory courses is for those departmental doctors employed in municipal offices and also concerns eugenics and Nazi ideas of race purity. This group pays particular attention to marital problems—what to tell couples who apply for premarriage examinations, how to encourage healthy and racially sound persons to marry, and how to discourage others.

New decrees by the Federal War Ministry require medical students to serve one year in the army "because one cannot become a good military doctor without having himself gone through the joys and sufferings of a soldier."

REPORT OF PRESIDENT ROOSEVELT'S COMMISSION ON INFANTILE PARALYSIS.—Receipts of \$1,071,000 from the series of balls held on President Roosevelt's birthday anniversary last January for aid in fighting anterior poliomyelitis were reported to President Roosevelt, Nov. 19.

Colonel Doherty, who was national chairman of the birthday ball committee, presented a formal report showing that 70 per cent of the total ball receipts had been turned back to the communities where the funds were raised for the support of local work in combating poliomyelitis. The remaining 30 per cent, plus some telegraphic receipts, brought the committee's share of the money to \$326,062.39, of which \$19,180.18 additional was returned to communities.

The Commission for Infantile Paralysis has allocated \$110,000 in grants to 10 organizations. The projects represent many diverse approaches to the problem and indicate as a whole that assistance has been given to a broadly comprehensive attack upon the problem of controlling poliomyelitis. The work in all cases is in the hands of competent, well-trained investigators who are associated with institutions of high standing.

The institutions to which grants have been made and the men under whose direction the research is proceeding are: Harvard University, Dr. W. Lloyd Aycock; Long Island College of Medicine, Dr. Sidney D. Kramer; New York University, Dr. William H. Park; University of Chicago, Dr. Paul H. Harmon; University of Pennsylvania, Dr. Joseph Stokes, Jr.; Stanford University, Professor E. W. Schultz; University of California, George Williams Hooper Foundation, Dr. Karl F. Meyer; University of Southern California, Dr. John F. Kessel; Western Reserve University, Dr. John A. Toomey; Yale University, Dr. John R. Paul and Dr. James D. Trask.—*N. Y. Times*, Nov. 20, 1935.

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

DEBATERS' HANDBOOKS

Submitted by the Committee on Medical Economics

1 COMPLETE HANDBOOK OF STATE MEDICINE. J. Weston Walch, Chief Compiler. This is a 158-page quarto volume, compiled by the Debaters Information Bureau, 45A Free St., Portland, Maine. Price, \$2.50.

The set-up is in 4 main divisions: Study outline, briefs, rebuttal notes, and strategy. The subject matter is a distinctly unbiased presentation of both affirmative and negative, condensed into short, terse sentences grouped under appropriate paragraphs. The paragraphs are headed in bold type, making it quite easy for reference and emphasis. The briefs are divided into affirmative and negative, with about 11 pages devoted to affirmative and 15 pages to negative. Rebuttal notes are also arranged in affirmative and negative, classified

according to a number of headings, and consist of numerous references with the quotations from these references. The rebuttal notes are about evenly divided between the affirmative and negative. The set-up of this volume is quite different from any of the others and, although intended for school debaters, the material is so compactly presented and so concisely arranged that it is worthy of very favorable notice by medical as well as lay groups.

2. **DEBATER'S HELP BOOK**, Vol. II, Free Medical Care (Socialized Medicine). This is an octavo volume of about 360 pages, compiled and edited by E. C. Buehler, Director of Forensics, University of Kansas, and published by Noble & Noble, 100 Fifth Ave., New York City. Price, \$2.

The preface is rather interesting in that it contains this significant statement: "Although much has been written about the general theories of socializing medicine, there is a relatively small amount of material which deals with the identical features of the affirmative proposal." The author says, "This volume has been prepared with the view of giving the high school debater a reliable guide for his studies, with the hope that it will serve to direct him into those fields of reading which will be most helpful to him."

The introduction is significant and would on the surface tend to indicate the author's unbiased approach. He says: "In fact, there is a danger that in some instances the undercurrent of sentiment in the audience or the community may be so strong as to spoil what otherwise would be a friendly forensic tilt. But, no matter how the people in the audience or the community may feel about this question, debaters must give it impersonal treatment. They have no personal part in any of the community's medical quarrels, they are merely members of a debate team partaking in a friendly kind of academic sport." This apparent impartiality is not borne out by a review of the first chapter dealing with the principal arguments. For instance, under the heading "Origin and History of the Question" this statement is made: "About 1848, the need of organizing medical services on a large scale was felt all over Germany." The fact that the motivating feature in Germany was purely political on the part of Bismarck is not indicated. Again, under a "Definition of Terms" a rather naive proposal is injected. "It is reasonable to assume that the financial support for the state medical program may be augmented by the Federal Government, by social science societies and foundations interested in the promotion of social welfare, and other forms of private charity." This would appear to be entirely a new departure for which the author's assumption certainly has no real grounds. It would seem to be injected to temper the forceful argument that can be presented by the negative in considering the tremendous tax burden that would be involved. This statement is repeated as follows: "It is admitted that it is not necessary for all money for the support of free public medicine by the state to come through taxation," etc.

The affirmative arguments are also stated categorically and include the social statistical arguments taken from the Committee on the Cost of Medical Care and other well-known sources. There are about 14 pages devoted to the affirmative and 9 to the negative in this chapter. The next chapter deals with a series of questions and answers defining various terms. The volume contains an extensive bibliography with occasional footnote comments. The major portion of the volume is taken up with reprints of various recent articles on socialized medicine covering both the affirmative and negative sides with the material for the affirmative side again predominating. Although this close scrutiny might indicate a bias on the part of the author in favor of the affirmative side, the volume as a whole is an excellent reference volume and could be safely used as a textbook.

3. **SOCIALIZED MEDICINE**. The Ninth Annual Debate Handbook, 1935-1936. This is paper-bound in 2 octavo volumes which contain about 220 pages; edited by Bower Aly and published by Lucas Bros., Columbia, Mo. Price, \$1.50.

These volumes are decidedly more in the nature of reference volumes and are 2 which the A. M. A. Bureau on Medical Economics assisted greatly in compiling. The material is presented in a highly impartial manner and probably would be rather more difficult for the high school debater to use with ease than the Walch Handbook. In addition to the subject matter covering both medical and dental subjects and a discussion of various forms of distribution of medical services aside from state medicine, it contains a very extensive bibliography. It would be a valuable addition to the library of any student of socialized medicine.

4. **THE REFERENCE SHELF**, Vol. 10, Socialization of Medicine. Compiled by Julia E. Johnsen. This is one of a large number of publications published by the H. W. Wilson Co., 958 University Ave., New York City, as small reference shelves. It is an octavo volume of 330 pages. Price, \$.90.

This particular volume, both in the introduction and in the compilation, indicates that the author appears to have a definite bias in favor of socialized medicine. The articles are in the large majority favoring the affirmative side; in fact, in that small section devoted to the negative side of the subject, there appears a lengthy article by J. A. Kingsbury extolling the virtues of complete socialized medicine. This is probably an inadvertent error in arrangement, but whether it is or not this volume is hardly to be recommended as a fair discussion of both sides of the question.

5. **DIGEST OF SICKNESS INSURANCE**. A very valuable collection of material has been arranged and classified by Dr. Robert T. Devereux of the Chester County Medical Society. This monograph provides a surprisingly large amount of material and argument for the position of the negative.

NAMING THE DOCTOR

H. L. Mencken, ever alert to pounce on artificialities and affectations, has devoted much energy to exposing the follies of the American language. In recent numbers of *The New Yorker* and elsewhere he has been reporting so-called progress in euphemisms, and in his characteristically crushing style has attacked such absurdities as the substitution of chirotonsor for barber, exterminating engineer for rat-catcher, and the like. He believes that the upward surge of such swankiness should be checked.

The language of medicine has been quite free from bold efforts to dress it up, since its terminology has always been, basically, polysyllabic and classical. True, one could carp at many words which seem mere euphemism to the layman. For instance, what validity lies in the use of *trauma* for injury or wound? *Injury* has all the potentialities of a noun or adjective that *trauma* possesses. *Injury* epilepsy, *injury* psychosis, *wound* abscess and *wound* aneurysm sound logical, although the connotation and the feel seem unnatural to the physician. There is a consistency in the use of the Greek and Latin medical terms, despite the seeming obscurity to the nonmedical public.

There is, of course, much room for improvement in the language of medicine, and even among physicians the names for specializations are confusing. What is a neurologist? Need he confine himself to organic dis-

(Concluded on page xiv.)



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NAMING THE DOCTOR

(Concluded from page 296.)

ruptions of the nervous system, or can he also treat the neuroses? But if he does, is he not then a neuropsychiatrist? Is the psychiatrist equipped properly to perform neurologic examinations, or must he confine himself to the mental processes? If so, will he not miss, for example, the case of a psychosis due to a brain tumor? And where does the neurosurgeon come in? Is he also a neurologist, or only the surgical consultant for the neurologist?

What is the distinction between a physical therapist and a physiotherapist? Is only the former an accredited physician? Shall we say oculist or ophthalmologist in speaking of the eye doctor? And what is an internist, presumably the swankiest of all physicians and the one who is hardest to define? He is somewhat of a consultant and a diagnostician (but what doctor is not?); he foregoes surgery and obstetrics, and is generally expert in cardiac and gastro-enterologic diseases. But many internists are more, and many are less!

Health officers are rapidly becoming doctors of public health. Is the roentgen-ray specialist a radiologist or a roentgenologist? What the ear, nose, and throat doctors need is a title comprehensive enough to define their sphere of activity. On the distaff side the nurse wants to discover another name which will distinguish her from practical and sundry other nurses who are not graduates of training schools. The allergist is coming into his own, and there has been some endeavor of late to emphasize the specialization of geriatrics. It was probably not a physician who, in an advertisement, introduced the term "bathology" to describe a spa, for balneology is the time-honored word for hydrotherapy. This calls to mind the attempt of a medical student, in an examination in pharmacology, to define the science of dosage as dosology. To his surprise he learned that the correct word was posology, which means the science of *how much* (poso). But if English ever becomes the universal language, dosology may come into its own. —Editorial, *Medical Record*, Oct. 15, 1935.

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Cardiovascular Symposium

ANGINAL HEART FAILURE*

HAROLD M. MARVIN, M.D., NEW HAVEN, CONN.

A physician said recently that, of all the conditions encountered in the course of a large medical practice, the one most readily recognized and most satisfactorily treated was angina pectoris. His comment interested me deeply, because all who specialize in cardiovascular diseases constantly see patients with typical anginal heart failure who have nevertheless been assured by honest and conscientious physicians that they have something else. It becomes of interest to inquire into the reason for this wide discrepancy between theory and practice with respect to the recognition of this condition.

One of the chief reasons for the failure to make a correct diagnosis of anginal failure is found in the deplorably widespread impression among doctors that, if a suspicion of angina pectoris is aroused by the history, it must be confirmed by the finding of some abnormality in the physical examination, the blood pressure, the electrocardiogram, or the roentgenogram of the heart before a positive diagnosis can be made. The truth, of course, is the precise opposite of this, namely, that the diagnosis of anginal heart failure should always rest wholly and exclusively upon the history and upon nothing else whatever. The diagnosis should be made with certainty before the physician starts his examinations, and, with a single unimportant exception, nothing that he finds in the course of his various examinations should increase or decrease his certainty. The one exception is this: If an electrocardiogram is taken during a seizure of anginal pain, the majority of such curves will show certain alterations not present in control curves taken before or after the pain. This is clearly a matter

of fortune, since it is most unwise deliberately to induce an attack of pain for the purpose of making observations. Furthermore, it is entirely unnecessary in the great majority of instances to have diagnostic information other than that derived from a careful history. Occasionally it is necessary to postpone a final decision about the nature of pain that is suspected of being anginal, and in such cases a short period of careful observation by the patient will usually make the diagnosis clear.

If it be true that the diagnosis of anginal heart failure must rest solely upon the history, it might be well to indicate briefly the type of history that not only justifies but actually forces a diagnosis of anginal failure. The term angina pectoris as well as the preferable term anginal heart failure are applied to a single symptom—pain. Through generations of observation and experience, we have come to know that this pain is extraordinarily constant in its manifestations from time to time, from patient to patient, from race to race. In its typical form there is no possible excuse for failure to recognize it, and atypical manifestations of this disease are rare.

The pain is almost invariably described as squeezing, pressing, constricting, or tearing, rarely as having a burning sensation in addition. Contrary to the descriptions still found in some texts, it is almost never precordial in location if by that term is meant the area to the left of the sternum overlying the heart. Practically without exception the pain is substernal, although it often radiates from the midline outward over the heart or to the corresponding area on the right. It is erroneous to speak of anginal pain as precordial pain. Physicians should speak precisely in this connection, for pain that finds its first and fullest

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

expression over the body of the heart is very seldom anginal in character. The pain may be sharply and invariably confined to the region beneath the sternum, but usually it radiates to certain other areas that have acquired ominous significance. Most frequently it radiates down the inner aspect of the left arm, being most severe at elbow and wrist; rarely it may involve the fingers on the ulnar side of the hand. Less often it spreads to the right arm or to both; it may seem to penetrate through the body to the interscapular areas. It is rarely severe in the face or the teeth, but exceptionally may begin here. It is not uncommon for the pain to appear beneath the lower sternum and radiate slowly upward or outward along the costal margins for a short distance. The discomfort is always continuous from the instant of its appearance to its complete cessation; true anginal pain is never described as pulsating or intermittent. It has a fixed relationship to those factors which impose additional work upon the heart, the most important and most constant being physical exertion and emotional excitement. The pain is more severe or is more readily elicited for a short time after eating and in a cold environment. And it is promptly and dramatically relieved in almost every instance by the administration of one of the vasodilator group of drugs, of which the best known and most satisfactory is nitroglycerin.

Such, in very brief outline, are the more important characteristics of this extraordinary pain which has been given the name angina. The first consideration is its etiology. What do we know of its cause? According to Sir Thomas Lewis, it was the distinguished Welsh clinician, Parry, who in 1799 first expressed clearly the view that anginal pain might be due to a change in the circulation within the heart muscle such that it was still adequate for the resting needs of the organ but insufficient to meet unusual demands. This new conception of pain as an expression of myocardial ischemia advanced very slowly during the next 125 years. It met vigorous opposition as well as cordial support, and as recently as 15 years ago there was not universal or even widespread agreement as to the cause of this discomfort.

Apparently the first important experimental observations relevant to the subject were those reported in 1923 by MacWilliam and Webster. These English physiologists investigated the sensory phenomena associated with deficient blood flow by arresting the circulation to the arm in human beings and then exercising the muscles in various ways. They found that in these circumstances pain of intolerable severity occurred in

the active muscles, and they called attention to the possible application of these observations to the pain of intermittent claudication and of angina pectoris.

Five years later Keefer and Resnik reviewed all available evidence, including that just mentioned, and on the basis of the then known clinical and experimental observations came to the conclusion that anginal pain had but one cause, namely, anoxemia of the myocardium. Their vigorous paper aroused a great deal of interest and comment; it was generally regarded as wholly convincing and as the most eloquent statement of the anoxemia theory.

About 2 years later Lewis, Pickering, and Rothschild published a splendid paper ("Observations Upon Muscular Pain in Intermittent Claudication"), which at the same time aroused fresh interest in the subject and brought forward much important evidence relating to it. These observers, by a series of simple, precise, well-controlled observations upon human beings, showed that the pain of intermittent claudication might be reproduced in a normal limb by exercising the limb muscles after the blood supply to them had been arrested. In this respect their experiments added but little to those of MacWilliam and Webster, whose work had unfortunately been overlooked by the later students. But Lewis and his colleagues went much farther. They showed, for example, that the arteries supplying the active muscles did not enter into a state of spasm but on the contrary were widely dilated while the pain was acute; their observations upon this point seem wholly convincing. The pain so produced was continuous, and it could be kept constant at any level of intensity if the exercise was terminated at that level and the circulatory arrest was continued; that pain, however, would disappear within several seconds if the blood flow to the region was restored. There was no demonstrable evidence that the muscles were in a state of cramp at any time. It was found that the pain was not due to lack of oxygen alone, for it occurred after the same time interval even if the circulation was arrested for 10 minutes before the beginning of exercise, and pain did not occur if exercise was stopped several seconds before it was due to appear and the circulatory arrest continued for another 5 minutes. Furthermore, simple arrest of the circulation was not of itself sufficient to cause pain, even when continued for very long periods. On the basis of these and other vitally important observations, the authors came to the conclusion that the pain was due to a stable chemical or physicochemical stimulus developed

by the muscle during exercise and acting not within the muscle fiber but in the tissue spaces surrounding it.

The application of these observations to anginal pain was obvious, and Lewis, in an eloquent lecture in Chicago in 1931, reviewed the important theories relating to cardiac pain, presented the recent work done in his own laboratory, and demonstrated convincingly that the evidence then available was overwhelmingly in support of the belief that the pain was due to muscular contraction in the absence of a sufficient supply of oxygen. He stated clearly the reasons for asserting that neither cramp of the heart muscle nor increased strain upon the walls of a diseased aorta could account for the known characteristics of this pain.

A short time earlier Sutton and Lueth had performed a series of ingenious experiments upon dogs in an effort to throw further light upon the origin of anginal pain, and were apparently able to demonstrate that in these animals it arose chiefly or exclusively from interference with the coronary arterial circulation. The difficulty of applying these results directly to human beings with diseased coronary arteries is evident; the importance of their work, as Lewis states, lies in the fact that they failed to cause pain by a variety of other forms of interference with the heart and its vessels.

Within a short time further relevant and important observations were reported by Rothschild and Kissin, who subjected a series of 26 anginal patients to general and increasing anoxemia by having them rebreathe from a spirometer in such a way that the oxygen content of the inspired air was steadily decreasing. Eighteen of these 26 developed typical, and in some instances severe, pain when the oxygen content of the inspired air had fallen to levels ranging from 6.4 to 11 volumes per cent, although they were at complete rest. Twenty control subjects did not develop pain. This report was valuable in a double sense: (1) It showed that anginal pain may develop with the subject at complete rest if the heart is subjected to an inadequate supply of oxygen, and (2) it indicated that such anoxemia does not invariably cause pain to appear. Kissin later extended the experiments by having a series of normal subjects exercise the muscles of the forearm without interference with the local circulation but while they were breathing a steadily diminishing supply of oxygen. In these subjects also, pain appeared in the active muscles when the oxygen content of the inspired air had fallen to the levels mentioned above.

Many of the observations of Rothschild and

Kissin were repeated by Katz and his associates, who found that only 2 of 6 anginal patients developed typical pain when subjected to increasing anoxemia. They concluded, therefore, that some factor other than anoxemia may be concerned in the production of anginal pain, and suggested that this variable factor might be the state of the nervous system—the end-organs in the heart, the afferent pathways to the brain, or the sensorium of the subject.

Following the first contributions from Lewis' laboratory, there was a series of important papers relating to the same subject by others in his department, chiefly by Wayne, Pickering, and La Place. They have made careful, precise studies upon clinical cases, and in this condition such observations are far more valuable than are animal experiments. They have shown that the amount of exercise necessary to induce pain is very nearly constant in any one individual, and the appearance and disappearance of pain is not related to the height of the blood pressure but rather to the heart rate. Atropine causes a diminution of exercise tolerance and an increase in the duration of pain; nitrites increase the exercise tolerance and decrease the duration of pain, but the disappearance and reappearance of pain after nitrites is not related to the blood pressure. The authors emphasize that these results are not consistent with the view that pain arises from distention of the aorta, but support the belief that it is due to relative ischemia of the myocardium. The rise in heart rate, which is more important than elevation of the blood pressure, increases the energy expenditure of the heart without a concomitant increase in blood flow, and the beneficial action of nitrites is due to dilatation of coronary vessels rather than to the fall in blood pressure which sometimes occurs simultaneously.

They have pointed out that there is little or no acceptable evidence in support of the belief that angina may exist without pain; they present one case, presumably of this nature, in which the symptoms were shown to be due to paroxysms of rapid ventricular action verging on ventricular fibrillation.

In a study of the influence of anemia, they have added immeasurably to our previous knowledge; they have shown that pains clinically indistinguishable from those of intermittent claudication and of angina pectoris may occur in any type of severe anemia. Of 15 severely anemic patients who complained of one or the other symptom induced by exercise and relieved by rest, only 3 continued to have pain after cure of the anemia. Four of 6 severely anemic patients who had

anginal pain on walking ceased to have such pain when the hemoglobin had risen above 50 per cent. Their observations lend additional support to the belief that angina pectoris and intermittent claudication are due to similar mechanisms in the heart and the skeletal muscles, and lead to the conclusion that the essential factor in the production of anginal pain is a diminished oxygen supply to the contracting cardiac muscle.

There is one further type of evidence. A number of observers have had the opportunity to record electrocardiograms from patients during a seizure of anginal pain, spontaneous or induced. In many instances, alterations have occurred in the curves registered during the maintenance of pain. These alterations are comparable with those occurring after acute coronary arterial thrombosis in the human being and after experimental ligation of the coronary arteries in dogs. It should be added that similar and very profound changes may be produced in the dog's electrocardiogram by perfusion of the coronary arteries with asphyxial blood.

There are many other interesting and important observations that have added considerably to our knowledge of the cause of anginal pain. The past 7 or 8 years have provided evidence far more conclusive than any previously available, all of which points directly to the belief that anginal pain is due, largely or exclusively, to a discrepancy between the heart's expenditure of energy and its available blood supply—in other words, to a relative myocardial ischemia.

Until recent years the treatment of this condition was wholly medical; now there are several surgical measures available. Too often the physician considers his duty ended and his resources exhausted when he prescribes nitroglycerin and asks the patient to use it whenever pain appears. Actually, this is but a small part, perhaps the least important part, of the proper treatment. The doctor's first duty, after he is certain of the diagnosis, is to explain frankly and fully to the patient the nature of his pain. It is not necessary to use the term angina pectoris, which has such ominous connotations for most laymen; but it is perfectly possible to explain that the pain arises in the heart, why it occurs in association with exertion and emotion, why it is worse in cold weather and after meals, why it is relieved by rest and by nitrites, why it is important to heed and treat it at the instant of its appearance. These explanations can be made without arousing apprehension and anxiety; in most instances they actually bring a great deal of comfort, for the patient experiences the relief that arises from

the belief that his illness is fully understood and is amenable to treatment. There are few groups of patients who are so grateful for a full and truthful explanation. Without it, how can we expect the intelligent coöperation and regulation of activities which constitute the most essential part of the treatment?

After the patient has been told the nature of his condition, it is advisable to discuss with him in great detail the regulation of his physical and emotional activities which evoke the pain. It is encouraging to assure him earnestly that as a general rule any activity whatsoever is permissible if it does not cause pain, whereas on the contrary any that does elicit pain should be eliminated or modified. He should be urged above all things to live, as Dr. Thayer once expressed it, as near the pain level as possible; to live as nearly normal a life as he can without having pain. It is my custom to tell most patients who are just beginning to have anginal pain that they will probably require from 3 to 12 months to learn just how to live at the particular level which gives them the greatest satisfaction and the least pain. Even highly temperamental, nervous, energetic people can and do learn in time to adjust their lives happily to a slower tempo, although they may need frequent encouragement or the administration of mild sedatives such as phenobarbital.

It is only after the patient has a full understanding of the nature of his pain and its provocative factors that nitroglycerin should be prescribed. And it is by no means sufficient to instruct him to use this drug whenever pain appears, although he certainly should realize the importance of increasing the supply of oxygen to a heart that is urgently demanding it. It is far more important to urge him to use nitroglycerin to prevent pain by using it immediately before starting upon any activity that is apt to evoke it. There are many patients who are free from pain for weeks at a time because they have learned the prophylactic use of nitroglycerin; if they used it only for the relief of discomfort, they would experience pain many times a day. These remarks about nitroglycerin apply with slight modifications to the other members of the group of nitrites. I have found nitroglycerin the most satisfactory of all. It seems necessary, however, to explain to most patients that the drug should be taken for slight as well as severe pain, and also that even after years of use it will still be effective.

There is another group of drugs now widely used for the treatment of angina. They have this in common, that they are combinations or

derivatives of theocin or theobromine; they are known variously as metapophyllin, aminophyllin, theamine, theominal, theocalcin, *etc.* Theocin and theobromine were thought to be of benefit in this condition for many years before the introduction of these special preparations; but the evidence upon which this belief rested (so far as I have been able to discover and appraise it) is most unconvincing, and my own clinical experience with them was wholly disappointing. Almost precisely the same statement may be made with respect to the newer combinations; the clinical reports, despite their enthusiasm, fail utterly to carry conviction because of unwarranted assertions or lack of adequate control. Apparently the chief reason for believing these preparations useful in angina is that when introduced into the dog's coronary arteries in perfusion experiments they cause conspicuous dilatation of these vessels. It is unnecessary to point out the difficulty of applying this observation to the sclerotic arteries of a middle-aged or elderly human being, for the final appraisal of these drugs must be made upon clinical experience. After prescribing them for years to scores of anginal patients, I am not convinced that they have been useful in a single instance. Five or six highly intelligent patients, it is true, are convinced that they feel better and have less pain when taking such preparations than when they omit them; but the great majority can observe no difference between the periods of use and periods of abstinence. My friends who have had wider experience assure me that their results are similar. Do not refrain from prescribing such drugs for your patients, because possibly they are helpful in a small number of cases; but use them without any false ideas of their true value and without encouraging your patients to expect any great benefit from them.

With tissue extract I have had no personal experience, and prefer not to discuss it. I have known of its use in a few patients subsequently referred to me; in all of them it was discontinued because of its failure to cause any demonstrable improvement. I have used myorgal but a few times, and have not found it helpful.

There is one matter relating to treatment which should be mentioned because almost every patient asks specifically about it. It is the use of tobacco and alcohol. The subject of tobacco might easily be discussed for an hour, and it is only lack of time that leads me to be dogmatic. In 15 years of interested searching, I have never encountered a case of tobacco angina; I do not mean to imply that such cases do not exist, but merely that they are very rare. Nor have I

yet seen any patient with angina whose pain was demonstrably more severe or more frequent when he smoked moderately than when he refrained altogether from smoking. By moderate smoking is meant 4 to 8 pipes or 10 to 15 cigarettes a day. On the contrary, I have encountered literally scores of men whose pain has been increased greatly after they had been forced to stop smoking, and immediately decreased upon the resumption of their former habits. It is clearly not the tobacco or its absence that is responsible for these differences; it is the nervous tension and apprehension in the one case, and their absence in the other. Until there is far more clear and convincing evidence than we now possess that tobacco in moderate quantities is harmful in anginal heart failure, no physician is justified in insisting that his patients abandon a cherished and pleasurable habit which is often demonstrably helpful in preventing nervous tension. Too often the dogmatic insistence of a physician that his patient stop smoking is nothing more than the expression of his own moral disapproval. Surely it behooves us to interfere as little as possible with the pleasures of a man's life, and then only when we know or have excellent reason to believe that they are harmful.

With respect to alcohol the evidence seems clear and unequivocal. With the exception of nitrites, it appears to be the most effective remedy we possess for the prevention or relief of anginal pain. It acts more slowly and its effect lasts far longer than that of nitroglycerin. There is no evidence, so far as I am aware, to indicate that it has a deleterious effect upon the coronary arteries, however long it may be used. The chief objection to its frequent and widespread use is what might be termed the social objection; an occasional patient will use his disease as an excuse for frequent overindulgence. With a little wisdom and diligence on the part of the physician, however, alcohol may often prove a great blessing to those whose pain is frequent. In my own experience whiskey has been the most effective agent, and its use in the late afternoon or evening especially helpful.

This is a very brief outline of some of the more important measures embraced in the medical treatment of the condition; the surgical treatment will be discussed very briefly. Cervical sympathectomy will not be considered, because it is unjustified and because it has been widely if not wholly abandoned in recent years.

Ten years ago it was first demonstrated that anginal pain could be remarkably relieved in most cases by the injection of alcohol into the dorsal nerve roots on the left side. Within the

next 5 years the anatomic and physiologic basis for this relief was made clear by the demonstration of postganglionic fibers running from the upper 2, 3, or 4 thoracic sympathetic ganglia across the posterior mediastinum into the posterior cardiac plexus. A number of observers, notably James White of Boston and his co-workers, have shown that in dogs these nerves provide the most important, probably the only, pathway for impulses from the heart to the central nervous system; removal of the upper 4 ganglia appears to interrupt all sensory impulses. With full experimental knowledge as a background, White has attempted the surgical removal of these ganglia or the injection of alcohol into them in about 40 patients. Only 4 patients have been subjected to the surgical operation; the others have received injections of alcohol. All patients were selected and the final results appraised by his medical colleagues, and only those were accepted in whom medical measures had failed to give comfort. In other words, they were all severe cases. Of the total number there was complete or almost complete relief (estimated at 90 to 100 per cent) in more than half, marked improvement (50 to 90 per cent) in about one-fourth, slight improvement (25 to 50 per cent) in about 8 per cent, and failure in about 12 per cent. Robert Levy of New York reports that in his series of such cases there has been marked or complete relief in about 40 per cent, moderate relief in about 30 per cent, and failure in about 30 per cent. These differences are to be ascribed to differences in experience and in technical skill. In all successful cases the relief has lasted throughout the remainder of the patient's life, and some are still living who have been free from pain for periods as long as 6 or 7 years.

When it is remembered that these patients were severely ill and were not helped by medical measures, that pain was so frequent and severe as to make life unbearable, these results are very impressive. There are several objections that should be mentioned, however. The chief one is the appearance, in one-half to two-thirds of the cases, of a severe alcoholic neuritis of the infiltrated intercostal nerves; this may last for several weeks or several months and is sometimes quite distressing. A second objection is the technical difficulty of placing the alcohol precisely, since this must be done blindly; obviously the results in any clinic will depend largely upon the experience and skill of the operator, and there are but few surgeons who have been interested in this field of work. The injection of alcohol, however, is a minor opera-

tion; it involves no operative mortality; it requires only several days of hospitalization; and it has no serious permanent complications.

The second of the surgical measures consists of complete removal of the thyroid gland, an operation advocated about 3 years ago by Blumgart and Levine of Boston. It is impossible in this discussion to review the many lines of thought and experiment that led to this suggestion; they will be found admirably and lucidly presented in the papers of the 2 men themselves. The first question is that relating to the results obtained, and the following figures are the latest available from the 2 Boston hospitals in which the largest groups of patients have been observed. From the Beth Israel Hospital, Blumgart reports that, of the 25 patients who have lived longest since operation, 9 showed marked improvement, 6 moderate improvement, 5 slight improvement, and 5 no improvement. Of his total of 36 cases, he reports marked improvement in 50 per cent, moderate improvement in 17 per cent, slight improvement in 14 per cent, and no improvement in 19 per cent. From the Brigham Hospital, Levine reports that of 19 cases there was an excellent result in 8, good in 6, moderate in 4, and fair in 1. These figures, as well as a composite report from 26 different clinics, indicate that marked improvement may be confidently expected in approximately half the cases, and some measures of relief in a further 20 or 30 per cent. On the basis of figures alone it is still possible to say that alcohol injections, as reported by White, give a slightly higher percentage of patients who obtain complete relief.

At first it was widely feared that complete thyroidectomy might introduce certain serious hazards even though it relieved pain. Among the complications suggested were cutting of the recurrent laryngeal nerves with resulting aphonia, inadvertent removal of the parathyroid glands with consequent parathyroid tetany, severe anemia, mental changes such as those observed in spontaneous myxedema, the development of so-called myxedema heart, and the rapid progress of arteriosclerosis because of the elevated level of cholesterol in the blood associated with hypothyroidism. These possibilities have been kept in mind, and it should be stated that up to the present day they have not proved to be of importance. The danger of operative or postoperative death has actually been much less than was expected; Blumgart reports no operative deaths among the last 62 cases in his series.

A hurried comparison of the 2 methods may be attempted, although it is yet too soon for any final statement. In favor of alcohol injection is

the slightly higher percentage of successful results, the absence of operative mortality, its freedom from any permanent ill effects, the short period of hospitalization, and the fact that other methods may be tried in case of failure because the patient's condition is not made worse. The disadvantages are the technical difficulty of injection, the paucity of surgeons who are competent to perform it properly, the neuritis that often follows, and the fact that relief is limited strictly to the injected side. In favor of thyroidectomy is the fact that it can be performed properly by a large number of general surgeons throughout the country, it is comparatively safe, and it affords marked relief in one-half to two-thirds of the patients, including those who have bilateral radiation of pain. Among its disadvantages are the comparatively long period of hospitalization required—the necessity for prolonged close observation, determinations of the basal metabolic rate, regulation of the dose of thyroid extract—and the appearance in many patients of symptoms of myxedema which make life far less pleasant even though pain may be absent. Furthermore, it would be quite erroneous to acquire a false sense of security from the figures just quoted respecting the operative and postoperative mortality. There are few, if any, clinics in this country where such patients receive the experienced and skilled care that is given them at the Beth Israel Hospital, and it is doubtful if their figures can be matched or approached by

any other institution. There are several hospitals in which the mortality rate has been excessive even at the hands of highly competent surgeons, and this fact must be considered in making a decision. If a competent surgeon is available, I would suggest alcohol injections first; if this procedure fails, I would then advise thyroidectomy. No patient should be subjected to any operative procedure until medical measures have been given a thorough trial and have failed.

There is one final question that demands a word. Is it dangerous to abolish pain in these patients? Is anigral pain a warning without which the patient might continue harmful exertion to the point of causing his death? This question cannot be answered with certainty, for the patients subjected to surgical operation are precisely those who are notoriously apt to die suddenly at any time. So far as I am aware, no clear proof or even suggestive evidence has ever been brought forward in support of the belief that the patients relieved of their pain by surgery die sooner than do similar patients not operated upon. Actually, of course, in most cases there are substitution symptoms that serve as warnings just as truly as did pain before its removal. This theoretical consideration has not the slightest actual value in deciding for or against surgical treatment.

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THE DIAGNOSIS AND PROGNOSIS OF CORONARY OCCLUSION*†

The Electrocardiogram as an Aid

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The diagnosis of coronary occlusion has been made with increasing frequency during the past decade. This no doubt resulted from many causes. There probably has been an actual increase in the number of patients with myocardial infarction. The present-day interest in this subject has resulted in the diagnosis being more often entertained, doubtless on too meager evidence at times, and finally the electrocardiograph has been of the greatest aid in confirming the diagnosis in mild and atypical cases. In a typical severe case of coronary occlusion the diagnosis is usually not difficult, and subsequent ob-

servation of the patient establishes it beyond a doubt. Even in these cases, however, the immediate and ultimate prognosis is notoriously difficult. An accurate localization of the site of the cardiac damage is not feasible, and the extent of lesion can only be surmised. In the mild and atypical cases of myocardial infarction an exact diagnosis is often impossible, and acute disease of the viscera of the upper abdomen may give the greatest difficulties. The proper treatment for any condition must necessarily be based on a correct diagnosis. It is in these last groups of cases that the electrocardiogram (often repeated records being necessary) has been of so much value to the physician and patient.

An analysis of the many series of cases reported in the literature during the past few years,

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in which the diagnosis has been based on electrocardiographic as well as clinical and necropsy studies, shows that our previous teachings in regard to the very high mortality in this condition as well as to the common sites of pathologic change in the ventricular muscle need to be revised. In nearly all cases the area of the cardiac damage can be accurately localized by means of electrocardiographic studies (repeatedly confirmed at necropsy in fatal cases). Recent studies suggest that the prognosis may depend considerably on the site of the heart lesion. If subsequent observations confirm this hypothesis, the electrocardiogram may aid us also in prognosis of these cases. It is unwise to apply rigidly the statistical method in the prognosis of the individual case, which must always be judged on its own merits. Nevertheless, information which will assist us in this field is always welcome.

The changes which occur in the electrocardiogram in acute coronary occlusion result from necrosis of the cardiac muscle. They usually appear within a few hours and are concerned mainly with the R S-T segment of the ventricular complex. It is the site of the infarction rather than the artery occluded which determines the pattern of the electrocardiogram. The common sites of myocardial infarcts are the anterior surface of the left ventricle near the apex and the posterior surface of the left ventricle near the base. The adjacent interventricular septum is frequently involved. A less common area of infarction is the lateral aspect of the left ventricle about midway between the apex and base. This area is at times involved in occlusion of the left circumflex branch. Infarction of the right ventricle is most uncommon and need not be considered clinically.

The coronary arteries are not immune to the congenital variations seen in arteries throughout the body, but in general the arterial supply of the heart is fairly constant. The left coronary artery (descending and circumflex branches) supplies the anterior and lateral surfaces of the left ventricle, the lateral half of the left ventricle posteriorly, the apex of the heart, the anterior two-thirds of the interventricular septum, and about one-third of the adjacent right ventricle anteriorly. The right coronary artery supplies the remaining right ventricle anteriorly and all of it posteriorly, the adjacent half of the left ventricle posteriorly except the apex, and the posterior one-third of the interventricular septum.

Figs. 1 and 2 show the usual portions of the ventricles supplied by the left and right coronary

arteries and the common sites of myocardial infarction following occlusion of these vessels.

A detailed discussion of the changes in the electrocardiogram seen with anterior and posterior infarctions is not within the scope of this paper, but typical illustrations of the 2 groups

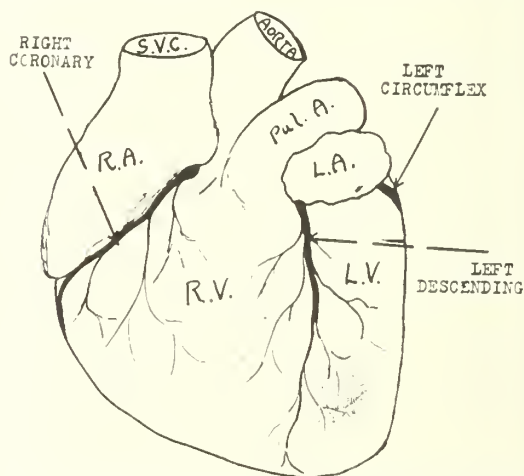


Fig. 1. Anterior view of the heart (after Morris) to show the arterial supply of the ventricles. The shaded area represents the common site of infarction in occlusion of the left coronary artery.

will be given with a few of the common variations. Occasionally records are seen which are difficult to classify as belonging to either anterior or posterior groups, but these are not common. Massive infarctions which prove rapidly fatal may produce aberrant and unusual ventricular complexes. The use of direct chest leads, first advocated by Charles C. Wolferth and Francis C. Wood, has proved of value both in diagnosis and localization of the infarct. In all of the cases in our series chest leads were taken. The anterior electrode (right arm electrode) was placed at the apex of the heart and the other electrode on the left leg in most of the cases (termed lead V by the above authors).

At the Pennsylvania Hospital during the past 3 years we have studied 41 cases of acute coronary occlusion. These patients were seen both on the ward and private services. Electrocardiographic studies were done in all cases, and in those who survived more than a few days several records were taken. During this period there were no cases of coronary occlusion in which the electrocardiogram failed to show changes, although in several instances serial records were necessary. In a number of patients with upper abdominal disease the electrocardiogram gave valuable negative evidence which aided in establishing the correct diagnosis. The youngest patient in the series was age 29 and the oldest age 79. Thirty-four cases (83 per cent) occurred

between age 41 and age 70. The largest number of cases (15) occurred in the sixth decade. Only 4 of the patients were women and all of these had previously had hypertension. Of the entire group of patients, 23 (56 per cent) had a history of hypertension or definite hypertension at the first examination or both. The mortality was no higher in the hypertensive group in this small series. Considering the relative hospital admissions, coronary occlusion occurred frequently in Jewish patients and infrequently in the Negro race.

The cases were divided into anterior and posterior groups (according to the location of the infarct in the left ventricular muscle) by means of the electrocardiographic findings. This classification is not possible by history or clinical study, but depends entirely on the pattern of the electrocardiogram. Of 41 patients we were able to classify 19 in the anterior group and 20 in the posterior group. In 2 patients the findings were not characteristic enough to place them in either one group or the other, though the clinical diagnosis of coronary thrombosis was supported by the electrocardiograms. In a typical case of anterior infarction (usually resulting from occlusion of the left descending branch but occasionally by occlusion of the left main coronary), the major changes in the electrocardiogram are seen in leads I and IV. (In this article lead IV is used to designate the direct or chest lead.) Lead II at times shows similar changes to lead I but less marked, and lead III usually shows a slight reciprocal action to lead I (Fig. 3). In posterior infarctions (usually from occlusion of the right coronary) the changes are largely in leads II and III, especially the latter. Leads I and IV may show slight changes, but these usually return rapidly to normal (Fig. 4). The chest lead has been found to be a distinct aid in diagnosis in some cases of anterior infarction in which the usual 3 leads have shown little change (Fig. 5). There is evidence also that the residual changes in the chest lead following anterior infarction tend to be more permanent than those in lead I. The chest lead may thus be of great value if there is a past history suggestive of coronary occlusion. In 2 cases of this series the electrocardiograms were suggestive of both an old and a recent infarction. In each case the history supported this view. The second attack was fatal in both patients. Necropsy examination was granted in one case, and an old scar and recent infarct were present in the areas predicted (Fig. 6).

Disturbances in conduction and rhythm were not frequent in this series. Partial heart block

(delayed P R interval) was noted in the electrocardiograms of 5 cases at some time during the acute stage. In no case were there dropped beats, however, so the condition was not diagnosed clinically. All of these cases were in the posterior group, which is quite logical considering the anatomic position of the bundle of His. A. V. nodal rhythm was present in 2 patients, both of whom succumbed. Premature beats of ventricular origin were noted in 5 cases, but in none were they a prominent feature. Ventricular tachycardia, auricular flutter, or fibrillation were not recorded or suspected clinically. A friction rub was heard in 7 cases (17 per cent). In 4 of these the infarct was anterior and in 3 posterior according to the electrocardiographic localization.

In the entire series of 41 cases there were 15 deaths directly attributable to coronary occlusion (36.6 per cent). In the anterior group of 19 cases there were 11 deaths (58 per cent). In the posterior group of 20 cases there were 4 deaths (20 per cent). In 6 patients there were 2 attacks of coronary occlusion, 4 of whom succumbed after the second attack. These cases were grouped as anterior or posterior according to their second attack, except in one case in which the second attack occurred only 2 weeks after the initial one and a record was not obtained before death. Eleven cases proved fatal in the first attack. Of this number 10 were in the anterior group and 1 was in the posterior group, a mortality of 58 per cent and 6 per cent respectively when only those cases with one attack are considered. Of the 3 remaining fatal cases of the posterior group, 2 had had a previous anterior infarction.

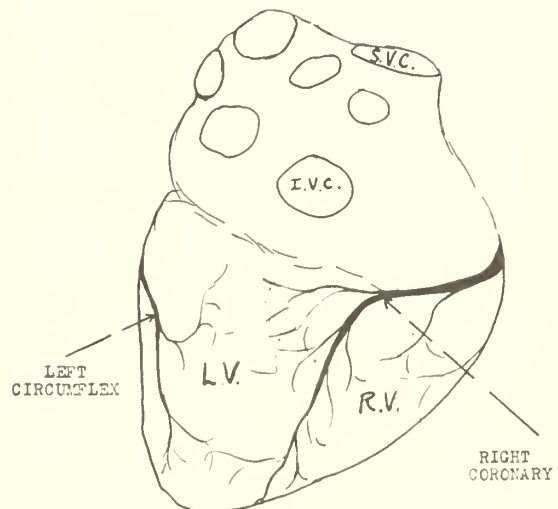


Fig. 2. Posterior view of the heart (after Morris) showing the arterial supply of the ventricles. The shaded area represents the area usually infarcted in occlusion of the right coronary artery.

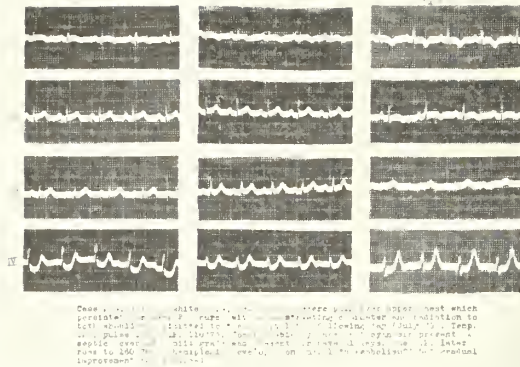


Fig. 3. Case 40. This is a typical case of the anterior infarction group (left coronary). The principal changes are seen in leads I and IV. The slightly elevated R T segment returns to normal and the T wave becomes inverted in lead I. In the chest lead the initial Q wave is absent, the T waves become upright, and the depressed R T segment returns to normal. Low voltage is present in all leads which may be of some prognostic significance but is not a characteristic finding. The exaggerated T waves in the chest lead as seen in the last record are not infrequent after coronary occlusion.

Conclusions should not be drawn from the analysis of such a small group of cases, but this evidence together with that of the necropsy studies suggests that occlusion of the right coronary artery with infarction posteriorly is rarely fatal in the first attack. Occlusion of the left coronary artery with infarction anteriorly, however, seems to result fatally not infrequently. The relative incidence of thrombosis of the right and left coronary arteries would seem to be about equal from analysis of recent series of cases, as it is in our own group. The descending branch of the left coronary has been termed the

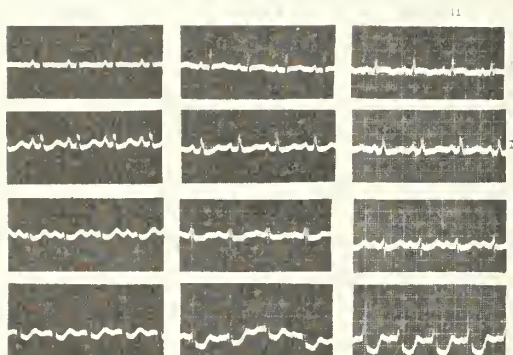


Fig. 5. Case 16. The changes seen in the usual 3 leads in this case are of little diagnostic value. The chest lead (IV), however, shows definite and characteristic changes suggesting infarction of the anterior surface of the left ventricle. In lead IV note the loss of the initial Q wave in the second record with depression of the R T segment, which is even more marked in the record of Dec. 11, showing a progressive change and demonstrating the value of the chest lead in certain of the cases of anterior infarction.

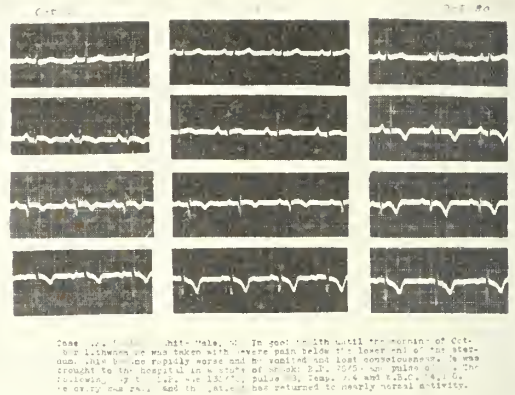


Fig. 4. Case 18. These records show the typical changes seen after occlusion of the right coronary artery with infarction of the left ventricle posteriorly at the base. The changes are confined to leads II and III, leads I and IV being normal throughout.

artery of coronary thrombosis and the artery of sudden death. The former expression is not justified as thrombosis probably occurs as frequently in the right coronary. The latter designation, however, has a basis in pathologic experience and may be relatively true.

Most of the surviving patients of this series have been under observation following recovery. We have been able recently to check on nearly every case in order to determine the present functional capacity. Due to the small number of cases and the relatively short period of time elapsing in many instances, we do not feel justi-

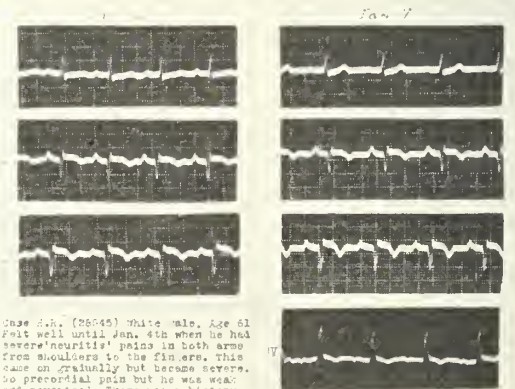


Fig. 6. Case 3. The first record taken the day after the occlusion shows deep Q waves in leads II and III with elevation of the R T segment and slight inversion of the T waves. Two days later the record was repeated and a chest lead taken. Little change is seen in the first 3 leads. The chest lead (IV) shows absence of the initial Q wave, which would not be expected in a posterior infarction. In view of the chest lead findings and the history, a diagnosis of old infarction anteriorly was made, and from the changes in leads II and III, recent infarction posteriorly. These lesions were verified at necropsy a few days later.

fied in drawing conclusions in regard to the relative recovery of the 2 groups.

In order to approach the subject from a different angle we have analyzed the cases of acute myocardial infarction seen at necropsy at the Ayer Clinical Laboratory of the Pennsylvania Hospital during the past 5 years. A total of 13 cases was found. Seven of these cases were studied in our series and have complete electrocardiograms. Three cases have electrocardiograms with the usual 3 indirect leads, and in the 3 remaining cases no record was obtained. In all of the 10 cases with electrocardiograms the localization of the site of the infarction was found to be correct. The left coronary artery was involved in all of the 13 cases—the left descending branch in 9 and the left main coronary in 4. In addition, one case had a recent occlusion of the right main coronary and another had a recent occlusion of the left circumflex branch. In both of these cases the second occlusion had proved rapidly fatal. Thus no case was found in the necropsy series in which occlusion of the right coronary artery was the cause of death without there having been a previous occlusion in the left coronary. In one case of the posterior group there was a fatal issue after the first attack, but unfortunately permission could not be obtained for necropsy. The artery occluded, the site of infarction, and the electrocardiographic localization of the 13 necropsy cases are given in the accompanying table.

SUMMARY

1. Changes in the electrocardiogram are nearly always present after coronary occlusion and are of the greatest aid in the diagnosis of mild and atypical cases. More than one record is desira-

ble and often necessary for confirmation of the clinical diagnosis.

2. The electrocardiographic changes result from infarction of the myocardium. Practically all myocardial infarcts occur in the left ventricle. The common sites of these are the anterior surface of the left ventricle near the apex (from occlusion of the left descending branch or the left main coronary) and the posterior surface of the left ventricle near the base (from occlusion of the right coronary artery).

3. The electrocardiographic picture or pattern is quite characteristic in these anterior and posterior infarcts, and by this means the site of the infarction can be accurately predicted in nearly all cases.

4. In a series of 41 cases of coronary occlusion the site of the infarction could be determined in 39 cases. Of these, 19 were in the anterior group and 20 in the posterior group. From the clinical picture alone this division of cases is not possible.

5. The mortality of the entire series was 36.6 per cent. In the anterior group of 19 cases the mortality was 58 per cent. In the posterior group of 20 cases the mortality was 20 per cent. Four of the deaths occurred after the second attack of coronary occlusion. Considering only those cases with one occlusion, the mortality in the anterior group was 58 per cent and that of the posterior group 6 per cent.

6. Over a period of 5 years 13 cases of acute myocardial infarction were seen in the necropsy room. Seven of these cases were from our series and had complete electrocardiographic studies. In 3 of the other cases electrocardiograms had been taken. In each of these 10 cases the loca-

NECROPSY FINDINGS IN ALL CASES OF CORONARY OCCLUSION (AYER CLINICAL LABORATORY) 1930 TO 1935

Case	Artery occluded	Site of lesion	Cardiogram(group)
3	Old left descending	Old scar at apex anterior	Anterior
	Recent right	Infarct at base posterior	Recent posterior
6	Left main	Large infarct at apex anterior. Rupture myocardium	Anterior
8	Left descending	Infarct at apex and interventricular septum anterior	Anterior
15	Old left descending	Scar at apex anterior. Infarct lateral and midportion	Anterior. (No record after second occlusion.)
	Recent left circumflex	left ventricle with rupture	
24	Left main	Large infarct and scar anterior surface	Anterior
35	Left descending	Scar anterior surface	Anterior
42	Left descending	Infarct anterior surface	Anterior

Three Leads

4329	Left descending	Infarct anterior surface	Anterior
4333	Left descending	Infarct anterior surface	Anterior
4467	Left descending	Infarct anterior surface	Anterior
5112	Left descending	Infarct anterior surface. (Death cerebral embolism)	No record
4574	Left main	Large infarct anterior surface	No record
4034	Left main	Large infarct anterior surface	No record

tion of the myocardial infarct as determined by the electrocardiographic pattern was found to be correct.

CONCLUSIONS

1. Occlusion of the right and left coronary arteries occurs with about equal frequency.

2. By means of the electrocardiographic findings the site of the myocardial infarction can be determined in nearly all cases of coronary occlusion.

3. The mortality in occlusions of the left coronary artery is much greater than that of the right.

4. Occlusion of the right coronary artery is not often fatal in the first attack. The same cannot be said of the left coronary.

5. In suspected cases of coronary occlusion the electrocardiogram, including a direct chest lead, is usually of great aid in arriving at the correct diagnosis.

6. From a limited experience over a relatively short period of time we are of the opinion that valuable information in regard to prognosis can be obtained by the electrocardiographic localization of the site of the infarction in patients with coronary occlusion.

302 South Nineteenth Street.

ABSTRACT OF DISCUSSION

LAURRIE DODD SARGENT (Washington): The study of coronary arteries from the electrocardiographic standpoint is really a new clinical entity and there are 2 things to consider, namely, the physiologic as well as the pathologic changes of the system.

Muscular anoxemia can be attributed in part to sclerosis of the coronary vessels, the partial occlusion at the ostia in the aorta, along with the lowered oxygen carrying power of the blood. Any increased strain in coronary sclerosis caused by an emotion of exertion, such as ingestion of a heavy meal or sexual activities, causes coronary pain or tightness in the chest. These pains are sometimes referred to other parts.

Fortunately the coronary system is not one of end-arteries; it gives a collateral blood supply so that healing and fibrosis can take care of the repair of the infarct.

The electrocardiographic changes which occur in sclerosis and coronary thrombosis are now a subject of great interest. Confusion still exists about many points. The evolution of coronary thrombosis makes changes from day to day; therefore, the electrocardiogram must do the same. Opinions from single tracings are not always justified.

During attacks of anginal pain the T wave will show inversion, with a return to normal after the pain. Other experiments have produced the same picture. Insurance companies are becoming interested in the use of the electrocardiogram in order to detect coronary disease. Does a normal electrocardiogram assure a normal circuit? Does an abnormal electrocardiogram assure a

serious prognosis? The latter is more easy to answer than the former.

Old infections may produce the trouble or it may be more recent, but as an insurance risk it seems to be out of the question. If there is not an abnormal cardiovascular system, there is not such a bad prognosis. Insurance companies deal with groups, but physicians deal with individuals.

The history of the case is most important. Coronary thrombosis may give a very distorted picture and yet at a later time present a more or less normal electrocardiogram. It is impossible to say how many times this occurs, but the greatest significance lies in the deformity of the QRS complex or the T wave. Anginal patients may have a normal electrocardiogram but soon after suffer coronary thrombosis.

The sight of the infarction and its magnitude are very important so far as prognosis is concerned. The Pardee deformity is frequently very indicative of coronary thrombosis. The high take-off and the convexity of the RT segment and the inversion of the T wave do not have to be present in every lead. Healing of the infarct may produce later a normal curve, and again the T wave may persist. Localization of the myocardial infarct by variation of the T wave in leads I and III is being reported.

Levine states that the main point in the diagnosis of the infarction in the anterior ventricle is the absence of a Q-4 wave. Lead 4 does not as a rule give much help if the infarction is not in the posterior part of the ventricle.

Occlusion may be divided into 2 groups: The anterior group in which the changes are nearly always seen in leads I and IV, the second group in which changes primarily occur in leads II and III.

At one time it was thought the location of the infarction would be determined by the severity of the symptoms, which were considered to be the deciding factor as to whether the left or right coronary was involved.

Our necropsy record shows that, of 14 cases, 4 were in the right main, 6 in the left main, and 1 in both the right and the left.

Ventricular flutter, called ventricular tachycardia, frequently precedes thrombosis. The changes in the electrocardiogram in coronary disease are of great importance, and the tracings from day to day or week to week are the best basis of diagnosis.

Great progress is being made in the differentiation of these infarctions. We must continue to study the clinical signs and symptoms and use the electrocardiograph with more frequent tracings in order to get the best diagnoses.

WILLIAM G. LEAMAN, JR. (Philadelphia): The precision of the cardiogram is an extremely valuable and comforting aid to the surgeon in ruling out coronary occlusion in cases of abdominal pain attended by the symptoms of shock.

Emphasis has been properly laid on the fact that the prognosis in coronary occlusion in many cases is good with the proper medical supervision. This is particularly true in posterior occlusions. A series of cases observed by us at the Woman's Medical College Hospital, although smaller, confirms this observation. Complete restoration in the younger age groups has been possible in many cases receiving the proper treatment and rest following the initial attack. In some cases the appearance of complete heart block following the typical

symptoms of an occlusion has helped localize the infarct. In one patient normal rhythm was noted again in 48 hours, showing the ability of the coronary circulation to establish a collateral flow around the infarcted area.

WILLIAM D. STROUD (Philadelphia): I am sure that Dr. Vander Veer and Dr. Brown would be glad to have anyone write to us at the Pennsylvania Hospital if they should find at necropsy any case of occlusion of the posterior vessels alone considered the cause of death,

for so far we have not been able to find such cases reported in the literature.

DR. VANDER VEER (in closing): Some of the most seriously ill patients who recovered have had right occlusion, whereas others who have died have had left. Consequently, we believe that this work is of definite help. There has been reported several cases of long life after occlusion in the right coronary. It would be interesting to follow this out with a greater number of carefully studied patients.

LATENT NONVALVULAR CONGESTIVE HEART FAILURE*†

ANDREW P. D'ZMURA, M.D., PITTSBURGH

In the past 21 years many ambulant patients with latent congestive heart failure have been studied clinically and by means of instruments of precision. A detailed report of all cannot be given, but various features of individual patients will be combined to draw a composite picture based entirely upon my own impressions. It is hoped that you will be able to integrate some of these features with those of patients seen in your own practice.

Patients having valvular disease are excluded because any valvular defect, justly or unjustly, is almost automatically regarded by many physicians as being accompanied by more or less congestive heart failure.

The group under consideration is less dramatic than other cardiac syndromes in its subjective and objective manifestations; hence, the condition is often overlooked until it is unmasked by actual congestive heart failure.

ETIOLOGY

Males appear to predominate to an enormous degree. Early and late middle life is taking its toll as a result not only of rheumatic fever and syphilis but also of poor heredity, so-called minor infections, improper habits of living, and various other intangibles called stress and strain. The family physician, with his knowledge of the background and details of the patient's method of living, has a tremendous advantage in working out this etiology.

SYMPTOMS

Heart consciousness is a frequent complaint. It varies in degree from a vague sense of uneasiness, emptiness, or heaviness of the precordium, without actual pain, to a marked awareness of the heart because an arrhythmia is pres-

ent. (Parenthetically, it may be stated that latent anginal heart failure must also be borne in mind during the consideration of these symptoms.) Many patients are not able to lie down without choosing a comfortable posture to avoid heart consciousness or slight dyspnea.

During the usual day shortness of breath may be absent because the patient does not exert himself very much: it may become manifest only when an extra demand is made upon the heart, such as a few extra holes of golf, rolling the lawn, changing an automobile tire, trying to do a full day's work after insufficient rest the night before, cherishing the delusion that youth is still present by trying to match the proper or improper conduct of the younger generation, *etc.*

During latent failure dyspnea may be accompanied by unproductive cough or a sense of constriction in the throat or chest, but the attacks are relatively short and the patient has no difficulty in the intervals.

Paroxysms of nocturnal dyspnea and coughing may be the only complaints although physical examination and the electrocardiogram may reveal such an advanced cardiac lesion as bundle-branch block. A patient of this type was recently referred to me by a nose and throat surgeon who failed to find a local cause for her complaints.

Discomfort after meals is often present. It is more variable than that caused by primary gastrointestinal disorders as it depends upon the degree of activity which the patient undergoes following a meal and the total amount of food taken. During digestion the extra work of the heart may induce dyspnea, precordial uneasiness, or heart consciousness, with or without the occurrence of arrhythmias, by relative insufficiency of the more central circulation; or it may induce abdominal complaints of various types due to temporary insufficiency of the supply of blood to the digestive organs. The ques-

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

† From the Department of Medicine, University of Pittsburgh School of Medicine, and the Electrocardiographic Laboratory, St. Francis Hospital, Pittsburgh.

tion of interlocking reflexes between the circulatory and digestive systems is far from being solved. Many patients are regarded as having gastric neuroses because laboratory tests of the gastro-intestinal system are normal or very slightly altered. Such symptoms may go on for many years without the patient or his physician realizing the causative mechanism until definite heart failure appears. A patient with persistent digestive complaints and progressive abdominal distention not infrequently is found to have a definite bundle-branch block; this lesion is to be excluded in all middle-aged or elderly individuals suspected of having acute intestinal obstruction as they may have had latent congestive heart failure for many years prior to the onset of the dramatic terminal stages of their illness. A number of such patients have been referred to me by alert surgeons who refused to operate despite the presence of nausea, vomiting, obstipation, and other symptoms which suggested the need for prompt operative interference. Another differentiating point between digestive symptoms of gastro-intestinal and cardiac origin is that change in the type of diet is less likely to result in improvement when the heart is at fault; it is necessary to reduce the quantity of food and limit activity during digestion to diminish or abolish the symptoms.

Occasionally the symptoms are those commonly attributed to cerebral lesions. Forgetfulness, irritability, mental confusion, fainting, *etc.*, may indicate latent congestive heart failure in addition to cerebral arteriosclerosis. Intermittent insufficiency of the blood supply to the brain is probably the cause. A patient of this type was seen recently. While he was driving home from his office, his car stalled; for a short time he was unable to go about the process of starting his car although he had been driving for many years. Examination revealed intraventricular block.

Many of these patients have a greater urinary output at night than during the day because comparative rest permits the heart to supply the kidneys adequately. The specific gravity of the urine is above 1015 in some or all of the specimens, thus differentiating this type of nycturia from that due to primary renal failure.

Marked fatigability is often found. The patient has no specific complaint; he just gets tired more quickly and remains tired longer than he should. His desire to work, the blood count, and the basal metabolism are within normal limits; there is no apparent cause for the fatigue, but the electrocardiogram may reveal definite evidence of heart-muscle damage.

Pain in the legs and paresthesias in the extremities, which are so often due to peripheral vascular failure, should prompt the exclusion of latent heart failure.

SIGNS

Most of these patients are overweight as many of them have been hearty eaters; some are of the overactive type who boast of their health and vigor, never having been sick in bed. Their faces are sometimes rather florid or they may show slight cyanosis, especially during activity. Dyspnea may be objective, being quite apparent to others, but the patients themselves may not be aware of it as its development may have been very gradual.

The heart rate is often definitely accelerated and the response to effort tests of various types may not be normal. Too much reliance cannot be placed on these findings as response to effort tests may be normal even in the presence of marked heart damage.

The heart itself is usually enlarged. Auscultation may reveal such difficult variations to interpret as changes in the intensity and character of the heart sounds, splitting of the heart sounds, and gallop rhythm. Simultaneous observation of the venous pulsation in the neck may reveal an increase in the number of waves, suggesting the presence of auricular flutter or bundle-branch block.

Virtually any arrhythmia may be present, from an occasional ventricular premature beat to pulsus alternans. This latter disorder of mechanism is commonly regarded as an evidence of advanced myocardial damage, yet 2 patients, now in their seventies, on whom polygraphic confirmation of pulsus alternans was obtained more than 10 years ago are still living, quite comfortable and fairly active. Auricular fibrillation is a very common finding, and bundle-branch lesions are not uncommon.

The blood pressure may be higher or lower than normal; it is rarely found at the expected level and often shows marked instability within short periods of time.

No definite evidence of congestive heart failure is present in the lungs, liver, *etc.*, although stethoscope edema is often found and may be especially significant if the symptoms have not led the examiner to suspect the heart.

The cardiographic evidence is often distinctive, as when it discloses a disorder such as auricular flutter or intraventricular block, but it may be highly suggestive if some of the so-called minor changes are present.

Variations in the size, contour, and width of the P wave; marked shortening or prolongation

of the P-R interval; notching, slurring, lessening, or lengthening of the height of the primary ventricular complex, especially if combined with narrowing or widening; irregularities in the origin, height, depth, width, or contour of the T wave, and failure of the T-P interval to adhere to the iso-electric line should not be disregarded if they do not combine into one of the gross patterns of distinctive electrocardiograms. These minor changes should not be dismissed too casually.

In the reading of such tracings for other physicians, I report these variations with the comment that final interpretation should be based on clinical findings.

DIAGNOSIS AND PROGNOSIS

The diagnosis requires the usual procedure, namely, history, physical examination, laboratory studies, and the exclusion of other possible conditions for the production of the variations from normal which have been found. This may need extended observation and repetition of diagnostic procedures. During this study the patient is in great danger of excessive examination if his physician is not careful to permit clinical evidence to predominate over laboratory findings. A specific instance of the accuracy of this viewpoint is afforded by a patient who for 6 years had shown various arrhythmias, including intermittent bundle-branch block, yet has been able to conduct a business involving great mental strain except for brief intervals of congestive heart failure which are caused by his own intemperances. If complete reliance had been placed upon cardiograms alone, this man would have been forced into retirement. His situation has been discussed frankly with him, and he knows that his comfort and length of life depend very largely upon his own conduct.

Too numerous are the patients unnecessarily kept in bed for a long time because premature beats were noted, which gave rise to inordinate concern about the heart, adding thereby a certain amount of psychogenic embroidery. Great care must be taken in determining the amount of damage present and in attempting to venture the prognosis. Clinical observation should outweigh laboratory evidence. It must be conceded, however, that laboratory evidence sometimes precedes all other forms of objective proof.

More than 20 years ago electrocardiograms were taken by me of 3 male patients complaining of heart consciousness and slight dyspnea. The tracings were very abnormal.

The first individual, age 56, showed auricular fibrillation with abnormal primary ventricular

complexes, had an occasional short period of disability during the following 19 years, and died at age 75 of pneumonia.

The second individual, age 69, had auricular flutter with an auricular rate of 320 and ventricular rate of 160. How long he had tolerated this abnormal rhythm prior to its discovery could not be learned. He remained active until a short time before his death 6 years later.

The third individual, age 43, who showed markedly abnormal primary ventricular complexes, probably due to some type of intraventricular block, has had an occasional short period of disability but is still active and useful at age 65.

If the patient coöperates, allowing his physician to steer him between the Scylla of overcaution and the Charybdis of utter carelessness, latent heart failure may be present for many years without interfering too much with continued comfort and usefulness.

Any physician can have good results with patients of this type if he is willing to study them carefully and if they are intelligent enough to understand that the heart has a certain amount of mileage built into it. Like that of an automobile tire, wear of the heart is governed by the succession of low and high pressure, rapid acceleration, rapid deceleration, colliding with unexpected obstructions, injuries, *etc.*, some of which are avoidable and some of which are unavoidable.

TREATMENT

The patient's entire method of living must be studied; he should be questioned about every activity, day and night. The output must be regulated to conform with his ability to carry on with little or no discomfort. So long as an aggravation of symptoms occurs, progressive narrowing of the field of effort should be made. One of the patients mentioned previously, the man with intraventricular block who momentarily forgot how to start his stalled car, is a dentist, and all that has been necessary is to let some one else do his laboratory work.

It is unwise to forbid entirely the use of coffee, tea, alcohol, and tobacco unless the amounts used are excessive or unless it can be proved definitely that they are harmful. Undue restriction focuses the attention of the patient upon himself and often defeats its purpose by adding the figments of introspection to the patient's real trouble.

One of the most difficult things to do with patients of this type is to make them "act their age." It is a very human failing to be unwilling

to admit the advance of age. Many of them want to play and work as hard as they did 20 to 40 years previously and to retain some of their reckless habits. A fine sense of discrimination

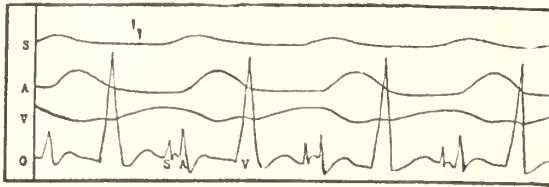


FIG. 1.—Simultaneous mechanical and galvanometer record of terrapin sinus, auricle and ventricle.

must be used in plotting a future course of life for them.

Physical therapy, especially hydrotherapy and massage, may be valuable, but the patient may get a false sense of security and omit other more important measures. Graduated exercises may also help, but they foster the idea that marked reconstruction of the heart is going to take place when this is no longer possible.

Since many of these patients have digestive disturbances, it is essential to consider the diet. It is more important to regulate the quantity of food and the degree of activity following its ingestion than to elaborate on the kinds of food to be eaten. Some patients eat too little because of their digestive difficulties and at the same time do not avoid really harmful activities. If diabetes is present, it is unwise to keep the blood-sugar level too low as the heart muscle and conducting apparatus need ample glycogen.

The amount of food taken during the day may be badly distributed. A large breakfast, little or no lunch, and a big dinner may have to be revised into 4 smaller meals.

It is often necessary to treat the families as well as the patients. The oversolicitous type who make the patient miserable with their admonitions is well known, but occasionally a wife or child is apparently unwilling to believe that anything could be the matter with one who has always been so robust. Putting the family straight is often more beneficial than a collection of prescriptions.

Drugs play a comparatively minor rôle in the treatment of latent congestive heart failure. Symptomatic treatment for various accompanying difficulties such as constipation, insomnia, etc., may be of value. Occasionally digitalis, given in intermittent courses, is beneficial, although when digitalis helps it is probably because definite congestive heart failure is already present. It can be contended, however, that digitalis at times converts patients with mild

degrees of congestive failure into patients with latent failure.

SUGGESTIONS FOR FUTURE STUDY

Clinical observation must remain predominant in the investigation of latent heart failure as diagnosis with the equipment available to any physician, his own senses and judgment, is highly desirable.

For the elucidation of successive changes in the degree of latent failure it is necessary to draw upon the laboratory for objective proof. The correlation of necropsy findings in patients followed for many years is very valuable. Electrocardiograms should be interpreted in the light of their fundamental significance as suggested by C. C. Guthrie when he stated that "electrical manifestations are of significant practical value only insofar as their meaning is revealed by contractile phenomena."¹

SUMMARY

Comments have been made on the subjective and objective features of latent nonvalvular congestive heart failure; it is realized that some of

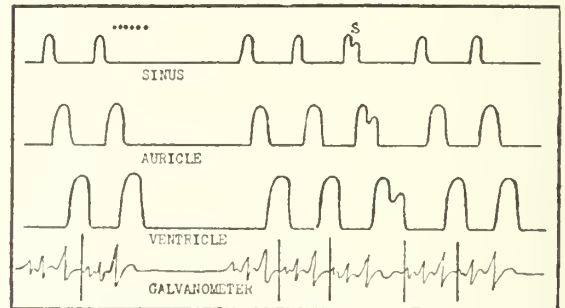


FIG. 2.—Diagram of evidence of origination of excitation in sinus of mammals.=stimuli to vagus nerve. S=stimulus to sinus.

the same phenomena are present in latent anginal heart failure.

For future progress it is suggested that basic knowledge of functional heart mechanisms be given clinical application so that the earlier recognition and proper treatment of latent heart failure may extend the average span of life.

121 University Place.

REFERENCE

1. C. C. GUTHRIE: "Functional Heart Mechanisms." *Proc. Soc. Exper. Biol. and Med.*, 30: 916-919, 1933.

Illustrations reprinted through the courtesy of Dr. C. C. Guthrie.

ABSTRACT OF DISCUSSION

AUGUSTUS S. KECH (Altoona): It is easy to recognize the developed or developing congestive heart failure just as it is with advanced tuberculosis and late cancer, but when the diagnosis is made in these cases the final sentence is decreed.

Many patients in middle life present themselves with a vague precordial uneasiness, "a floppy heart." They have considerable fullness after meals, which is relieved by belching. On closer questioning they reveal that they experience uncomfortable sensations, easy exhaustion, or palpitation after exercise.

It is often difficult to evaluate these cardiac, respiratory, gastro-intestinal, and nervous symptoms. It is necessary to eliminate first the asthenic patients who manifest all the subjective symptoms enumerated by Dr. D'Zmura but who are notoriously difficult to manage. The true cardiac patients do get relief under proper treatment. Dysfunctions or pathologic involvements of the liver, gallbladder, stomach, and colon with their chain of symptoms must be investigated thoroughly before a final decision is made that they are of cardiac origin.

As the heart is a muscle continuously at work, fatigue must enter into its every function. The dysfunction of every other organ reacts on the heart and circulatory system either as cause or effect; therefore, infection, endocrine disturbance such as hypothyroidism or hyperthyroidism, ovarian dysfunction, and even prostatic hypertrophy often give early signs directed to the circulatory system.

The sign of cardiac hypertrophy must not be considered as a compensatory measure alone and dismissed, but as the possible beginning of a vicious cycle or an early sign of latent congestive failure. The electrocardiographic studies give valuable aid in confirming many of the clinical signs and symptoms and should be used if available. Many minor changes, particularly in the T wave, help in our clinical judgment.

Much can be accomplished if we recognize the early

signs of latent cardiac failure and manage our cases accordingly. However, these patients must not be transformed into cardioneurotics of the type who are told by a doctor that they have a "bad heart" and thus get much satisfaction in avoiding work on account of that diagnosis. Probably myocardial fatigue would be a better explanation to patients; they should also be advised that by rest and diet a gradual return to normal activity may be expected.

CHESTER K. KISTLER (Reading): Will Dr. D'Zmura give us the percentage of the valvular and nonvalvular cases?

MAX B. WALKOW (Allentown): May I ask if Dr. D'Zmura was including hypertension with or without the arteriosclerosis, either localized or general, or whether he considers it a separate entity? It seems to me that many of the cases fall into one of the 2 groups.

DR. D'ZMURA (in closing): No attempt was made to determine the percentage of patients having valvular and nonvalvular heart disease. That will vary with every observer, and experience is never the same with any two doctors.

The group under consideration is that in which the heart is slowly wearing out, and the longer the latent stage can be continued, the longer life can be sustained.

The hypertensive patients are included. I was stressing latent heart failure as a functional diagnosis regardless of the cause. Occasionally it will be seen as an accompaniment of toxicity, such as is caused by a thyroid gland that is too active. In fact, it includes all such conditions except valvular disease. Highly abnormal cardiograms often are found.

THE MANAGEMENT OF THE PATIENT WITH ESSENTIAL HYPERTENSION*†

EDWARD WEISS, M.D., PHILADELPHIA

Until comparatively recently it was quite generally believed that arteriosclerosis caused high blood pressure and that the patient with high blood pressure was suffering from Bright's disease. Even today, despite the brilliant efforts at the turn of the present century of Allbutt in England, Huchard in France, and Janeway in America to separate out a large group in which hypertension was not of renal origin, there is still much confusion. Great lessons often are learned slowly, and that seems to be the case concerning the reciprocal relationships of hypertension, vascular disease, and kidney disease. So intimately connected are these processes that essential hypertension cannot be discussed without some discussion of the whole subject.

Perhaps the biggest problem remaining is the cause of essential hypertension; on the other phases of the subject some unanimity of opinion has been reached. A great deal has been learned

about the life history of the hypertensive process and its consequences so far as the various organs and tissues are concerned. The following is a brief statement of our generally accepted conception of essential hypertension. It is a common disorder, responsible by its effects on vital organs for almost one-quarter of all deaths in the United States after age 50. The hypertension arises from arteriolar vasospasm (whatever the cause of that may be), and after it has continued for years a compensatory reaction in the arterial system results in a diffuse hyperplastic vascular sclerosis, which in turn is eventually responsible for failure of such vital organs as the heart, brain, and kidneys.

ARTERIOSCLEROSIS AND ESSENTIAL HYPERTENSION

The vascular process just described differs entirely from the senile sclerotic changes which occur in large vessels such as the aorta and its main branches. It is unfortunate that the term arteriosclerosis is used for both processes. Even

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.
† From the Department of Medicine, Temple University School of Medicine, Philadelphia.

the introduction of the modified term *arteriosclerosis* to fit the hypertensive vascular process is not satisfactory. The similarity in the 2 terms leads to confusion. It is now generally accepted that essential hypertension is the best designation for the first process, and in this discussion the term hypertensive vascular disease will be used to describe the vascular reaction that results. The old term *atherosclerosis* is again becoming popular for the second group of disorders. Consequently, *arteriosclerosis* may be used as an all-inclusive term comprising both forms of the disease and also a less important form of chronic arterial disease—Mönckeberg's sclerosis, a calcification of the media of peripheral vessels—for example, the tracheal-like rings in the radial vessels of aged persons.

Although it is true that these are independent processes and can exist alone, that is, hypertensive vascular disease without *atherosclerosis* and *atherosclerosis* without hypertension, nevertheless, they may coexist and frequently do. This is quite natural because hypertensive vascular disease is one of the commonest disorders of middle life and *atherosclerosis* is the commonest disorder of late life. Consequently, individuals with hypertensive vascular disease live into the age period when *atherosclerosis* develops. Furthermore, there is some evidence that the progression of *atherosclerosis* may be accelerated by the hypertensive process.

NEPHROSCLEROSIS

What is the relation of these vascular disorders to kidney disease? It is pretty well accepted that hypertensive vascular disease, through its narrowing effects on the afferent arterioles of the kidney, may gradually lead to greater or lesser degrees of glomerular obliteration with tubular atrophy and interstitial fibrosis. This is the condition now called *nephrosclerosis*, the so-called primary contracted kidney of older writers, which was one of the varieties of chronic interstitial nephritis; the other was chronic glomerulonephritis.

Nephrosclerosis, then, is the specific end result of the renal reaction to the hypertensive vascular process. It may lead to kidney insufficiency and uremia, but this occurs in only 10 per cent or less of individuals with essential hypertension. The reason is that before the kidneys are affected to a degree incompatible with life a more vital organ (heart or brain) has succumbed. As Allbutt expressed it, "The overstrained vessels in the brain will burst, the laboring heart will suffer defeat, before the symptoms of uremia are likely to make their appearance."

Nevertheless, so common is essential hypertension that this 10 per cent is still much more important than glomerulonephritis as a cause of death, and vital statistics that give such prominence to nephritis as a cause of death are derived not only from deaths caused by glomerulonephritis but also by *nephrosclerosis* and other conditions which are frequently included in that cumbersome term cardiovascular-renal disease.

CARDIOVASCULAR-RENAL DISEASE

The term cardiovascular-renal disease is very widely used but is unsatisfactory. It usually indicates loose thinking in regard to the problems just discussed and leads to unsatisfactory treatment and bad judgment in prognosis. The individual with high blood pressure and perhaps albuminuria who is referred to as a cardiovascular-renal case may be suffering from (1) cardiac disease with renal congestion, (2) *nephrosclerosis*, (3) chronic glomerulonephritis, or (4) a combination of these processes. Progress in this subject is impeded by failure to differentiate them clearly.

In regard to the first, heart failure may be brought about as a result of persistent hypertension. After years of high blood pressure the patient shows thickening of peripheral vessels and enlargement of the left ventricle and eventually has myocardial failure. This manifests itself by shortness of breath, edema, and albuminuria. Frequently, in spite of a mild degree of heart failure, the hypertension is long maintained. This is the type of case most frequently called *cardiorenal*. The renal element often is given credit for more mischief than it actually does, and the proof of this becomes apparent when, after rest and digitalis, edema disappears and albuminuria clears as renal congestion is relieved.

The clinical and even the pathologic differentiation of *nephrosclerosis* and chronic glomerulonephritis may be very difficult. Considering the evolution of the 2 processes and their effects on the kidneys, this difficulty is understandable. On the one hand, there is long-continued essential hypertension with arteriolar disease, a degenerative process that may be compared to a slow fire; the resulting *nephrosclerosis* is the charred remains. On the other hand, glomerulonephritis is an inflammatory process, and a previous severe attack or repetition of attacks has been compared by MacCallum to a conflagration or series of conflagrations which may result in the same degree of kidney scarring, thus producing charred remains having the same appearance. It may be impossible from an

examination of these burned embers to say whether a slow process or a rapid process resulted in the destruction.

CLINICAL PICTURE OF ESSENTIAL HYPERTENSION

The clinical picture of essential hypertension is sufficiently well known so that it does not need extensive discussion, but its relation to vascular and kidney disease is so intimate that it must be considered briefly.

The problem met in practice is often as follows: An individual of middle age applies for life insurance; high blood pressure and perhaps albuminuria are discovered. Insurance is refused, and the applicant, frightened or angry, seeks the advice of his physician, who attempts to discover the trouble. General physical examination with special attention to the cardiovascular system (size of heart—condition of peripheral vessels—eye-ground study) plus tests of kidney function will suffice in the majority of cases. The problem resolves itself (with certain very unusual exceptions) into the differentiation of glomerulonephritis from hypertensive vascular disease. Usually the patient is suffering from essential hypertension, and the end result, perhaps 10 to 20 years away, will be cardiac failure in about 50 per cent, intracranial accident (hemorrhage or thrombosis) in about 30 to 40 per cent, and renal failure in probably less than 10 per cent. Other accidents and incidental infections account for the remainder of deaths.

If the end result is to be renal failure, the patient—usually over a period of years—will show gradual loss of concentrating power as determined by specific gravity tests of kidney function. The final event, renal failure ending in uremia, will be indicated by the onset of retinitis and progressive nitrogen retention. This change may come about with considerable rapidity; patients who present the usual clinical picture of benign hypertension may quite suddenly complain of severe headaches, show a higher level of blood pressure, increased eye signs (retinitis), loss of concentrating power, and nonprotein nitrogen retention with rapid progression to death. This acceleration of the hypertensive process has been called by Fishberg the malignant phase of essential hypertension.

The treatment of nephrosclerosis, that is, the renal part of the picture of hypertensive vascular disease, does not differ from the symptomatic management of the progressive loss of kidney function in glomerulonephritis. There is no specific drug or organ extract that will stop the process. The principles of management are the

same—to maintain nutrition and supply an adequate amount of fluid for the compensatory polyuria. When it comes to the question of renal failure occurring with malignant hypertension the treatment again is the same as in uremia arising from glomerulonephritis. More important than the consideration of these end stages, however, is the problem of the treatment of essential hypertension.

TREATMENT

Let us consider again the example of a middle-aged man who has been refused life insurance because of high blood pressure. His physician rules out glomerulonephritis and decides that the patient is suffering from essential hypertension. Then all too frequently attention is concentrated on an effort to reduce the blood pressure. The patient demands to know the blood pressure figures; on each visit to the physician he waits with anxious concern to hear the latest reading and frequently has ideas of a stroke, heart failure, or Bright's disease in the back of his mind.

What is done to this poor fellow in an effort to reduce the blood pressure? Because of an ill-founded idea that protein is responsible for hypertension and kidney disease he is denied meat and eggs, especially red meat, which for some reason is looked upon with particular dread. His diet is rendered even more unpalatable by the withdrawal of salt. Sympathy would doubtless be extended to this half-starved fellow except that he probably would not be able to eat anyway, his teeth having been extracted on the theory that focal infection has something to do with hypertension. Even before this he had sacrificed his tonsils and had had his sinuses punctured because of the same theory. In case some food had been consumed, the slight colonic residue was promptly washed out by numerous colonic irrigations, especially during the period when the theory of auto-intoxication was enjoying a wave of popularity. To add to his unhappiness he may be told to stop work and exercise. Of course, he is denied alcohol and tobacco as well as coffee and tea. As a climax to the difficulties of this unfortunate person, he may fall into the clutches of the neurosurgeon, who is prepared to separate him from his sympathetic nervous system.

Although we do not know the cause of essential hypertension, we do know enough about the nature of this process to plan a more rational management. Evidence is increasing concerning the deep-seated constitutional nature of this disorder, and superficial efforts to lower blood pres-

sure and one-sided approaches to the problem must be condemned.

ETIOLOGY

Heredity seems to play a large part in etiology, for there is a large incidence of high blood pressure, apoplexy, heart failure, and kidney disease in the family histories of these patients. Many close students of the subject believe that the stigmata indicating potential hypertensive disease are disturbances of the autonomic nervous system manifested by signs of vasomotor instability during the early years of the individual.

It is probable that in such hyper-reacting individuals, during the twenties or thirties, there occur periods of hypertension with a quick return to normal following rest and relaxation. During middle life there is a sustained hypertension with a failure to return so promptly to normal following rest. Later the blood pressure is maintained at a fixed high level, and rest and relaxation influence it little if at all. During the fifties and sixties the evil effects upon the organs, especially the arteries, heart, and brain, are manifested, and having withstood the hypertension for a period of 10 or 20 years the individual finally succumbs to heart failure, to intracranial vascular accident, or in a small percentage of cases to kidney disease.

It was formerly believed that syphilis had something to do with hypertension, but there is no evidence to indicate that this is true. Volhard and his pupils believe that a circulating pressor substance is responsible. But this work has not been confirmed by the English school. At present a great deal is being said about the relationship of pituitary basophilism to hypertension. This finding in conjunction with cases arising from adrenal tumors together with the hypertension of the climacteric period are indicative of the part played by the endocrine glands.

From another viewpoint there are indications of the rôle of the vegetative nervous system. The definite indication of arterial vasospasm as the precursor of the diffuse hyperplastic vascular sclerosis, the evidence of vasomotor instability in the prehypertensive stage, the lability of the hypertension in its early phases, and the influence of lead, obesity, and perhaps tobacco as vasospastic agents indicate that the vegetative nervous system is fundamentally disturbed in essential hypertension.

Another field of investigation which has only been touched upon as yet has to do with the rôle of the psyche in precipitating hypertension. Many patients give a history of emotional stress preceding the onset of the hypertension. The

early symptoms may be exactly those of a psychoneurosis. Anxiety is found to bear an important relation to the sporadic increases of blood pressure, and personality study reveals deep-seated conflict which stands in an important relationship to the aforementioned anxiety.

If these 3 (communicating) sides of a pyramid are erected on a base consisting of constitutional and hereditary factors in essential hypertension (Fig. 1), the picture indicates how complicated the problem is and how absurd it is to concentrate one's efforts on reducing the blood pressure in place of a total evaluation of the individual with essential hypertension.

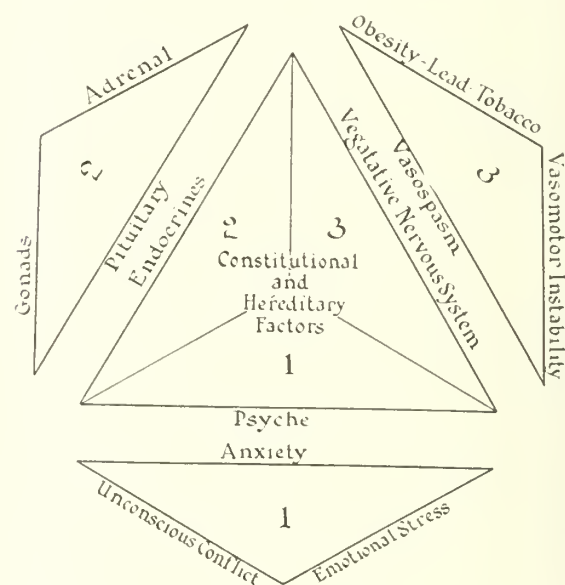


Fig. 1.—Schematic representation of the etiology of essential hypertension. The base of the pyramid is made up of constitutional and hereditary factors; the sides consist of interrelated systems which are shown separately as triangles with their sides representing interrelated factors.

MANAGEMENT OF THE INDIVIDUAL WITH ESSENTIAL HYPERTENSION

The deep-seated nature of essential hypertension suggests a rational management based on a total study of the individual rather than a concentration on blood pressure figures and an effort to reduce them. In general, von Noorden's advice was excellent—"forbid as little, instead of as much, as possible."

The following is not intended as a complete discussion of the subject but rather a brief statement of some of the more important points in management.

Diet.—There is only one dietary principle involved in the question of essential hypertension and that is to reduce overweight. There is no evidence that protein is responsible for hypertension and no evidence that it is harmful to the

hypertensive individual. So long as kidney function is normal, to forbid meat and eggs may do more harm than good. The same is true of salt; to restrict it severely merely makes the diet unpalatable. Late in the course of the affliction, if cardiac function is disturbed, it may be necessary to restrict salt and fluid because of edema. For some people it may be necessary to make an adjustment in the diet for psychologic reasons. So deeply entrenched is the fear of protein and especially of red meat that it may require considerable educational work to convince the patient of the harmlessness of these foods. If the patient is obese, sensible reduction is definitely indicated and may be very helpful not only from the standpoint of reducing the blood pressure but for the general welfare of the patient.

There is some evidence that tobacco is a vasospastic agent. Apparently it affects some people more than others and therefore must be denied or restricted in some people but not in all. Perhaps for certain individuals it is better to deny tobacco than to attempt restriction, because of the pocket habit. Personally, I do not listen too seriously to the laments of those deprived. There are greater tragedies in life.

Consumption of ordinary quantities of coffee and tea is not harmful to the hypertensive individual.

Rest.—Periods of rest and short vacations are very helpful to hypertensive patients. It is almost never necessary for them to give up business or exercise completely. Not only is it impossible to separate a man from his business for financial reasons, but often hypertensive individuals are business men with restricted viewpoints who have few outside interests. Their pleasures are at the table—food and drink and frequently along with these tobacco and cards. To separate them from their business is to hasten death. The main point is a readjustment of the individual to his environment. Living life on a lower level necessitates restricting somewhat the circle of activities but not forsaking all business and pleasure.

Lying down for a short time in the middle of the day is useful, and for many men who cannot get home at noon a couch at the place of business will permit them to cultivate the habit, often much to their surprise, of relaxing and even falling sleep. Usually it is somewhat easier to enforce rest in women with hypertension. At this point it may be stated that hypertension in women is not as dangerous as in men; they tolerate it better.

Closely related is the question of mental rest which is much easier to advise than to effect.

To advise the individual involved in mental conflict not to worry is absurd especially when, as is so often the case, no concerted effort is made to find out what is disturbing him. Too often the physician is satisfied that there are no problems disturbing the patient after he has inquired, "Are you worried about anything?" and has received a negative reply. Most of the time the patient really does not know just how much he is disturbed nor does he relate the factors actually responsible for his discontent. He is much more apt to project his worries into questions about his blood pressure, heart, brain, and kidneys. Careful inquiry will bring out that his fears are grossly exaggerated and that the reasons he assigns for them are illogical. There is only one approach that has any merit, that is, to encourage the patient to talk about himself as a person rather than as a medical case. This will permit some insight into conflictive situations and lead often to some relief of anxiety, which is closely related to the high blood pressure. For practical purposes of treatment in essential hypertension the relief of anxiety is much more important than a search for circulating pressor substances. Although this approach does not offer a complete solution of the hypertensive problem and does not even apply to all patients, it is a practical method of dealing with a set of important factors that may be modified, whereas the constitution of the individual cannot be touched. It is an approach heretofore not sufficiently practiced. We are too much concerned with physical measurements in hypertension, the blood pressure figures, the percentage of renal function, the size of the heart, the electrocardiographic tracing, the amount of retinal sclerosis—all of which are essential in the study of the hypertensive person but give incomplete information from the standpoint of the total evaluation of the patient. We are too little concerned with the emotional life, which may hold the key to the satisfactory management of the hypertensive patient.

If possible it is best to treat the hypertensive patient without referring to the blood pressure figures. This may be impossible because he may have heard them before and may demand to know them again. However, even though they must be stated, an attempt can be made to re-educate the patient in regard to their significance. Explanations that the blood pressure may vary many points even at one visit as a result of emotional stress and that the trend of the blood pressure curve is important to the physician rather than the individual measurements often satisfy.

Drugs.—Many physicians give nitrites as soon as hypertension is discovered. This is a serious mistake. I seldom find any necessity for employing them except in crises of hypertension. In no other condition is the evaluation of therapeutic results more difficult. False ideas of the value of therapeutic measures are obtained by a failure to discount the effects of rest and reassurance. For example, the patient with hypertension is referred to the hospital for study. Some drug or other therapeutic measure is immediately employed and the drop in blood pressure is attributed to that. It is well known that no treatment at all except bed rest and the feeling of security that the patient obtains in a hospital will often account for a considerable reduction of blood pressure within a week or 10 days. At least that much time should elapse before other measures are employed.

Bismuth subnitrate has recently been advocated on the basis that its effects, though less pronounced than those of the nitrites, are longer maintained. My experience with this drug has been disappointing.

The use of organ extracts, especially liver and pancreas, to overcome vasospasm has only temporary effects and does not seem a rational therapeutic procedure.

Small doses of sedatives are very useful, especially in starting treatment and in assisting in tiding over stressful periods. One-quarter to one-half grain of phenobarbital 2 or 3 times a day may be used for long periods with good effects.

The employment of endocrine products is a measure for the future. Recent developments in studies of the endocrine glands, particularly the adrenal and the pituitary, and the relationship of both to hypertension may possibly open new paths in the future to the specific management of certain cases of hypertension.

Physical Measures.—Autocondensation by means of high frequency currents produces only temporary effects in hypertension. Sweating is of no value except as an unsatisfactory method of weight reduction. Caution must be exercised in advocating it in hypertensive diseases with cardiovascular complications. It may be dangerous. Venesection is of no value during the course of hypertension although it may be useful in crises of heart failure or hypertensive encephalopathy.

It will be a happy day for medicine when institutes devoted to the relief of auto-intoxication by means of colonic irrigations are relegated to the past. In the minds of many patients and doctors, too, there is an easily exploited association

between disturbances in bowel function, auto-intoxication (poisoning), headaches, high blood pressure, and a host of other ills that have no scientific basis. These houses of the internal bath are harmful not so much from the standpoint of injury to the colon as from the unhealthy atmosphere and subtle suggestions of ill health.

Surgery.—If the teeth and tonsils that have been removed from hypertensive people because of the idea that these foci of infection are intimately related to the cause of high blood pressure were piled together, there would be an imposing monument to an era of overcredulousness in regard to a significant American contribution to medicine—the theory of focal infection. What sins have been committed in its name!

This does not mean that hypertensive people cannot have foci of infection nor that these should not be removed. But not for any supposed specific effect on the high blood pressure should good teeth be sacrificed or tonsils excised simply because they are present. So often these tissues are removed because the physician does not know what else to do. He feels that their removal may accomplish some good and will do no harm. In regard to the latter he is mistaken. The same principles that guide their removal in other people should apply to hypertensive individuals, with an added precaution: The wholesale removal of teeth and tonsils may actually be dangerous to the hypertensive individual with advanced hypertensive vascular or renal disease. Coronary occlusion, apoplexy, and uremia are some of the accidents that may follow.

The most recent surgical trend I view with misgivings, that is, the various operations on the sympathetic nervous system—cervicothoracic and lumbar ganglionectomy, denervation of suprarenal glands, and resection of splanchnic nerves—that are recommended to control hypertension. It is obvious that this is a very one-sided and superficial approach. However, the same thing might be said of the removal of the thyroid gland in Graves' disease. In spite of increasing knowledge concerning the constitutional nature of the latter disorder, surgery remains today as the most practical method of dealing with it. Time alone will permit us to judge the results of surgical procedures in the treatment of essential hypertension.

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ABSTRACT OF DISCUSSION

CHARLES FALKOWSKY, JR. (Scranton): This is a subject in which we are all vitally interested, for 12 per cent of our patients are hypertensive. Nothing receives less attention than hypertension. And nobody knows anything about it. I sometimes wish that physi-

cians would throw away blood pressure apparatus and use ophthalmoscopes.

S. LEON ISRAEL (Philadelphia): Dr. Weiss referred to the pituitary gland as a possible factor in the etiology of essential hypertension. It is true that the pituitary gland has become a veritable clinical catch-basket, in the last decade, and we must be wary in evaluating its importance in each of the entities with which its name is currently linked. However, as signified by Dr. Weiss, there is some evidence which indicates a possible rôle for the anterior lobe of the pituitary gland in relation to the etiology of essential hypertension. Briefly, the evidence suggests that hyperfunction of the anterior hypophysis is present in essential hypertension, and it may be summarily presented as follows: (1) Marked hypofunction of the anterior hypophysis (Simond's disease) is associated with hypotension. Conversely, hyperfunction of the anterior pituitary lobe (basophilic adenoma) is accompanied by hypertension. (2) Cushing found basophilic cells invading the posterior lobe of the hypophysis in cases of essential hypertension. (3) Eclampsia with hypertension has been associated with pituitary basophilism in necropsy studies. (4) Kylin, a Scandinavian proponent of the pituitary hypothesis in essential hypertension, claims to have demonstrated a direct and remarkable relationship between the urinary excretion of the gonadotropic principle of the anterior hypophysis (prolan) and the degree of essential hypertension.

In a recent report, Kylin reviewed his contentions and reasserted them on the basis of prolan determinations in 40 patients with essential hypertension. It is to be noted that all of Kylin's patients were over age 40.

That this theory is an attractive one cannot be denied, but definite confirmation is lacking.

With the purpose of repeating Kylin's clinical experiment and attempting to determine the relationship (if any) between hypertension and excretion of prolan, Dr. Maxwell Scarf and I recently studied 12 patients with essential hypertension at the Mount Sinai Hospital in Philadelphia. All the patients were under age 35 and were purposely so selected in order to eliminate the possibility of error in prolan determination. (It has been shown that 75 per cent of men and women near the menopausal age excrete excessive quantities of prolan.) The systolic pressures of the entire group of 12 patients ranged from 156 to 220. They had been placed in the category of essential hypertension after prolonged medical observation and study. In addition to the urinary excretion of prolan, the specific dynamic action of protein, sugar tolerance, and basal metabolic rate were determined for each patient. The latter 3 studies were added to the experiment because they are often accepted as evidences of anterior pituitary function. No significant changes were demonstrable in any of the 12 patients with regard to the specific dynamic action of protein, sugar tolerance, or basal metabolism. Furthermore, no excessive excretion of prolan was found in spite of the fact that Kylin's technic (the precipitation method of Zondek) was followed.

It is realized that the urinary excretion of the gonadotropic principle of the anterior pituitary lobe is at best a very poor criterion of pituitary function. However, contrary to the opinion of Kylin, our observations do not lend weight to the theory which attempts to link essential hypertension to hyperfunction of the anterior pituitary lobe.

THE IMPORTANCE OF VENESECTION AND VENOUS PRESSURE TO THE GENERAL PRACTITIONER*

HAROLD F. ROBERTSON, M.D., PHILADELPHIA

Venesection in congestive heart failure is rapidly becoming a lost art. The medical student and general practitioner of today have a knowledge of its importance which is far too scant for adequate practicality. This is more true of the younger generation of physicians than the older, since it was considered a popular and useful procedure in days gone by. This may be due to a lack of emphasis in the medical curriculum or the additional therapeutic agents at our command. These may lessen the importance of one of the oldest and most common remedial devices at hand. We learn from the Talmud that venesection, cupping, and leeching were well known among the Jews about the second century A. D., and it is fair to assume that they were known before that time. The first record of bloodletting in European practice is to be found in the work of Hippocrates. The human element, however, throughout the centuries greatly abused phlebo-

my, believing it to be a panacea. Wordy battles waged by brilliant minds for and against this procedure have continued to the present. Yet in spite of all this marshalling of genius and talent against it, bloodletting still holds a formidable place in the treatment of heart failure. Its importance, however, is frequently overlooked as a life-saving measure. Let us consider briefly its physiologic and therapeutic aspects with particular reference to failure of the right and left heart.

"By far the greater part of the clinical situation in cardiac failure is due directly to venous engorgement exhibited as passive congestion in various organs and as exudates from serous membranes. As such engorgement occurs, the venous pressure rises, to fall again as the engorgement is reduced or disappears. Venous pressure may, therefore, be said to represent not only the primary factor that underlies the symptoms and functional pathology or cardiac failure, but to be responsible, also, in large part, for the

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physical signs accompanying it, such as edema, congestion, cardiac dilatation, orthopnea, cyanosis, and reduced urinary excretion. As the principal underlying factor in these conditions and as the main index of cardiac behavior, it is the most reliable and important single factor to determine and to follow accurately when this clinical condition develops or when it is impending."¹

Under normal conditions the heart transports as much blood as comes to it and there is merely a temporary rise of venous pressure. In cardiac decompensation, on the contrary, the burden upon the heart exceeds its physiologic response. It cannot convey into the arterial circulation the blood that comes to it from the venous circulation. Venous stasis ensues with a resultant failure of the ventricles. Experimentation has shown that the decompensated heart needs more oxygen than the normal heart, whereas under the foregoing conditions its supply of oxygen is actually lessened. Venesection in such instances reduces the high venous blood volume and lessens the abnormal right ventricular burden, thus frequently proving to be the emergency measure par excellence to prevent exodus.

The question naturally arises as to the indications for this procedure. What are the criteria by which we can ascertain the optimum urgency for phlebotomy? On the medical service of Dr. William Egbert Robertson at the Philadelphia General Hospital, the following routine is observed.

First, an approximation of the venous pressure is made by the method of Gaertner, who, in 1899, aptly considered the vein as a manometric tube connected with the right auricle. Thus, a prominent vein is selected on the dorsum of the hand. The hand is then raised slowly with the arm fully extended until the level of the right auricle is reached, whence, in the normal person, the vein is seen to go from a state of filling to one of collapse. In cardiac congestion, however, the outstretched hand must be raised considerably above this zero pressure level to a height consistent with the amount of venous pressure present. If the pressure is high, it is then necessary to raise the hand to an appreciable height above the level of the right auricle. This distance can be measured as a rough approximation of the venous pressure. When this pressure head becomes less after one or more venesections, again it furnishes a roughly measurable factor without the use of apparatus. The collapse of the vein occurs when the venous pressure falls to a level not exceeding the hydrostatic pressure. The importance of this procedure is readily demonstrated after a venesection, at which time it is

found that the venous pressure is lowered. If the heart tonus is such that recovery can take place, then the pressure remains lowered because of the lessened load and improved circulation. If it is too badly damaged and cannot respond, the venous pressure will be seen not to decrease materially. Thus, there is a prognostic value attached to this procedure as well as a method enabling the physician to decide when venesection is or is not indicated.

In addition, the direct method of venous pressure determination is routinely utilized when time affords. Under these circumstances, we use the simplified technic as described by Dr. William G. Leaman, Jr., of the Woman's Medical College Hospital. This technic consists of an upright manometer tube connected to a special adapter and an 18-gauge needle. The needle is inserted directly into the antecubital vein, and as the blood rises in the manometer a direct reading is taken in centimeters of blood. Venous pressure readings should be made daily, since, as Leaman states, "It is the venous pressure trend that is significant."²

Normal values for venous pressure at the level of the right auricle taken in the upright position are from 90 to 125 mm. of water. In failure of the right heart are included those cases manifesting signs of venous congestion, dyspnea, cyanosis, ascending edema, effusion into the serous sacs, and enlargement of the liver. In failure of the left heart are included those cases with cardiac dyspnea without engorgement of the systemic veins and also cases of diminished vital capacity with cardiac asthma. The presence of protodiastolic gallop rhythm or accentuation of the pulmonic second sound is accepted as additional evidence. In these cases there is usually no enlargement of the liver, no cyanosis, and no venous congestion.

Venesection is greatly enhanced if ascending edema is present by aseptically puncturing the edematous areas with the tip of a scalpel, after which continuous wet dressings of hypertonic sodium chloride (for its osmotic effect) and 2 per cent sodium citrate (for its anticoagulant effect) are applied to the punctured areas. This further reduces the peripheral cardiac burden and is far more satisfactory than Southey's tubes. The decrease of the circumferential load by means of venesection and multiple punctures permits a more efficient use of digitalis because of the lessened myocardial resistance.

Recent study at the Philadelphia General Hospital in conjunction with Dr. Ferdinand Fetter has shown surprisingly good results with combined phlebotomy and lumbar puncture in cardiac

failure. Since the venous and spinal fluid pressures are closely related in failure of the right heart but not in failure of the left heart, a series of experiments were carried out to determine the relation of arterial, venous, and spinal fluid pressures with respect to congestive heart failure. The results divulged a striking correlation of the venous and spinal fluid pressures in right heart failure, less in left heart failure, and no correlation whatsoever between the arterial blood pressure and the venous or subarachnoid tension in either right or left heart failure. A method was consequently devised by which, in yielding of the right heart, 10 to 20 c.c. of spinal fluid were drained, together with a venesection. The pressure around the medullary center of respiration was greatly relieved as well as the peripheral cardiac burden. This method afforded greater relief than the practice of one or the other method alone.

In conclusion, venesection, if properly utilized in conjunction with venous pressure determinations, multiple puncture of edematous areas, and combined lumbar puncture, offers a therapeutic aid of considerable consequence, particularly in severe cardiac failure.

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ABSTRACT OF DISCUSSION

WILLIAM G. LEAMAN, JR. (Philadelphia): Venous pressure determinations are no longer of theoretical and laboratory interest but are rapidly becoming an important aid to the general practitioner in bedside diagnosis. Since an elevation of the venous pressure precedes the usual clinical signs of congestive failure, these readings have their greatest field of usefulness in the diagnosis, prognosis, and treatment of cardiovascular disease.

At the eighty-fourth annual session of this society at Wilkes-Barre last year we presented a motion picture film from the Department of Cardiology of the Woman's Medical College of Pennsylvania showing the ease with which a *direct* venous pressure determination could be made in the outpatient department. Continuing our work with the direct method of venous pressure determination throughout the past year has served to increase our enthusiasm in regard to the value of these readings. A few examples may be cited.

In patients with cardiovascular disease and obesity, particularly if these conditions are complicated by pregnancy or abdominal tumor, the signs observed, particularly the dyspnea, may be difficult to evaluate clinically. In such cases elevation of the venous pressure is a guiding beacon in treatment, and digitalis and bed rest are advised until cardiac balance is restored and severe congestive failure avoided.

In caring for pregnant women with heart disease which, in nearly all cases is rheumatic in type with

mitral stenosis as the predominating valvular lesion, venous pressure elevation has proved its value in detecting early myocardial failure. Here again the usual signs of congestive failure are obscured. However, an upward trend of the venous pressure readings taken on successive days is a warning to heed inasmuch as many thousand cubic centimeters of fluid may be stored away in the tissues of the body before the first visible evidence of edema appears above the clinical horizon.

In pneumonias in which the circulatory status may be clouded by the lung changes, routine venous pressure readings are valuable. They forewarn the clinician of circulatory collapse and indicate the time when venesection may be employed to the greatest advantage. Furthermore, beginning elevation of the venous pressure furnishes a strong contraindication to the overloading of the circulation by transfusion and other intravenous infusions.

At times the general practitioner will find it profitable to fall back on venous pressure as an aid in the differential diagnosis of allergic from the so-called cardiac asthma. High venous pressure values will be found in cardiac cases whereas the allergic cases usually show figures within the normal limits.

Three years ago at the Philadelphia General Hospital, where we first used our simplified apparatus described last year, we were much interested in venous pressure as a prognostic aid in heart disease. A downward trend of the venous pressure readings following bed rest, digitalis, and venesection gave a good immediate prognosis in patients with congestive failure whereas increasing values on successive days or a continuation of the venous hypertension invariably attended a poor prognosis.

In the absence of heart failure, patients with hypertension, endocarditis, chronic valvular disease, paroxysmal tachycardias, and fibrillation have shown normal venous pressure values. In other words, the readings are normal as long as the myocardium is able to cope with the situation and move the blood from the right side to the left.

WILLIAM EGBERT ROBERTSON (Philadelphia): In discussing this paper I desire to accentuate the clinical difference existing between cases of dominant left ventricular and dominant right ventricular failure. In the former there is edema of the lower extremities, often more or less extensive tissue edema, but the serous cavities remain free and the liver is not enlarged. Cyanosis is not a striking feature, the dyspnea is moderate, and neither venous pressure nor spinal fluid pressure are elevated even when arterial hypertension exists. Such cases are not benefited to the same extent by venesection as are cases of right ventricular failure, although some degree of mobilization of fluid occurs as a result of restoration of blood volume. In dominant right ventricular failure the earliest manifestation is dyspnea, next cyanosis. Fine inspiratory râles may be heard at the base of the right lung, at first dispelled by deep breathing. Later the râles persist, the percussion note becomes impaired, and finally fluid collects in the right pleural cavity. Enlargement of the liver to a greater or less extent is practically a constant accompaniment, and at a later period ascites develops. Edema of the legs and other tissues is negligible, often absent. Venous and spinal fluid pressures are elevated, and coma may occur in the most extreme types. Response to lumbar puncture in the comatose cases is often spectacular, but venesection alone suffices in most instances. Many cases are seen in the wards of the Philadelphia General Hospital. It is our custom to remove 14 ounces of blood the first

day, 10 ounces the next, and 8 ounces on the third day. We never begin digitalizing until peripheral resistance has been reduced and mobilization of fluid is established. When dyspnea and cyanosis are marked, paracentesis of the pleural cavity is practiced, but in many instances the pleural fluid is absorbed promptly as a result of the venesection. You may remember the

character in *Gil Blas*, Sangrado the bleeder, and the epithet applied to Benjamin Rush, whose enemies referred to him as the modern Sangrado. We, too, may be included in this category, but the prompt comfort conferred upon some patients and the almost immediate recovery from coma in others abundantly justify the procedure.

AGE INCIDENCE AND MORTALITY IN CORONARY OCCLUSION*†

A Review of 400 Cases

WILLIAM L. MULLINS, M.D., PITTSBURGH

Since the publications of J. B. Herrick in 1912, 1918, and 1919, interest in coronary occlusion has increased considerably. So many papers have been published on the diagnostic features of the condition that it is now readily recognized by most physicians. With this increasing recognition has come such a change in the outlook of the disease that mortality figures formerly regarded as being accurate are now very much in question.

The following study comprises 400 patients seen consecutively in hospital, consultation, and private practice between July, 1928, and July, 1935. All of these patients had complete physical examinations and the necessary laboratory examinations if time and the condition of the patient permitted. Electrocardiograms were made in 95 per cent of the cases, and several thousand electrocardiographic tracings were preserved. No case was included in which there seemed to be the slightest doubt in diagnosis; and as all of the examinations were made by a single individual, the criteria for diagnosis were constant throughout.

Of the 400 cases 300 were males and 100 were females. The average age of the males was 52, the youngest being age 28 and the oldest age 82. The average age of the females was 55, the youngest being age 33 and the oldest age 75. The average age of the entire group was 54. The immediate mortality for the 400 cases was 9 per cent. Patients who died within a period of 2 months following the initial attack are included in this percentage whether death was due to the effects of the original attack, to the extension of the thrombus, or to new occlusion.

Fig. 1 shows the incidence in 5-year age groups. The greatest number of cases in the entire group and in both males and females

considered separately occurs between ages 55 and 59. Although the average age of the females is 3 years higher than that of the males, the graphs for both sexes closely resemble one another.

Fig. 2 shows in block charts the number and percentage of cases in 5-year age groups. It is interesting to note that approximately one-third of the cases occurred before age 50 and approximately two-thirds before age 60. In the period from ages 35 to 39, the percentage of female cases is almost double that of males. This is

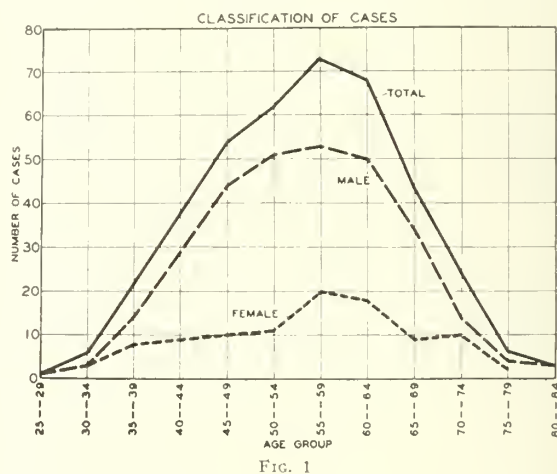


FIG. 1

accounted for by the inclusion of 5 females whose occlusions occurred during the course of a syphilitic aortitis.

Fig. 3 shows in percentage the immediate mortality of all cases in the various age groups. The mortality increases definitely with advancing years from ages 45 to 79. In the 5-year period from ages 40 to 44 the slightly higher percentage can be explained as a statistical variation because of the small number of deaths. No deaths occurred in the initial attack in patients under age 40.

Fig. 4 (right block chart) shows the outcome of 80 cases which were examined between July,

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

† From the Heart Department, Mercy Hospital, Pittsburgh, and the University of Pittsburgh.

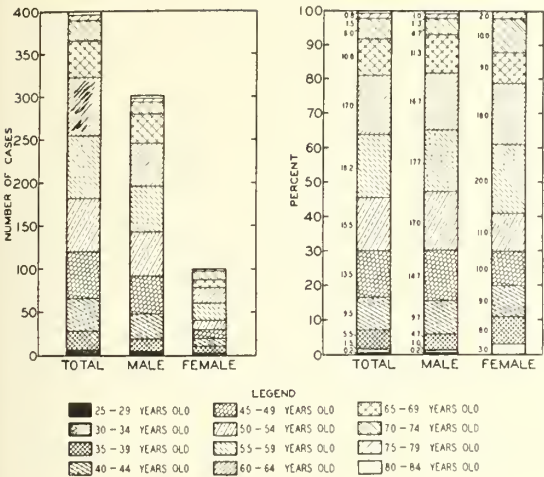


FIG. 2

1928, and July, 1930, and followed to the present date. The immediate mortality of these 80 cases was 7.2 per cent, 7.7 per cent in males, and 6.7 per cent in females. At the end of 1 year 13.9 per cent of males and 13.4 per cent of females were dead. At the end of 2 years 20.1 per cent of the males and 26.7 per cent of the females were dead. No female died in the third, fourth, or fifth year, and at the end of 5 years 63 per cent of the males were living and 73 per cent of the females.

Fig. 4 (left block chart) shows the percentage figures for 326 cases which have been followed in the period from July, 1928, to July, 1935. It was impossible to obtain satisfactory follow-up information on the remaining 74 cases. These 74 cases survived the initial attack. The percentages in the chart show a higher mortality because the estimation of deaths in the initial attack has been based erroneously on 326 cases when it should have been based on 400. The corrected percentages in this chart closely parallel those in the group of 80 cases followed from 5 to 7 years. The percentages, however, are constantly changing; since this chart was prepared one week ago, 2 patients, one whose attack occurred in 1931 and the other in June of this year, died suddenly.

Fig. 5 shows the monthly incidence of initial attacks throughout the 7-year period. Almost twice as many initial attacks occurred during December, January, and February as occurred during the summer months. Climatic change must be responsible for the wide variation. It has been noticed that thrombotic affections are much more common during the colder months. Francis C. Wood in an analysis of 133 cases of coronary occlusion noticed a similar curve.

In 1929 Samuel A. Levine reported 145 cases of coronary occlusion with an immediate mortality of 53 per cent. In 1930 Lewis A. Conner reported 287 cases with an immediate mortality of 16.2 per cent. In August, 1935, Arthur M. Masters reported 75 cases with an immediate mortality of less than 2 per cent. The wide divergence in these figures may be explained by the difference in the case material studied and by the time during which the studies were made. Increased familiarity with the symptoms of coronary occlusion has rendered more easy the recognition of the milder attacks. Levine's cases were collected from 1915 to 1929. Many were hospital cases; in others the diagnosis was not made until necropsy was performed. His individual case reports indicate that practically all had severe attacks. Almost two-thirds of Conner's cases came from the ward service of the New York Hospital and the outpatient clinic of the Cornell Medical College. The cases were collected from 1913 to 1930. Masters' group of 75 cases was seen between 1928 and 1935. His patients were a selected group from private practice in whom early diagnosis was made and prompt and prolonged treatment instituted and maintained. During the earlier years of Levine's and Conner's studies the milder cases of coronary occlusion very frequently escaped recognition and rarely reached the hospital or free clinic. The cases diagnosed during these years were usually of the most severe form. Ward and free clinic patients do not usually seek treatment unless seriously ill. Even then their treatment is not as efficient or as prolonged as that of private patients.

In order that a clearer picture of the mortality could be obtained, private and ward patients were not divided into separate groups in the present study. However, it was found that the mortality in hospital patients was greater than

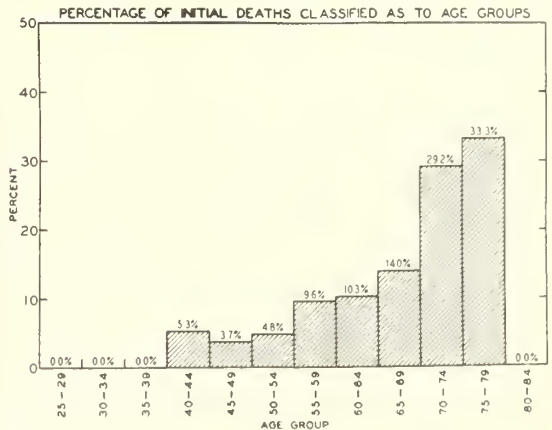


FIG. 3

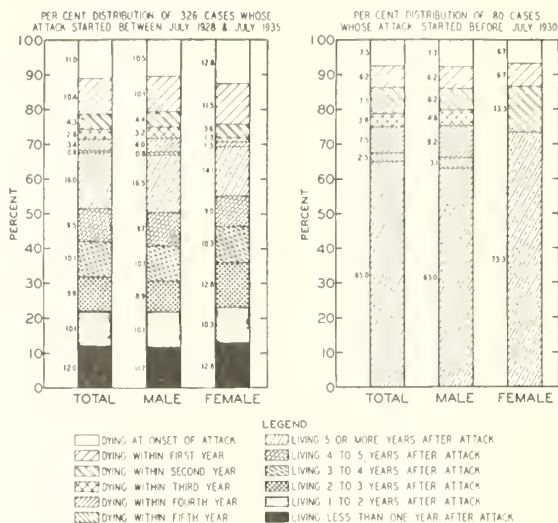


FIG. 4

in those patients seen in consultation. The reason for this may be found in the fact that the Mercy Hospital is close to the business center of Pittsburgh. Patients in whom attacks occurred during working hours and who were so seriously ill that transportation home seemed inadvisable were brought to the hospital. When the initial attacks were of less severity, the patients were likely to go to their homes. Others whose progress was unsatisfactory at home were moved to the hospital as a last resort.

The mortality of 9 per cent in the initial attack seems low in view of the seriousness with which coronary occlusion is regarded by the medical profession. Levine's figures have been extensively quoted, and on first thought seem to show accurately the mortality in this disease. During the present study it was noted that the writer's memory of those patients whose deaths had been dramatic was much clearer than that of those who had made good recoveries. Sudden and unexpected death produces on the mind a mark that is almost indelible.

SUMMARY

The age incidence and mortality of 400 cases examined from the Heart Department of the Mercy Hospital, Pittsburgh, are tabulated. The immediate mortality in all cases was 9 per cent. In 80 cases seen between July, 1928, and July, 1930, the immediate mortality was 7.2 per cent. Fifty-two of these patients are living at the present time. There was no immediate mortality in patients whose attacks occurred before age 40. The immediate mortality increased gradually from ages 40 to 80. Initial attacks occurred

almost twice as frequently during the winter as during the summer months.

Mercy Hospital.

ABSTRACT OF DISCUSSION

ELLIOTT B. EDIE (Uniontown): Dr. Mullins' contribution emphasizes the futility of relying on memory alone for a clear conception of a clinical entity. My mental picture of the occlusion patient has been that of an ambitious, hard-driving business or professional man, age about 50, a brain worker of sedentary habits. This evidently came about because of a few vivid and dramatic experiences, especially with patients who were personal friends, but a tabulation of cases seen during the past few years proved the inaccuracy of my memory. No common denominator appears in this list, either in race, physique, temperament, occupation, or social position. The patients range from the coal miner, age 30, to the housewife, age 70. The condition is, however, sex-linked, about 75 per cent of the patients being men. The ages varied greatly, but about one-half were between age 46 and age 55. The importance of this disease to society is that so many men of training and experience are incapacitated when 15 or 20 years of usefulness might have been expected.

A study of the incidence of coronary disease does not seem to disclose anything on which a theory of causation might be based. Comparison with reliable statistics from other countries would be interesting and might be useful. The reason for the difference between the sexes is a subject for speculation only; it may have to do with the greater frequency of intravascular strain in the male or it may be only a further proof that, biologically, man is the weaker sex.

Our ideas of the mortality in coronary occlusion have changed greatly in recent years. The 1925 edition of Osler's *Practice of Medicine* contains very little about

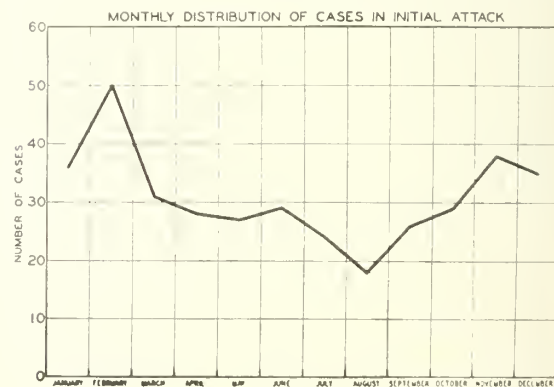


FIG. 5

diagnosis, nothing about treatment, and states, "The outlook in obstruction of the coronary arteries is very grave. Even if an attack is recovered from, the duration of life will not be long." Now we can give assurance that the patient in a first attack has more than a 90 per cent chance of survival and a reasonable hope of resuming a useful, though not strenuous, life. The prognosis as shown by Dr. Mullins is good in inverse proportion to the age of the patient. It is good in direct proportion to the ability and willingness to carry out the regimen advised by the physician, especially for

the first few months. The seasonal incidence noted in the paper suggests a therapeutic measure for the patient who has a condition suggestive of coronary disease and who has an ample bank account. In the near future the statistics of Dr. Mullins and Dr. Wood may be quoted in the alluring advertisements of Florida, Arizona, and Southern California.

WILLIAM D. STROUD (Philadelphia): May I ask Dr. Mullins if in studying the electrocardiograms of these patients he has been able to tell whether the ones in which the prognosis is best have had occlusion of the posterior vessels, and those in which the prognosis is less favorable have had occlusion of the anterior vessels?

One reason why the number of attacks in August

was less is because so many people take their vacation in that month.

ROBERT B. CAMPBELL (Mt. Union): In regard to coronary occlusion in patients with sedentary habits, why should they not improve their heart condition by rest? It has been thought that rest is paramount to the heart; then why should sedentary habits not give rest to the heart and the coronary artery?

DR. MULLINS (in closing): In reply to Dr. Stroud, I have not attempted to analyze the T I--Q I, T III, and Q III types in the present study.

Apparently Dr. Campbell directed his question to Dr. Edie rather than to me, but the aim in the treatment of all cases was rest and drug therapy which would accomplish this.

REMOTE SYMPTOMS IN UPPER RESPIRATORY INFECTION*

JOHN B. PRICE, M.D., NORRISTOWN, PA.

In a recently published book a prominent bacteriologist says: "The scientist describes impersonally the external world, the artist expresses the effects which external things exert on his own mind. In both cases the more generally applicable the observations, the greater the science or art."

My attention was drawn to this subject some 5 or 6 years ago, when I suggested to a physician that he prescribe for an infant a nasal instillation of silvol 10 per cent and 1 dram of 1 per cent ephedrine hydrochloride. The mother instilled this prescription into the child's nose and after several instillations noted a swelling of the child's abdomen. The instillations were stopped, but the abdominal tenseness remained. The child was taken to the hospital and died from acute ileus paralyticus. This incident, of course, was naturally attributed to an idiosyncrasy to ephedrine.

A few cases from the Montgomery Hospital, Norristown, Pa., will be presented briefly. Their general applicability will be left to your judgment.

CASE REPORTS

CASE 1.—Infant, age 10 months, had repeated head infections since birth. Taken ill very suddenly. Chief symptom—ileus paralyticus. All known methods for relieving the condition failed. Bilateral otitis media noted and double myringotomy performed. Pus in both middle ears. Immediate cessation of all symptoms. Ileus completely relieved.

CASE 2.—Boy, age 12. Tense abdomen. General appearance cachectic; history of chest infections; low white blood cell count—high lymphocyte count; temperature chart variations of 2° per day. Diagnosed as

possible tubercular peritonitis. Both ears subsequently found to be under pressure. Ear drums incised. Abdominal symptoms immediately relieved. Both ears subsequently showed seropurulent drainage.

CASES 3 and 4.—Both private aged patients. Both patients operated on for acute abdominal obstruction; both developed hiccough. Relieved by paralyzing area over sphenopalatine ganglia.

CASES 5 and 6.—Both private patients. Tinnitus aurium—dizziness and headaches, mostly frontal. Both patients had large number of gold-capped teeth. Removal of caps relieved practically all of the symptoms.

CASES 7 and 8.—Both patients had mastoid pain and tenderness and severe frontal headache with intense supra-orbital neuralgia. No evidence of mastoiditis. Extirpation of a posterior auricular gland over the tip of the mastoid in each case relieved all symptoms.

CASE 9.—Private patient, age 14. Severe symptoms—temperature 103° F., vomiting, pain in abdomen, general appearance of acute illness. Appendicitis suspected. Had been operated upon 7 years previously for double mastoiditis. Right mastoid wound reopened and large quantity of pus evacuated from the antrum, also from the adjacent ethmoid area. Middle ear drained. Patient immediately began to recover. No appendectomy performed.

CASE 10.—Patient brought in for appendectomy. All abdominal symptoms present—pain, tenderness, nausea, with increased white blood cell count. On suggestion of colleague the throat and head were examined. Infected tonsils and acute ethmoiditis were suggested. The following day an acute tonsillitis developed, also a purulent ethmoiditis. The patient did not have an appendectomy, and subsequently was discharged free from all symptoms.

These observations or empirical phenomena have made me wonder what the relation may be between the neuro-anatomic and remote symptomatology in the presence of infection or pressure in the upper respiratory tract.

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

It appears that the phenomena noticed empirically must have some distinct association with the various communicating nerves and their systems that are distributed throughout the body. If the entire body does contain a vast system of communicating and interlocking nerves and branches, it appears that in some instances various phenomena may arise from either their stimulation or inhibition; or it may be possible that these distant phenomena are caused partly by toxins from the diseased area being absorbed and carried to distant organs by the circulation.

They may be due to what is described by neurologists (Head, Mackenzie, Spiegel, and others) as "irradiation phenomena." Briefly this theory holds that a neuron in a state of hyperexcitation due to pathologic irritation creates abnormal impulses, which stimulate other neurons that do not act normally that way, and distant symptoms result.

Attention is directed to the possibilities that may arise from disturbances in the upper respiratory tract which profoundly influence the nerve contacts of the trifacial tract or system and its accompanying system, the facial nerve system, when they are transmitted to other parts of the body.

The trifacial nerve is divided into 3 branches: First, ophthalmic; second, maxillary; and third, mandibular or inferior maxillary. The main ganglion of the trifacial is in the brain and is known as the gasserian ganglion. The ganglion of the largest of the division of the trifacial system is the sphenopalatine (Meckel's), which is the ganglion of the sensory division of the second or maxillary portion of the nerve. This is located in the posterior portion of the pharynx in the sphenopalatine foramen. This is below the sphenothmoidal fissure, where the nerve escapes from the cranial cavity to the pharyngeal wall. It is from this ganglion and this area that most of the important connecting links are distributed.

The facial nerve is to a very large extent a motor nerve, but it has crossing and recrossing branches, which bring it into complete union with the trifacial mechanism.

According to some authorities there is a sensory nerve connection to the facial, known as the nerve of Wrisberg, which is referred to by some anatomists as the sensory facial nerve, but the great connection is the nerve known as the superficial petrosal.

Sluder, in his book on *Headaches of Nasal Origin*, refers to the relationship between the nasal or sphenopalatine ganglia and various

headaches as being due to the irritation along the various branches of the trifacial nerve.

Ruskin, however, claims that these pains follow closely the distribution of the facial nerve. He quotes Quain, anatomist, who believes that the facial nerve has communication with the acoustic nerve, which is connected by a branch to the geniculate ganglion of the facial, which may explain various attacks of vertigo. He also believes that the facial nerve has communications with the sphenopalatine ganglia by way of the superficial petrosal, the auricular branch of the vagus, the glossopharyngeal, the main vagus, the auricular nerves, and the trifacial itself. Thus one can see the possible effect along any of the branches of the fifth, seventh, ninth, and tenth cranial nerves, besides a great many of the lesser communicating trunks or branches. The reverse of this is also true, that any infection or pressure or infection along the trifacial and, more particularly, the sphenopalatine ganglia will cause disturbances along these various nerve lines.

Other micro-anatomists have shown the direct connection between the nerves of the upper respiratory tract and the sympathetic and parasympathetic systems. There is no question of the anatomic relationship of the fifth, seventh, and tenth nerves and their communicating branches with the sympathetic and parasympathetic nervous systems.

This paper, however, concerns chiefly the relationship of the sphenopalatine ganglia with these various nerve systems and their connection by communicating branches. The consequent phenomena that occur in other parts of the body following infection or pressure in the region of the sphenopalatine ganglia are assumed to be through these anatomic pathways.

Most attention clinically has been directed chiefly to the bacterial rather than to the anatomic cause of disturbances, whether near to or distant from this area. The thought occurred, however, that not only were nerve impulses directed along these connecting lines with manifest areas of pain, but possibly that subsequent pathologic involvement was due to the overloading or overstimulating of these nerve lines or their systems when interfered with in their normal innervation. It is entirely conceivable that, just as Rosenow in his work on focal infection about 30 years ago proved that streptococci have specific and elective localization in different parts of the body, so it may be that certain involvements in the nerve tract of the upper respiratory area have their terminal sensitization in some elective or specific locality.

The sphenopalatine ganglion lies in the sphenopalatine fossa very near the sphenopalatine foramen. According to Schaffer and other anatomists (Piersol, Kuntz, and Sluder), it possesses motor, sensory, sympathetic, and parasympathetic roots; it is connected with the facial nerve (by the nerve of Wrisberg) in its motor and parasympathetic branches; and its sympathetic root is connected through the carotid plexus. The parasympathetic portion and the sympathetic portion are connected by the superficial and deep petrosal to the vidian nerve, and the vidian nerve in turn is joined with communicating fibers to the vagus.

The sphenopalatine ganglion has distribution not only through these connections, but has branches sent into the orbit, the nose, the nasopharynx, the palate, and the mucous membrane of the middle and posterior accessory sinuses. The nasopalatine, the nasociliary, and the ethmoid nerves are all supplied by connecting branches from the sphenopalatine ganglion.

In a paper written by Karl Christensen, of the St. Louis University School of Medicine, December, 1934, he comes to the conclusion that the afferent functions of the sphenopalatine ganglion and its branches may be explained satisfactorily only on the basis of the afferent fibers which traverse them. He writes as follows:

"A study of the nerves connected with the sphenopalatine ganglion gives no evidence that sensory fibers arise in this ganglion; rather that many of its sensory functions are really functions of fibers which traverse it and nerves with which it is connected. This ganglion, the most important of all the cranial autonomic ganglia, is not only associated anatomically with the ganglia of the seventh nerve, but is also traversed by afferent fibers of the vagus and upper thoracic nerves which ascend in the plexuses on the carotid arteries and reach into the nasal mucosa by connecting branches."

This explains a great many of the phenomena that are present during infections in the sinuses, the pharynx, and the mastoid region of the upper respiratory tract. Any disturbance, particularly infection or pressure, that seriously interferes with the proper conduction of nerve force along any of these nerve lines may be transmitted; or some pathologic involvement may take place according to the intensity of the overload along the line in which it follows, even to the complete exhaustion of a nerve area and its distribution.

The subject opens up a vast field of speculation and certainly has a direct bearing on clinical diagnosis.

My most recent case was that of a patient taken sick with all the evidences of some serious illness. All the clinical signs of abdominal involvement were present—pain, tenderness, increased temperature, and discomfort. Laboratory tests did not substantiate abdominal involvement. Several days after the onset, attention was drawn to the sinuses and ear. An acute otitis media, with a mastoid antrum full of pus and large quantities of pus in the ethmoid, proved to be the etiologic factor of this disturbance. Incision and drainage of the ear and antrum relieved the condition. (Later the patient developed herpes auricularis.) The diagnosis came about through the family physician's knowledge of this possibility, and he thus saved the patient from a rather perilous operation.

When more is known about the physiology of the nervous system of the upper respiratory tract and its correlation with normal bodily functions, pathologic involvement resulting from infection or pressure along its nerve pathways will result in more accurate diagnosis, which will explain many obscure and baffling phenomena. The laboratory and clinical evidence of functional disturbances will also have a valuable and convincing aid.

How can this be put to practical use in medicine? There are 2 ways by which these phenomena may be utilized practically. The first is this—not every pain or transmitted impulse is a sign or symptom of disease at the point where the patient feels or localizes the pain. Perhaps stimuli arising in the mouth or nose or throat may bring about pain or disturbance in remote parts of the body, either by irradiation or by the anatomic communications. The headache, the abdominal pain, the intercostal pain, the pain in the big toe may be evidence of some remote disturbance. Secondly, the ear, nose, and throat will have to be watched more frequently. It seems strange that the head, where some of the most important autonomic nerve ganglia in the body exist, is usually investigated as a last resort in the numerous chronic, subacute, and acute conditions.

824 DeKalb Street.

ABSTRACT OF DISCUSSION

GEORGE M. COATES (Philadelphia): Although we all recognize that pathologic involvement in various portions of the upper respiratory tract often causes manifestations of pain in remote parts of the body, we are still undecided as to the *modus operandi* of such phenomena.

Much work has been done in studying the various nervous symptoms and their intercommunicating fibers, and order is slowly coming out of chaos; but the time

has not yet arrived when we can say with certainty why local conditions simulating acute appendicitis can be attributed to or caused by infection in a tooth root, a nasal air sinus, or an infected ear, or even why these reactions should be transmitted, apparently through Meckel's ganglion, to the region of the ear, thus causing an otalgia or mastoidalgia in the absence of infection in these parts. Sluder, indeed, worked from a general hypothesis, and by injection of the sphenopalatine ganglion controlled some of these manifestations of pain; but his hypothesis has been attacked by Gordon Wilson, Fenton and Larsell, and others. The apparently innumerable interconnections of the various nerves, motor and sensory, sympathetic or parasympathetic, still leave us in doubt as to the "why," although we may conjecture as to the route.

Dr. Price suggests that some of these phenomena may be caused by "irradiation," a term with which I am only vaguely familiar. I hope in his closing discussion he will explain what this process is.

While it is of the utmost importance that cases such as Dr. Price has described should be recognized and the symptoms traced to their true origin, this can be done, as he suggests, only by very careful study and co-operation between the internist or surgeon and the rhino-otologist. When it comes to tracing out possible nerve pathways in such cases, one who is not an anatomist becomes appalled by the complexity of the subject, which continues to become increasingly so as new discoveries are made. We can, however, retain a general working knowledge of these pathways that will be sufficient to guide us to the proper area in which to look for trouble when it is evident that the symptoms complained of are due to infection, pressure, or irritation of nerve fibers remote from the position where the pain is felt. Great credit is due Ramsey Hunt for his painstaking researches in this direction in his studies of herpes zoster oticus, which definitely mapped the extension of sensory filaments through the geniculate ganglion to the auricular region. It was by this same type of careful laboratory research that Fenton and Larsell were enabled to trace the sphenopalatine ganglion connections in cases of otalgia. Embryology and comparative anatomy must be carefully considered also, and as this study develops it is quite possible that in the near future it may be determined why as well as how these phenomena occur.

GEORGE L. WHELAN (Philadelphia): The essayist directs attention to several interesting phenomena associated with infection or pressure in the upper respiratory region. The nervous symptoms appear remote from the origin of the area affected, often in the region of another nerve, the origin of which is far removed from that of the nerve in the affected area.

Sometimes if an infectious disease is present the question arises as to whether the infection spreads along the nerve fibers and travels from one nerve by way of anastomosis to another or moves by way of the circulation to the area of the other nerves; whether it is simply an irradiation of the nervous irritation from one nervous area to another, where as a result of this irritation a sensation appears which is characteristic of the irritation of this area, such as pain in the face in a focus of infection involving the mastoid tip, or the case of tinnitus caused by pressure of improper capping of the teeth. Spiegel believes that if the irritation in a nerve is too strong it may overflow to another nerve and produce pain in that area, but this is not associated

with a pathologic condition in the area; it is more or less normal.

The consensus of opinion seems to be that the nerve fibers of one nerve may take the same general course as another nerve, but there is no real connection of the nerve fibers between these 2 different nerves. For example, the chorda tympani, a nerve which supplies the sensation of taste, accompanies the facial (the motor nerve to the facial muscles), but their fibers are separate the entire way. But we can imagine that an infection might spread along the chorda tympani to the facial, paralyzing the taste and the face on the same side; or that a severe irritation of the chorda tympani might extend to the facial and produce an irritation of the facial muscles.

In this relation the sphenopalatine ganglion is remarkable as nerves of different origin and different innervation go through this ganglion. Therefore, it is possible that many different symptoms may be seen when this ganglion becomes affected. Many anatomists and neurologists express doubt as to whether the sphenopalatine ganglion has fibers of the vagus and the upper thoracic nerves. It does, however, get fibers of the sympathetic system by way of the carotid plexus. We have seen such cases as described by Dr. Price in which acute suppurative otitis media appears in children, very often as a general disease with abdominal symptoms. This condition was also described by Alexander, who states that the infection of the middle ear is the symptom of a general infectious disease.

We agree entirely with Dr. Price that disturbance of the nerves and special sense organs of the head may produce symptoms in remote areas, or that the origin of the disease may be distant from the region, in the area of another nerve.

GEORGE W. MACKENZIE (Philadelphia): As to referred sensations in which the lesion is centralward of the site of the patient's suffering, the first operation performed by von Eiselsberg of Vienna upon the gasserian ganglion for obstinate pain in the distribution of the fifth nerve was a failure for the reason that the patient suffered from the late effects of cerebral syphilis. The pia mater had begun to contract about the nerve stem before it reached the gasserian ganglion. Therefore, no matter how much operating was done about the ganglion there could be no result. Disturbance could arise from any of the connections mentioned—seventh, eighth, vidian, etc.

The author mentioned a patient with vertigo, the result of tooth infection. That belongs to an entirely different group. This is a condition secondary to focal infection. Many people with infected teeth are seen without these symptoms. A case of focal infection is a condition in which the patient is constantly absorbing very tiny doses of antigen. Eventually resistance is decreased. Sooner or later some intercurrent disease, such as influenza, lowers the resistance and the secondary manifestations of focal infection develop. One of the most common of these is the so-called Meniere's disease. In the discussion of a paper read before this section a few years ago in Pittsburgh I differentiated Meniere's syndrome and Meniere's disease. Meniere's original case was one of labyrinthine suppuration in a girl, aged 14, who died of meningitis secondary to the labyrinthine suppuration. Meniere's syndrome is permissible if vertigo, nystagmus, deafness, and subjective noises are included. If there is corroborative evidence, particularly in the blood count and roentgen-ray findings of infection about the root of a tooth, and if its

removal is followed by improvement in the blood count and general condition, with Meniere's symptoms disappearing, the diagnosis of the disease and its source has been definitely established.

DR. PRICE (in closing): As stated in the beginning of this paper, these were empirical observations. It is a very difficult subject. This problem involves the autonomic nervous mechanism. It is the balancing of one system against another. Who knows but that the various factors involved in the parasympathetic and sympathetic nervous system may afford the clues to these various reactions. Replying to Dr. Coates concerning the irradiation theory I understand it was an attempt to describe referred or reflex pain.

In 1910 Mackenzie elaborated the theory previously written about by Lange, Ross, Head, and others, and later by Spiegel. He explained reflex bodily phenomena on the basis that a centripetal neuron when subjected to hyperexcitation due to pathologic process or pressure stimulated an exaggerated flow of impulses to distant ganglia.

Thus a normal impulse which would ordinarily send its stimulation to a central ganglion would be intensified and send abnormal stimuli to ganglia which ordinarily would not be stimulated and distant symptoms would result. But the question still is unsolved as to whether the anatomic pathways may hold the key to the explanation of these very baffling phenomena.

THE MALARIA TREATMENT OF PARESIS*

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Much has been written since 1917 when von Jauregg started his work with malaria in the treatment of general paralysis or psychosis with syphilitic meningo-encephalitis, and little remains to be said. However, comparatively few articles in the literature are based upon an experience of 10 years.

It is pretty generally agreed that some form of fever therapy is as effective as, if not more effective than, any other form of treatment. It is also fairly well conceded that inoculation with malaria is, in the long run, the most satisfactory method of administering heat. However, a very brief report on the results of 10 years' experience with the method may prove interesting.

Our records show that between June 1, 1924, and June 1, 1934, there were admitted to this hospital 435 paretics—321 men or 73.8 per cent, and 114 women patients or 26.2 per cent—who were presented at staff meetings and, in general, were diagnosed as cases of general paralysis on the basis of their mental symptoms, neurologic signs, and laboratory findings. A few were diagnosed otherwise at first, the diagnosis being changed later.

The main difficulty in carrying on this treatment has been in continuing the series, for not every case was inoculated as is done in some hospitals. We could not see that anything was to be gained by inoculating a patient who was in such a serious physical condition that he could not be expected to survive the treatment, or who was so deteriorated that there could be no hope of returning him to his place in life, even at a lower level. Now, when possible, we endeavor to build up those who are physically unfit on admission, and thus enable them to stand the treatment.

Treatment with malaria is not a harmless procedure but is fraught with danger unless adequate precautions are taken. There was rarely any one condition, such as serious disease of the heart or kidneys, which led us to decide not to treat a patient but usually a general deterioration, both mental and physical, sometimes more marked in one sphere than in the other. A flabby appearance with marked general tremors and ataxia or advanced age is usually regarded as a contraindication. The family is warned as to the seriousness of the condition and, in order to be safe, a signed request for the treatment is secured from the patient's nearest relative.

In this series tertian malaria was used, inoculation being done subcutaneously.

The patient is allowed to be up and about as long as he wants to, even between paroxysms, providing the heart is good and there are no other complications. Special watch is kept on the blood pressure and the hemoglobin, and the urine is examined. The patient is weighed once a week. If the blood pressure falls to 90 systolic or edema of the ankles develops, he is put to bed and given digitalis. If the hemoglobin falls to 60, he is given iron hypodermically. With blood pressure of 90 and hemoglobin of 50, the patient is watched most closely, and serious consideration is given to the advisability of terminating the treatment. To do this, quinine sulphate (grains 10, t.i.d.) is given for 1 week, or if the patient cannot tolerate quinine or requires quick action, he is given .6 gram of neosarsphenamine intravenously. There have been no cases in which these treatments have failed to stop the malaria.

Of the 252 cases of adult paresis inoculated, 15 failed to respond to inoculation—5.9 per cent. Of the 237 cases remaining, there were 183 men

* Read before the Association of Trustees and Superintendents at the Harrisburg State Hospital on Oct. 19, 1934.

and 54 women. The ages varied between 23 and 61 as indicated in Table I.

TABLE I
INCIDENCE OF ADULT PARESIS BY AGE

<i>Age</i>	<i>Number and percentage of cases</i>
20 to 30	26 (10.3%)
31 to 40	116 (46 %)
41 to 50	63 (25 %)
51 to 60	26 (10.3%)
61	1

The duration of symptoms given in the histories of such cases is often quite unreliable. However, it may be of interest to note that in these 237 cases, the duration of mental symptoms before inoculation is outlined in Table II.

TABLE II
DURATION OF MENTAL SYMPTOMS BEFORE INOCULATION

<i>Length of time</i>	<i>Number and percentage of cases</i>
Under 1 month	46 (19.4%)
1 to 6 months	88 (37.1%)
7 to 12 months	45 (19 %)
1 to 2 years	19 (8 %)
2 to 3 years	15 (6.3%)
3 to 4 years	2 (.8%)
4½ years	1 (.4%)
5 years	2 (.8%)
Unknown	19 (8.4%)

(It will be noted from this chart that 134, or 56.5 per cent, had mental symptoms for only 6 months or less before inoculation and 179, or 75 per cent, had mental symptoms for 1 year or less before inoculation.)

The types of cases treated are given in Table III.

TABLE III
TYPES OF DISEASE TREATED

<i>Physical types</i>	<i>Number and percentage of cases</i>	<i>Mental types</i>	<i>Number and percentage of cases</i>
Cerebral	163 (68.6%)	Depressed	27 (11.3%)
Tabetic	66 (28 %)	Excited or expansive	132 (55.7%)
Unclassified	8 (3.4%)	Demented	55 (23.2%)
		Unclassified	23 (9.8%)
Total	237	Total	237

The incubation time of the malaria in these cases varied from 5 to 27 days. The majority of the patients began to have paroxysms between the eighth and thirteenth day.

The number of paroxysms varied from none in a patient who died to 27 in one patient, as is shown in Table IV.

At the beginning of the work, it was thought sufficient for each patient to have at least 8 paroxysms of 103° F. or above, but the number was soon increased to 14, 15, or 16. The greater number of patients received from 10 to 17.

The smaller number of paroxysms usually occurred in patients who either stopped spontaneously or were not doing well and had to have the malaria terminated. The larger number above 16 occurred in patients who were having poor paroxysms and were allowed to have more to compensate.

The maximum temperature in a few of the cases reached 107° F., but in the vast majority of cases it was between 104.5 and 106° F.

TABLE IV
INCIDENCE OF PAROXYSMS

<i>Number of paroxysms</i>	<i>Number of patients</i>
0	1
1	4
2	3
3	9
4	6
5	7
6	9
7	13
8	7
9	10
10	12
11	17
12	19
13	18
14	15
15	18
16	35
17	15
18	5
19	2
20	2
21	..
22	1
23	2
24	..
25	..
26	..
27	1

Seizures, considered of serious import, occurred in 15 of the 51 patients who have died since the beginning of the work 10 years ago. Four of these occurred before, 5 during, and 6 after treatment. In the patients now living, seizures occurred in 13 before, 6 during, and 5 after treatment. Of the 13 having seizures before treatment, only 1 had seizures after. Of the 6 who began to have seizures during treatment, only 2 continued to have them afterward. Of the 13 having seizures before treatment, 2 had complete remissions and 2 had good remissions.

Among the complications, if it should be called such, was a severe secondary anemia, which occurred in many cases; but it usually improved rapidly after treatment was stopped. An edema of the ankles, in the absence of any appreciable heart condition, was often slower in

improving, but nearly always responded to treatment.

Other complications included diarrhea, colitis, acute gastritis, furunculosis, herpes labialis, herpes zoster, jaundice, and tuberculosis. The jaundice usually lasted only a few days, and there was the slightest evidence of liver damage.

Gain in weight usually accompanies the return of mental health as in any other mental condition and is a hopeful sign, although many of the deteriorating cases showed marked gain in weight.

With 2 exceptions, the 15 patients who failed to respond to inoculation were inoculated twice. Eight of these were negroes, and 7 white. Eight failed to respond to the first inoculation, but took at the second. Fifteen had one short series of paroxysms and were later inoculated the second time successfully. In 12, the attempt to produce a second series of paroxysms failed, although 3 were reinoculated twice. Of the 11 negroes who were inoculated, only 3 responded successfully.

Of the 237 that were inoculated successfully, 51 or 22.6 per cent have died. Of these, 41 died in this or other hospitals and 10 died at home.

Of the 51 deaths, 18 or 7.6 per cent died during treatment or within the first 3 months after the last paroxysms. It would appear that these are all the deaths that could, in any way, be justly attributed to the treatment. Of these 18 deaths, 5 occurred very early in the work before we had much experience. Quite a number of others were undoubtedly due to the scarcity of material and the necessity of inoculating patients who were recognized to be unsuitable. Six patients were recognized to be in poor condition at inoculation, and 9 were in only fair condition.

There were only 2 deaths that could be attributed to the treatment in 1932, none in 1933, and 2 in 1934.

The time of death, in relation to the attack of malaria, appears in Table V.

The cause of death reported in these cases was general paralysis except as follows: Suicide, 1; result of accidents at home, 3; diabetes and heart disease, 1; pneumonia, 5; tuberculosis, 1.

There remain to be considered 186 cases. Included in this series are those patients who, in addition to malaria, received some antityphoid inoculations to supplement the malaria treatment when the paroxysms stopped before the desired number had occurred, or when it was necessary to terminate the malaria because of the patient's serious condition. This should not detract at all from the findings, because the antityphoid treatment is not as effective as the malaria.

TABLE V

TIME OF DEATH

<i>Time</i>	<i>Number of cases</i>
During treatment or within the first few days after the last paroxysm	9
During the remainder of the first month following malaria	7
During the second month	2
During the third month	..
From the fourth to sixth months	6
From the seventh month to the end of the first year	6
During the second year	6
During the third year	3
During the fourth year	7
During the fifth year	1
During the sixth year	2
During the seventh year	1
Unknown	1

There are also included 55 patients who, following the malaria, received 10 to 12 doses of tryparsamide; 9 of these received more extensive treatment at home or in other hospitals. It is not probable that a single course of 10 to 12 doses of tryparsamide would have any marked effect on a patient. Cases that received more extensive treatment will be mentioned when the results of the malaria treatment are given.

The time of the onset of improvement varied considerably. Eight showed no improvement; 72 showed some improvement within one month. In 1 case appreciable improvement began at the end of 4 months, in 2 at the end of 5 months, in 2 at the end of 6 months, and in 1 not until the end of 9 months. Of these slowly reacting cases, 2 are in complete remission, 1 is in a good remission, and 3 are in fair remission.

Of the 186 patients living, 78 are in this or other hospitals and 96 are at home; 12 were paroled and cannot be located. The condition of the 174 who have been contacted in one way or another within the last 6 months is known with certainty.

It seems to be the consensus of opinion that the majority of untreated paretics die within 1 to 3 years. There are exceptions to this, of course. Remissions do occur in untreated cases and paretics have been known to live for 10 or more years but this is rare. Some of these may possibly have been due to elevations of temperature from some other source. Three men, plainly paretics, have been in this hospital since 1919 and one since 1920. Three of these have a history of elevations of temperature from one cause or another and one has not.

In 1923 Dr. Raynor, then of Manhattan State Hospital, reviewed a series of 1004 unselected, untreated cases and found that only 3.5 per cent

had remissions, meaning about the same as our complete remissions, and that only 1.7 per cent lived 4 years or more. It is probable that most patients coming to a hospital have had the disease for at least a year before coming under treatment. It seems probable, therefore, that most patients who are alive at the end of 4 years after the last paroxysm and are showing no advance in symptoms are in some sort of a remission and the disease is probably arrested.

The level at which these cases are arrested probably reflects little, if any, credit or discredit upon the treatment which they have received, because if treatment is not started fairly early in the disease, damage to the brain tissue is bound to occur and irremediable deterioration follows. Nevertheless, the cases treated have been classified (Table VI) according to the level at which they are now using the following terms:

TABLE VI
RESULTS OF TREATMENT

Result	Number of cases
Complete remission	56 (25 %)
Good remission	38 (17 %)
Fair remission	36 (16 %)
Poor remission	15 (6.6%)
Much improved	7 (3.1%)
Improved	14 (6.2%)
Unimproved	8 (3.5%)
Died	51 (22.7%)
	225
Unable to locate	12
Total	237

Complete Remission.—Patients who have been restored to a normal condition with no evidence of a psychosis and able to work at their old work level.

Good Remission.—Patients able to return to their place in life but at a slightly lower level and with some deterioration manifested.

Fair Remission.—Patients in whom the disease is evidently arrested but at a still lower level. In this group are now included many patients who were at one time considered unimproved but who, after 4 years, are still living fairly comfortable lives either at home or in hospitals, with fairly good health and behavior. Some delusions or hallucinations may be present.

Poor Remission.—Patients still living after 4 years but in quite poor condition either mentally or physically.

Much Improved.—Patients not definitely in a remission but greatly improved. Most of these are recent cases, the improvement in which has

not persisted long enough to regard them as remissions.

Improved.—Those showing any improvement whatever.

Of the 174 patients living and located, 78 or 34.6 per cent of the 225 cases treated are still in this or other hospitals. The length of life of these patients since their last paroxysm is shown in Table VII.

TABLE VII
LENGTH OF LIFE SINCE LAST PAROXYSM

Length of time	Number of patients
9 to 10 years	3
8 to 9 years	6
7 to 8 years	6
6 to 7 years	11
5 to 6 years	6
4 to 5 years	6
Under 4 years	40

The number of patients living in hospitals 4 years after treatment totals 38 or 21.3 per cent of 178, those treated prior to Oct. 1, 1930. Of these 78 patients, 51 are usefully employed. Of the 174 patients living and located, 96 are at home, or 42.6 per cent of the 225 cases of adult paresis treated and located. Their stay at home since the last paroxysm is shown in Table VIII.

TABLE VIII
LENGTH OF STAY AT HOME SINCE LAST PAROXYSM

Length of time	Number of patients
9 to 10 years	12
8 to 9 years	7
7 to 8 years	8
6 to 7 years	9
5 to 6 years	11
4 to 5 years	10
3 to 4 years	10
2 to 3 years	7
Under 2 years	22

The number of patients at home more than 4 years totals 57 or 32 per cent of 178 cases treated prior to 4 years ago.

The number of patients either at home or in hospitals more than 4 years after treatment totals 95 or 54 per cent.

Of the 96 patients at home only 32 could be followed satisfactorily in regard to the neurologic findings, and the serologic findings could be secured in only 23 who had not received extensive trypanamide treatment.

Of the 32 cases, there were some who, after periods of from 7 to 10 years, showed improvement, 6 in the reaction of the pupils to light, 5 in the disappearance of tremors, 7 in improved knee jerks and 8 in improved articulation, but

only 2 in coördination. On the other hand, in 2 the pupils showed a tendency to become unequal. In 2 tremors have appeared and in one the knee jerks have decreased. The great majority showed no marked change, although doing well clinically.

In the 23 cases the serologic findings showed little change for a time, although the patients show a complete clinical remission and are at home. In 5 cases the blood changed from plus 4 to negative or plus 1. Four of these cases had received no tryparsamide, and one had received one series of 12 doses of 3 grams each. In 10 the spinal fluid made the same change. Four of these had received some tryparsamide. These changes tend to occur gradually over a period of years. The gold sol test became negative in very few cases, but it showed marked improvement in 9 and considerable improvement in 5. Of the 9, 6 have received no tryparsamide and 3 had received some.

TREATMENT RECOMMENDED

As a result of 10 years' experience, we observe the following treatment:

Every patient who is in favorable condition and appears able to stand the treatment satisfactorily is inoculated at once and allowed to have from 10 to 12 paroxysms unless his condition subsequently makes it seem advisable to terminate the treatment sooner. The malaria is then followed with 12 doses of tryparsamide, 3 grams intravenously at weekly intervals, with mercury.

In patients who do not seem suitable for immediate inoculation, especially because of impaired physical condition, we endeavor to improve the physical condition by forced feeding and a course of tryparsamide and mercury. Some patients who at first seem quite unsuitable are thus enabled to take the treatment.

Patients who have received malaria and one course of tryparsamide and have made a good clinical recovery are allowed to go home. In spite of the apparently good clinical recovery, in almost all cases there has been little, if any, change in the serologic findings at this stage, and live spirochetes have been reported in the brains of paretics who have received malaria; it, therefore, seems most advisable to continue treatment, and those who are paroled are asked to have their family doctor get in touch with us. We suggest to him that during the following 3 months the patient should have a rest period from tryparsamide, as recommended by Lorenz, during which time he should receive bismuth and possibly iodides. This should be followed

by another course of tryparsamide and another rest period. How long these alternating courses should be kept up we do not know, but probably until the serologic reaction has shown a marked change.

SUMMARY

From June 1, 1924, to June 1, 1934, there were admitted to the Harrisburg State Hospital 435 patients who were diagnosed as general paralysis cases. Of these, 252 or 57.9 per cent were inoculated with malaria; 15 or 5.9 per cent failed to respond to the inoculation; 51 or 21.5 per cent of the 237 cases treated died during the 10 years. We are out of touch with 12. During the past 2 years, 85 cases were admitted and 65 or 78 per cent were inoculated.

Of the 174 patients who were treated and are known to be alive, 78 or 34.6 per cent are in this or other hospitals. Of these, 38 or 17 per cent had their last paroxysm 4 or more years ago.

Twelve of the 108 patients at home have not been contacted recently; 96 or 42.6 per cent of the 225 who were treated are known to be alive. Of these, 57 or 25 per cent had their last paroxysm 4 or more years ago. Ninety-six or 42 per cent of the 225 cases treated and contacted are alive at the end of 4 years, or 54 per cent of the 178 cases treated prior to 4 years ago.

Twenty were paroled and returned, and 2 of these were again paroled. Of the 18 who were returned and remained, 6 were in only fair condition when paroled and 4 were in poor condition. Three had had seizures before taking treatment.

Of the 225, 56 or 24.8 per cent are in complete remission and 38 or 16.8 per cent are in good remission, a total of 94 or 41.6 per cent in complete and good remission; 96 or 42.6 per cent are at home.

Of the patients in complete and good remission, only 3 had received more than one course of treatment with tryparsamide.

CONCLUSIONS

Inoculation with malaria is a comparatively safe and satisfactory method of treating paretics if suitable cases are chosen and suitable precautions taken.

It is not always possible to determine before treatment which cases will be benefited and which will not, but in the great majority the disease apparently becomes checked and the patients receive marked physical benefit. Considerable mental improvement will follow in the great majority of cases. A case that has become deteriorated will remain so.

In this series men did better than women, 32.7 per cent of the men inoculated having complete or good remissions as compared to 27.8 per cent of the women.

We are convinced that the duration of the disease before treatment has a decided bearing on the results to be expected, but we are unable to prove it from our series.

Those of the tabetic type responded slightly more favorably than those of the cerebral type, and of the reaction types the depressed cases responded best, then the excited or expansive group.

Age seems to have a decided effect on the results obtained. Ten per cent of those inoculated were between age 50 and 60, but of those in complete or good remission only 4 per cent are in that age period.

A long series of paroxysms does not appear to be as necessary as at one time thought, in view of the good results obtained in some early cases which received 10 or less.

One of the early cases had only 5 paroxysms and received no other treatment but is alive and well to-day and works regularly.

Seizures are considered of serious import, but of the 13 living patients who had seizures before treatment, 2 had complete remissions and 2 had good remissions, showing that seizures do not necessarily prevent good results.

The neurologic findings showed little change and the serologic reaction was slow to change, requiring years.

We have not used tryparsamide long enough or extensively enough to form any conclusion as to its effects.

The most pronounced effect of the work with malaria has been to change our attitude toward parole. Whereas in years past few paretics were paroled, we now parole them freely and expect them to improve after they have gone home.

Harrisburg State Hospital.

OBSERVATIONS ON OPHTHALMOLOGY OF THE NEAR EAST*

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The Near East is attracting more and more the attention of travelers. On a recent visitation there I noted that there is still one place in the Holy Land where a crusading order performs its original function—the care of the sick. This is the Eye Hospital of the Order of St. John of Jerusalem. The cross of the order flies in Jerusalem above the Eye Hospital, the full name of which is the Ophthalmic Hospital of the Grand Priory in the British Realm of the Venerable Order of the Hospital of St. John of Jerusalem. Inside the white modern building there are no politics; Moslem, Christian, and Jew are all received and cared for under the authority of one of the most brilliant ophthalmic surgeons. Some idea of the scope of the work which the Order of St. John is doing in Palestine may be gathered from the fact that annual attendances number over 80,000 and more than 3000 operations are performed every year. Dr. J. Strathearn, a Scotchman, is the surgeon in charge. He has an able corps of assistants.

It was in January, 1935, that I visited the clinics, during the rainy season when the nights were cool and the days not so hot and dry as they are for 9 months of the year. But even at

this season patients gathered outside the hospital at daybreak and sat along the curb in groups waiting for the doors to open. Patients came from all parts of Palestine, Syria, and Iraq. It was common to see a whole family blinded by the effects of trachoma being led by one member who had enough sight left to lead the way. After being admitted to the clinic many of the Arabs would sit on the floor rather than on chairs or benches. Monks bringing the afflicted, orthodox Jews, and others with their distinctive dress from all parts of the East made quite a variety of attire. They came from all classes and for many purposes. Some of the well-groomed ones came for certificates to aid them in getting visés on their passports for admission into other countries.

Members of the hospital staff stated that some mild cases of trachoma improved so much that it was impossible to detect any signs of the disease even by careful examination. Many who never had the disease came for certificates. I never saw so many cases of bilateral scarred cornea as were shown me there. It was said that no race is immune to trachoma but that the liability to infection is increased by certain environmental conditions and by the presence of intercurrent diseases. Here, with the veils re-

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

moved, could be seen the fruits of some of the conditions encountered in the villages and tents and even in many parts of the cities—insanitary dwellings, food deficient in quantity and quality, insufficient water supply or one which is impure either from the presence of organic matter or harmful micro-organisms, traumatism from sand storms, decomposing animal or vegetable material, rapid propagation of flies, and the common method of infection by infected towels and clothing. The most serious complications are prevalent following the hottest and driest months of July and August. During this season there are cases of perforation of the cornea.

Among the higher classes of Palestinians, who insist on their children being looked after by nontrachomatous nurses, it is becoming rare to find children infected with the disease. Children of British officials and British soldiers, who are looked after by British nurses, are never infected with the disease.

It was interesting to note how the natives wanted Dr. Strathearn to operate upon their eyes that they might have their sight restored. Many were given enough sight by his expert iridectomies to be able to get around without being led. This hospital is well kept and doing a magnificent work. One ward is equipped and supported by the Knights Templars of the U. S. A. During the World War the hospital was occupied by the Turks and many records and valuable equipment destroyed.

The wonderful work done in the Eye Department of the Rothchild Hospital under Dr. Aryeh Feigenbaum is very commendable. A system of school medical inspection with close follow-up work has been carried on for a number of years in all the Hebrew schools so that trachoma among the Hebrews is becoming a rarity. The Hadassa Society is doing a nice piece of work along this line in Tel-a-vev and Haifa as well as in over a hundred colonies in Palestine. The hospital in Tiberias is run by one physician, and his eye cases are referred to Jerusalem or Beirut.

The hospitals in Damascus refer their eye cases to Beirut and Jerusalem. The Victoria Hospital in Damascus is in charge of Dr. Brigstok. This hospital is supported by the Edinburgh Medical Mission, and Dr. Brigstok had just received his O.B.E. Many of his patients were afflicted with bone tuberculosis. His assistant, Dr. Thomas, was operating upon an eyelid for a chalazion while I was there.

At the American College in Beirut, Dr. Oliver of Johns Hopkins is in charge of the Eye, Ear, Nose, and Throat departments and has a very

fine equipment. Patients come from all the surrounding countries to his clinics. The University of Beirut has a New York State charter and has some medical students from the United States.

Ophthalmology in the Near East has definite characteristics of its own due to the habits of the people and to the conditions of climate. The latter strongly influence bacterial, parasitic, and insect growth. A sympathetic understanding of the people amongst whom the surgeon works is essential for success. Fatalism and indifference to pain and blindness fostered by poverty and by the difficulties in getting to the centers of relief all influence the stage at which the cases come to the surgeon.

Immature cataracts are comparatively rarely seen, for a patient only realizes his trouble when the second eye is so far advanced as to make ordinary actions of life difficult or impossible. Glaucoma secondary to cataract is a very frequent occurrence. A large number of cases of primary glaucoma come too late for vision to be saved. Inflammation of the uveal tract runs its course unchecked or more often is aggravated by harmful treatment. Granular ophthalmia, which if taken in hand early should never lead to impairment of vision, is responsible for an enormous amount of blindness in the Near East. Entropion, trichiasis, distichiasis, pannus, and corneal lesions are rife. Septic ulceration of the cornea, especially in association with lacrimal disease, is common and is too often seen when the case is hopeless. Malignant growths are usually seen in a very late stage. Errors of refraction occupy a much less prominent part in hospital work in the Near East than they do in Europe or America.

The heated winds of these countries, often laden with sand and dust, have a most damaging effect on the cornea and conjunctiva, especially since the days of the rapid motor car. Insect stings are frequently inflicted at night. The bite of an ordinary mosquito may cause alarming swelling of the loose tissues of the eyelids, leading the patient to think that he is blind whereas the eye is undamaged and the trouble soon passes away. Then there are the various poisonous insects, ants, centipedes, scorpions, bees, wasps, spiders, *etc.*, whose stings cause very severe swelling and close the eye. Nor should we forget the burrowing insects or the larger flies which deposit their larvae on or beneath the conjunctiva or in the lacrimal sac. One anatomic peculiarity is noticeable—the pigmentation of the conjunctiva of the sclera and of the fundus must always be taken into account.

Dr. Rowland P. Wilson, F.R.C.S. (Edin.), Cairo, Egypt, has written a very interesting article on the slit-lamp study of the corneal vessels in Egyptian trachoma, with a discussion of its diagnostic value in doubtful cases. He says that acute mucopurulent ophthalmia of itself very rarely produces new corneal vessels except in cases in which the cornea is seriously damaged. However, a biomicroscopic examination in such cases will always reveal vascular changes in the end capillary zone of the limbic system of vessels, and the changes found may be of extreme value in the diagnosis of doubtful cases.

Although eye diseases and blindness have been rife in Egypt for ages, this country did not have any ophthalmic clinics during the nineteenth century that could adequately take care of these cases. In 1903 Sir Ernest Cassel, by his generous donation, created 2 traveling ophthalmic hospitals serving for treatment of the poor population in the provinces and for

the education of native oculists. The chief of this service, A. F. MacCallan, was successful in interesting the provincial councils, the Health Department of the Egyptian Government, and some wealthy men in such a way as to allow the continuous extension of the organization. The hospitals have trained more than 200 oculists; graduate courses are given twice a year to selected young physicians. There are a number of other hospitals in Egyptian and foreign communities which have eye departments and clinics. The work of the ophthalmic hospitals in the hands of national specialists has gained the confidence of the Egyptian population, and a number of valuable contributions have been made to ophthalmology by the Egyptians. They are an alert hospitable group of men and are anticipating a large attendance of oculists at the International Congress of Ophthalmology to be held in Cairo, Egypt, in 1937.

19 North Union Street.

TREATMENT OF THORACIC EMPYEMA BY ASPIRATION AND AIR REPLACEMENT*

Report of 4 Cases

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Thoracic empyema follows and is a complication of some type of preceding pulmonary infection. Any discussion of empyema must take into consideration the pathology and etiology of the disease because the factors surrounding its occurrence may make it very serious or comparatively mild. In a general way, the disorder occurs either as a postpneumonia pneumococcal simple empyema or as a complication or result of so-called influenzal pneumonia.

The former is usually an intrathoracic localized abscess having the visceral and parietal pleurae as its walls. These cavities are often irregular in shape and may be in any position in the chest; they are not to be regarded as collections of pus lying free in the dependent part of the thorax. This localized type occurs if the site of infection is in an adherent area or in an area surrounded by pleural adhesions, if the process is slow so as to permit fibrinous adhesions to form, if the causative organism is not too virulent, and if it is located in a position in which there is little movement of the thorax. The

cavity is usually filled with thick creamy pus containing the pneumococcus or a mildly virulent contaminator: the mediastinal pleura has been stabilized and there is little danger associated with the introduction of air.

In contrast to this is the type, associated with streptococcal or so-called influenzal pneumonia, that manifests itself as intense inflammation of the pleura with thin watery exudate which is not walled off and which contains streptococci. It often presents itself before the causative pneumonia has disappeared, or is complicated with mediastinitis or pericarditis. In this case the patient is more severely ill, the organism more virulent.

These varieties may overlap, and it is wrong to underestimate the severity of either since it has been shown that the virulence and mortality of empyema follow the virulence and mortality of the preceding respiratory infection.

Empyema caused in other ways as by trauma, the rupture of a cortical lung abscess, or infection of a serous effusion will simulate either of the above types depending upon the associated factors.

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 8, 1935.

HEALING

Complete evacuation of pus and obliteration of all sources of reinfection are the only 2 events in the process of healing that have almost universal acceptance. It is probably true that bacteria remaining on the pleural surface after the removal of pus can be destroyed by the activities of tissue cells and antibodies without the help of antiseptics. Expansion of the lung and obliteration of the abscess cavity usually occur together. Three ideas are used to explain the mode of lung expansion: (1) The formation of a closed pneumothorax in which the gradual absorption of the remaining air causes the lung to be drawn out by the resulting increase of negative pressure until all air has been absorbed finally causing obliteration of the cavity; (2) the increased intrabronchial pressure by forced expiration; (3) the expansion of the lung by the contracting granulation tissue at the junction of the visceral and parietal pleurae. My belief is that all 3 ideas participate to a greater or less degree or perhaps equally.

PRINCIPLES OF TREATMENT

In order to effect healing with maximum speed and safety 2 principles must be observed: (1) Avoidance of too rapid production of open pneumothorax; (2) provision for adequate drainage. In considering the first, we must remember that intrathoracic pressure relationships are such that the rapid entrance of a large quantity of air leads to the partial collapse of the contained lung. Unless the mediastinal pleura has been stabilized by induration, the collapse of the other lung occurs, which results in cardiac and respiratory embarrassment. In simple postpneumonia empyema the mediastinum usually has been stiffened or the cavity has been made airtight by adhesions so that entrance of air seldom causes serious accidents. But in streptococcic empyema, the mediastinum does not have time to become stabilized and there is no localization of pus, both of these being due to the rapid accumulation of thin pus. These factors together with the grave clinical picture forbid the rapid entrance of air into the thorax.

Adequate drainage must carry a broad definition, and to me it means sufficient evacuation to produce cure. On the one extreme are those patients who have completely recovered without any drainage, and on the other are those whose cavities are kept nearly completely empty until the cavity has been obliterated. The aim of our different methods of treatment is to determine the amount and type of drainage compatible with the best results.

Four adult patients were treated for postpneumonia empyema, the method of aspiration and air replacement being used.

CASE REPORTS

CASE 1.—M. W., a white woman, age 33, had the onset in May, 1932. The empyema appeared one month after leaving the hospital where she had had bronchopneumonia at the site of the empyema. The pneumonia was a complication during an acute pelvic peritonitis following an infected abortion. A bronchial fistula was present; the number of aspirations was 5; the interval between aspirations was 2 days; the volume of pus at one aspiration varied from 45 c.c. to 240 c.c.; the total volume of pus was 585 c.c.; the duration of the disease was 4 weeks; the organism was the streptococcus; the cavity was a localized collection of thick greenish pus in the upper half of the left thorax; the lung was not collapsed when air entered during the procedure of aspiration. The result was complete recovery.

CASE 2.—H. H. M., white, male, age 19, had the onset in Jan., 1933, following lobar pneumonia. A bronchial fistula was present; the number of aspirations was 9; the interval between aspirations was 3 to 6 days; the volume of pus at one aspiration was 40 c.c. to 1000 c.c.; the total volume was 2420 c.c.; the duration of the disease was 5 weeks; the organism was the pneumococcus; the cavity was a localized collection of pus in the lower half of the left thorax; the lung was not collapsed when air entered during the procedure of aspiration. The result was complete recovery.

CASE 3.—C. G., white, male, age 25, had the onset in Mar., 1934, following lobar pneumonia. Bronchial fistula was absent; the number of aspirations was 15; the interval between aspirations varied from 2 to 8 days; the volume of pus on each aspiration was from 50 c.c. to 1250 c.c.; the total volume of pus was 6085 c.c.; the duration of illness was 7 weeks; the organism was the pneumococcus; the pus was not localized until after 12 aspirations; the collection was situated in the left lower thorax; the lung did collapse when air entered the thorax during the procedure of aspiration, but without clinical symptoms. The result was complete recovery.

CASE 4.—E. B., white, female, age 28, had the onset in Mar., 1934, following lobar pneumonia. Bronchial fistula was absent; the number of aspirations was 7; the interval between aspirations was from 2 to 8 days; the volume on each aspiration varied from 5 c.c. to 60 c.c.; the total volume of pus was 113 c.c.; the duration of illness was 6 weeks; the organism was the pneumococcus; the pus was localized close to the spine, one inch below the angle of the right scapula; there was no collapse of the lung during aspiration. The result was complete recovery.

TECHNIC

Dr. Danna was the first to report a large number of consecutive cases treated by aspiration and air replacement. He preferred to drain through a large needle attached by a stiff rubber tube to a 50 c.c. glass syringe. He removed a syringe of pus, clamped the tube, emptied the syringe, filled it with air, injected it into the chest, and repeated the process until all the pus had been withdrawn.

In my patients I did not use the rubber tube connection and did not interfere with the free entrance of air into the chest cavity after removing a portion of pus. The needle was permitted to stand open while the syringe was emptied which was considered safe because the empyema followed pneumonia and was considered walled off; but, as a matter of fact, 3 were walled off and the fourth (Case 3) was not. In the latter, the homolateral lung was collapsed but without clinical symptoms. After 12 aspirations, this collection became localized by fibrinous adhesions and the lung expanded while considerable pus was still present within the chest. Fortunately neither the mediastinal organs nor the opposite lung were affected adversely. We should guard against these unexpected circumstances in simple empyema because they are responsible for an occasional death. Danna believed that the good results in his cases depended upon the complete emptying of the cavity at each sitting and thought that aspiration alone could not accomplish this and that it could be done only when air replacement was a part of the procedure. On the other hand, McEnery and Brenneman practiced aspiration alone on a large group of children with complete cure in a large percentage. They were astounded by the ability of the pleura to absorb large quantities of pus after partial drainage of empyema cavities. In 2 of my patients the roentgen ray demonstrated small fluid collections in the costophrenic angle after the last aspiration; these were eventually removed completely.

MORTALITY

Statistics have shown that the mortality curve for empyema follows the mortality curve for pneumonia; the death rate varies from year to year and in different localities during the same year. Apparently the greatest factor in mortality rate is the type of respiratory infection that precedes the empyema. It involves both the kind and virulence of the organism and the intrathoracic complications. It would seem that the method of treatment constitutes a definite factor but a less important one. In recent years the death rate in simple empyema treated with any of the accepted methods has been very low. Empyema following influenzal pneumonia has had a higher death rate but it has been materially reduced since the war, after proper recognition was given to the importance of stabilizing the mediastinum before opening the thorax.

Danna's death rate of 5.7 per cent in 35 cases treated by aspiration and air replacement is lower than the average for other methods of treatment.

These figures represent excellent results for any type of empyema and they might be of even greater value if we knew exactly the type of pulmonary disease that preceded each case. He neither selected his cases nor used any other method of treatment.

The real value of aspiration and air replacement can be determined only after a large number of all types of cases have been treated over a period of years. My 4 cases with zero mortality are too few to justify a conclusion.

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ABSTRACT OF DISCUSSION

GROVER C. WEIL (Pittsburgh): Dr. McCloskey's conception of empyema as a complication of an antecedent pulmonary infection or another severe infective process with associated pulmonary involvement simplifies the study of the progressive events in each case and contributes in a great measure to the selection of the type of treatment.

A review of the literature over the past 30 years shows that the mortality ratio of empyema favors that of pneumonia in their respective localities.

The character and type of infections are variable and in a great percentage of cases depend largely upon the character and virulence of the primary respiratory infection. It naturally follows that in order to evaluate the proper treatment at the opportune time in the various types of empyema, the surgeon should have a thorough knowledge of the various pathologic changes occurring in the lung and pleural cavity as well as the bacteriologic behavior of the infective organism.

The importance of early classification of each case is universally recognized and plays a distinctive rôle in the management and postoperative care. The simple intrapleural abscess following pneumonia as a rule responds well to aspiration and air replacement or closed aspiration drainage. In this type the mediastinum has become well stabilized in the greater proportion of cases by virtue of the nature of the infection, and the opening of one side is not accompanied by any serious change.

In the so-called streptococcic empyema the character and nature of the inflammatory exudate as a rule differs from the simple or pneumococcic type, and the protection and stabilization of the mediastinum frequently are found wanting. Proceed with great caution in this type and institute primary aspiration so as to avoid further reduction of the vital capacity and dangerous cardiorespiratory changes by collapse of the opposite lung.

The streptococcic type with its associated conditions as a rule presents serious problems, and the preliminary treatment outlined above, which is safe and conservative, followed later by thoracotomy meets the requirements much better than an immediate rib resection with open drainage.

The mortality in empyema is the result of its associated conditions, and if the dangers of sudden intrathoracic change can be avoided by careful preliminary aspiration with adequate subsequent drainage, the fundamentals of treatment become well established.

It is, however, rather hopeless to expect a great decrease in the mortality rate of empyema, regardless of treatment, until better methods of treatment are established for the primary respiratory infection.

RESISTANT SYPHILIS*†

With Especial Reference to an Attempt to Produce Experimentally an Arsenic-Resistant (Neoarsphenamine-Resistant) Strain of *Spirochaeta Pallida*

SIGMUND S. GREENBAUM, M.D., AND ANNA M. RULE, PHILADELPHIA

One of the most important present-day problems in syphilology is that which is concerned with the cause for resistance of certain known syphilitic lesions (using the term lesion in the broadest sense) to modern therapeutics and the arsphenamines in particular.

Visibly active lesions of syphilis and presumably similar but invisible lesions within the body, irrespective of the stage of the disease in which they have developed, usually respond promptly to the organic arsenicals, the bismuth compounds, or both. As a matter of fact, failure to respond to these agents as a therapeutic test is almost just cause for considering the lesions nonsyphilitic. Despite its rarity, however, resistant syphilis is a well-recognized clinical and laboratory state. Any lesion of syphilis, irrespective of its location, which fails to heal under therapeutics with one or all of the usual anti-syphilitic drugs, if these have been used regularly and in adequate dosage and in the serologic-fast types over a period of from 3 to 5 years, depending upon whether it is an acquired or congenital infection, is spoken of as resistant syphilis.

When the lesion fails to respond to but one of the so-called specifics it is referred to as arsphenamine, neoarsphenamine, bismuth, or mercury resistant, depending upon the particular metal which has been used. In our own experience this is the form of resistant syphilis of the visible type that has been the rule; resistance to more than one of these metals is exceedingly rare.

The resistance may be to both specific and nonspecific medication, a rarity with the visible resistant lesion, less so with serologic resistance. Since the etiologic factors concerned are probably the same, it seems that lesions which yield but slowly to these drugs must be grouped among the resistant lesions of syphilis.

It is in the patient with congenital syphilis that resistance is apt to occur. Compared with the rapidity with which the lesions of acquired syphilis generally heal under the arsphenamines or bismuth, the amount of therapy needed in some forms of congenital syphilis, especially eye

and bone complications, is frequently astonishing.

Irrespective of the mechanism involved, serologic manifestations of syphilis, as detected by positive precipitation and complement fixation tests or both, are generally considered as representing continued and persistent activity of the organisms causing the disease. For this reason there is included in the general definition of resistant syphilis the persistent serologic evidences of the disease—the so-called “Wassermann-fast” but preferably “serologic-fast” syphilis since the fast state may be evidenced in the one case by a persistently positive complement fixation reaction and in the other by a persistently positive precipitation reaction—more often the latter. Serologically resistant syphilis is more common than formerly in the sense that it requires a longer treatment period to obtain seronegativity because of the higher sensitivity of the laboratory tests, especially the flocculation ones (Kahn), and as a result of Kolmer's quantitative method of estimating reagin. Whether the serologic evidences of the disease improve slowly or rapidly makes little difference if the final state is a persistence of the evidences of the disease as measured by a reliable laboratory test. Coleman and his co-workers have pointed out the necessity for calling these cases not “serologic-fast” but “syphilis-fast,” thus indicating a need for further therapy. They have found that whereas certain sera may, with the ordinary qualitative technic, show persistently positive evidence of the disease, definite signs of a decrease in the amount of reagin are obtained if a quantitative technic is used; thus, there really may not be a stationary condition—reagin is simply high in amount and has not fallen below a 4-plus level because of insufficient therapy in that particular case. Thus the criteria for serologic-fast syphilis have become more defined as the sensitiveness of the tests has increased.

Serologic-fast syphilis is defined somewhat differently by different observers. In our opinion no persistently positive Wassermann or Kahn reaction should be considered irreducible or fast unless the patient has had treatment with the maximum amounts of several different anti-syphilitic drugs, not only different chemically in kind (organic arsenicals, bismuth, and mercury) but different chemicals of the same kind

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† From the Research Institute of Cutaneous Medicine, Philadelphia, Pa.

(arsphenamine, neoarsphenamine, sulpharsphenamine, silver arsphenamine, *etc.*; potassium bismuth tartrate, bismuth salicylate, subsalicylate, *etc.*), and finally different either in lot numbers of the same brand, in the case of the arsenobenzenes, or in the manufacturing concerns from which they are obtained.

Given good drugs, used regularly, continuously, and in adequate dosage, serologic-fast acute syphilis is rarely encountered. By acute syphilis is meant syphilis of not more than 5 years' duration. In fact, with the above conditions fulfilled, we have never seen serologic fastness in acute syphilis. Serologic fastness is a phenomenon of chronic syphilis with and without visceral (cardiovascular and central nervous system) evidences of the disease. It is believed that in most serologic-fast patients a careful examination will reveal residua of the disease. In some of these and for reasons still unknown, generally those without discoverable clinical evidence of syphilis, cessation of therapy is followed by a tendency to spontaneous serologic negativity.

The relapsing lesions of syphilis, in the ordinary sense of the lesional term "relapser," cannot be grouped with resistant syphilis; however, their importance in relation to resistant syphilis lies in the fact that they may, especially if it be a serologically relapsing lesion, eventuate in a resistant state. Furthermore, the etiologic factors concerned in the development of relapsing syphilis may be and probably are closely related to those concerned with the development of the lesions of resistant syphilis.

The lesions in resistant syphilis are observed in both acute and chronic syphilis; grossly, they may be spoken of as clinical and serologic. In acute syphilis it is the mucosal and the cutaneous psoriasiform and the hypertrophic types that are commonly encountered; in chronic syphilis it is especially the serologic and occasionally osseous and visceral types (eyes and central nervous system in particular). Whether the lesions develop during the acute or chronic stage of the disease, resistance may be absolute, that is, there is a complete lack of response to the drugs exhibited, or the lesions may regress but partially under the particular drug being used or may even disappear, only to reappear during the administration of the drug and to disappear again under the administration of another form of antisypilitic medication. Resistant lesions such as these have been an extreme rarity in the experience of the writers. In prearsphenamine days resistant syphilis, *i. e.*, syphilis resistant to mercury, was more common than it is today.

ETIOLOGY

Resistance, when applied to the lesions of syphilis, in reality represents a symptomatic state; it is to syphilis what, for example, pruritus is to cutaneous diseases—merely a symptom, the pathogenesis of which, though not nearly as varied as with pruritus, nevertheless is varied. In the final analysis resistance is caused by the drug, the patient, or the organism itself; or may be a combination of these. The following known and theoretical explanations have been given for the resistance:

The Drug.—A decrease or lack in the spirocheticidal powers of the drug used. Such a diminished activity may be the result of an actual decrease in the efficiency of the drug, as indicated by the following cases:

CASE 1.—A white male, age 32, was first seen in Nov., 1931. His attending physician stated that despite 14 months of therapy he could obtain no effect upon either the patient's strongly positive Wassermann reaction or the persistent and relapsing secondary syphilides of the skin and oral mucous membrane. The treatment had been irregular for the first 6 months but had then become regular for the next 8 months. After 2 intravenous injections of a new brand of neoarsphenamine the visible lesions rapidly disappeared.

CASE 2.—J. H., white, adult male, age 44, received 25 intramuscular injections of a water-soluble bismuth compound at weekly intervals. As a result there followed but partial resolution of a widely disseminated, large, papular secondary syphilide. After 6 injections of both potassium bismuth tartrate and small doses of neoarsphenamine, the eruption had completely disappeared.

These clinical observations have been amply confirmed by the experimental studies of Schamberg and Kolmer in regard to neoarsphenamine of different manufacture and by Greenbaum and Rule in regard to the bismuth compounds of different manufacture. Of the arsphenamines, neoarsphenamine is today the most widely used. It is generally known that this drug, when prepared by different laboratories and sometimes in the same laboratory, is more apt to vary in curative properties than is arsphenamine. Of the 18 brands of neoarsphenamine tested by Schamberg and Kolmer, almost 25 per cent were found to possess less than the average minimal spirochetal curative dose. Greenbaum and Rule studied 10 bismuth compounds of different manufacture and found a wide variation in their curative doses.

Diminished activity may be due to inefficient application of a perfectly efficient drug, *i. e.*, insufficient dosage. To the minds of some the relapsing or persistent lesions due to such medication is resistant syphilis. It is in reality a pseudoresistant, not a true resistant syphilis. It

may, however, eventuate in resistant syphilis, especially serologic. This is a common enough experience in any large clinic for syphilis.

Cyanide of mercury when given intravenously in 10 to 20 mg. doses daily to a patient with a papular or papulo-hypertrophic secondary syphilitic eruption, will slowly and progressively cause a complete involution of the lesions. This same drug, however, given every second or every third day will stimulate the eruption and cause the lesions to become progressively larger. The following cases are illustrative:

CASE 3.—R. L., white adult male, age 22, with a generalized secondary exanthem and both complement fixation and precipitation tests strongly positive. The eruption disappeared completely under injections of bismocymol (20) and neoarsphenamine (3). The patient lapsed treatment for 5 months, during which period over a 5-week interval he received 12 injections of a bismuth compound. Examination on his return showed a recurrent chancre and an erythematous-papular palmar eruption of 10 days' duration (undoubtedly recurrent syphilis), which was cured entirely with further therapy (neoarsphenamine and bismuth).

CASE 4.—A. G., white male adult, age 30, presented a secondary exanthem consisting of erosive oral syphilides, vegetating labial commissural split papules, perianal and scrotal moist annular and discoid papules. Bismocymol (100 mg. per dose) therapy was instituted with the patient's visits to the clinic at 1- to 2- and 3-week intervals between treatments over a period of 7 months with disappearance of all but the commissural lesions. Injections of neoarsphenamine and later neoarsphenamine and bismocymol (10 doses neoarsphenamine .3 mg. and 4 bismocymol) were given over a period of 3 months, chiefly at 1 week but some at 2- and 3-week intervals, without impression upon the labial commissural lesions. Patient then ceased treatments entirely for 5 months, and when seen on revisit the labial lesions were unchanged, only to show fully 90 per cent regression after 6 intramuscular injections of bismuth subsalicylate (100 mg.) at regular weekly intervals.

The Patient.—There are a number of reasons for considering the difficulty as residing within the patient. There may be definite failure of the patient's tissues actually to utilize the injected drug properly. As Jessner and others have pointed out and as all syphilologists have observed, some of these patients are unable to support even small doses of the arsphenamines. Pointing in this direction, likewise, is the fact that changing the drug often leads to cure of the resistant lesion. However, this latter may also indicate an inefficient drug. It is exceedingly rare to find a patient with lesions resistant to all 3 major antisyphilitic drugs. In an extensive clinical experience over the past 15 years we have not observed such a case. On the other hand, the difficulty may lie in an inability of the drugs to stimulate the resisting substance, which

apparently is naturally developed in most individuals with syphilis. Malignant syphilis, seen both as an acute and more rarely as a chronic manifestation, suggests such a possibility. It has been suggested, likewise, that the increase in resistant syphilis, especially abroad, may be connected with a state of lowered nutrition. Diet undoubtedly affects the course of syphilis in the experimental animal. In support of this possibility, also, is the increase in drug efficiency which frequently follows preliminary nonspecific medication.

CASE 5.—J. P., a poorly nourished white male, age 46, was first seen April, 1933, with a late secondary eruption (developed 15 months after a primary lesion), consisting of erosive palatal and tonsillar syphilides and about 15 rupial lesions scattered over the trunk. The patient had previously received irregularly 15 intramuscular injections of bismuth and 6 intravenous injections of neoarsphenamine. After the fourth neoarsphenamine treatment there was a cutaneous reaction which disappeared with the use of sodium thiosulphate. With regular injections of bismuth (100 mg.) and neoarsphenamine (.15 gm.) all lesions underwent resolution; as treatment progressed, the patient became intolerant to neoarsphenamine and to bismarsen, which had been substituted. In Oct., 1933, despite regular therapy, the patient complained of severe pain over the bridge of the nose and the left nasal process of the maxilla, from within which an otolaryngologist removed sequestra from time to time for more than 14 months despite large doses of potassium iodide, mixed mercury and bismuth therapy, and milk protein injections. The nasal osteomyelitis became progressively worse. Histologic studies were negative for tuberculosis and malignancy, and the tuberculin test was negative. Skiagraphic studies showed marked involvement of the maxillary sinuses. Here, evidently, was a malignant inflammatory process of syphilitic nature, as subsequent therapy proved. Under much more powerful nonspecific fever therapy (typhoid vaccine intravenously) combined with the above drugs and a highly nutritious diet there was a progressive improvement generally and locally with ultimate complete recovery insofar as the local lesions were concerned.

Moore and Kemp have noted, and these observations have been confirmed by others, that the Wassermann reaction is not infrequently negative in patients with resistant active secondary lesions. The exact significance of this is not known, but Moore and Robinson believe that it indicates a lack of resistance and this appears so in the cases of those who develop relapsing lesions—an inability to produce reagin. Furthermore, in support of this as a real factor in some cases are the studies of Moore and Kemp who found on titration relatively small amounts of reagin in the blood of many patients with arsphenamine-resistant and chronically relapsing syphilis.

On the other hand, premature seronegativity, i. e., seronegativity developing in patients with

seropositive chancrous or secondary lesions within a month or two after beginning treatment and *remaining* so after a short course of one of the arsenobenzenes, points perhaps to a greater ability to develop resistance under such medication than is usual.

The Organism.—An increase in resistance of *Spirochaeta pallida* to the arsphenamines, bismuth, or mercury.

The fear of developing *Spirochaeta pallida* drug fastness is a real problem with some syphilologists. In the year book for *Dermatology and Syphilology* (1934, page 14) the suggested plan of treatment for acute syphilis includes mercury, which it is expressly stated is used only for a brief period to permit the loss of any drug fastness to the arsenicals.

Both clinical and experimental research have in recent years strengthened the idea that *Spirochaeta pallida* has developed special resistance to the antisyphilitic drugs and the arsphenamines in particular. The arguments on the clinical side rest upon (1) an apparent increase in the number of patients with visceral—cardiovascular and central nervous system—syphilis; (2) an apparent shortening of the period between the onset of the infection and the development of the tertiary manifestations of the disease; (3) the impression that the arsphenamines are less efficacious in secondary syphilis than formerly and that the original arsphenamines possessed greater curative value than the ones now in use. Although the European literature tends to support the above views, studies in one American clinic show no essential differences in the serologic results as compared with earlier years, no increase in frequency of relapses as compared to previous years, and no increase in frequency of true arsphenamine-resistant syphilis. Our own experience corresponds with that of Moore and Robinson, and from the clinical viewpoint we consider as do they that there is no evidence to indicate either that arsphenamine is less efficacious in the treatment of syphilis than formerly or that arsphenamine-resistant syphilis is increasing.

Because of this contradictory clinical evidence, European versus American studies, it appeared of interest to restudy the question experimentally in the rabbit. Both *in vitro* and *in vivo* experiments have been used in attempts either to demonstrate the possibility of producing or actually to produce arsenic, bismuth, and mercury resistant strains of *Spirochaeta pallida* in the same way as has already been shown to be possible *in vitro* with *Trypanosoma equiperdum* and certain spirochetes. *In vivo* experiments

have been made by transferring to rabbits organisms recovered from patients with arsphenamine-resistant syphilis with failure up to the present, however, to demonstrate any increased resistance to this drug; by injecting actively syphilitic rabbits with a small dose of arsphenamine, transplanting the organisms from these treated rabbits to other rabbits after a variable period, treating these latter with a slightly larger dose, and repeating the procedure until the amount of drug reached constituted the therapeutically active dose as compared with the curative dose in animals not so treated. Klauder states that the resistance to arsphenamine of the Nichol strain of *Spirochaeta pallida* was increased by this method to a maximum of 68 per cent; Giemsa failed to produce a bismuth-fast *Spirochaeta pallida* in 3 passages through rabbits using subtherapeutic doses of bismuth over a period of 148 days. In our own studies we used the same strain of organism used by Klauder, namely, Nichol's strain isolated by Nichol from spinal fluid in 1912 and maintained in rabbits ever since. In the past 30 years this strain has been repeatedly exposed, especially in this laboratory, to the action of all of the antisyphilitic organic arsenicals without the slightest tendency on the part of the organisms to show that they had become resistant to any of these—certainly the curative doses have remained the same. In the present study neoarsphenamine was the drug utilized because it is the one so generally used today in the treatment of human syphilis.

Our plan of procedure (Chart I) consisted in injecting weekly, for 10 doses, thoroughly infected rabbits, using small subcurative doses of neoarsphenamine (.001 gm. per kg. of body weight) of the same lot number. After a variable period of time the lymph nodes from these animals were removed, ground up, and injected into a second series of rabbits, which were then subjected to the same course of treatment. From Jan., 1931, to Nov. 3, 1933, 9 such sets of animals were treated. At the end of this period the last set of rabbits received, as did the controls, 0.12 gm. (per kg. of body weight) of neoarsphenamine intravenously, which was followed by complete lesional involution. One of us (A. R.) had previously shown that this dose is normally the therapeutic dose for neoarsphenamine. The therapeutic dose causes complete clinical involution of the lesions of syphilis within a week and without their recurrence in 2 months; the curative dose does this and at the same time completely sterilizes the animal. In other words, repeated exposure to small doses of neoarsphenamine, repeated over a period of al-

most 3 years, was not followed in the experimental animal by an increased resistance on the part of the organism to the usual therapeutic dose. A subcurative dose of 8 mg. per kg. was followed by the same amount of regression in the testicular syphiloma as would usually be observed in infected animals in whom the organisms had not been exposed to repeated small doses of neoarsphenamine. These experimental results perhaps confirm the opinions more generally held and based upon clinical grounds, namely, that if repeated exposure of *Spirochaeta pallida* to the arsenobenzenes had created organisms resistant to these drugs, we should certainly have had much greater clinical evidence of it almost 25 years after their introduction into the therapy of syphilis.

CHART I

AN ATTEMPT TO PRODUCE NEOARSPHENAMINE-FAST STRAINS OF SPIROCHAETA PALLIDA

Jan. 1, 1931	15 R	.001 gm. per kg. once
	16 R	a week for 10 doses.
		Lymph glands removed.
May 15, 1931	15 R1	
	16 R1	Repeated.
Oct. 16, 1931	15 R2	
	16 R2	Repeated.
Apr. 18, 1932	15 R3	
	16 R3	Repeated.
Sept. 30, 1932	15 R4	
	16 R4	Repeated.
Jan. 2, 1933	15 R5	
	16 R5	Repeated.
May 18, 1933	15 R6	
	16 R6	Repeated.
Aug. 7, 1933	15 R7	
	16 R7	Repeated
Oct. 7, 1933	R1, 2, and 5	were inoculated from 15 R7. Rabbits 5, 5, and 6 from our regular stock syphilitic rabbit.
Nov. 3, 1933	Rabbits were treated as follows:	

Neoarsphenamine intravenously. All had a large syphiloma when drugs were given. Results Nov. 21.

1	.008	.....	Small node	4
2	.012	.....	Normal	
3	.016	.....	Normal	
4	.008	.....	Small node	4
5	.012	.....	Normal	
6	.016	.....	Normal	

The importance of the study lies in the fact that the attending physician should, in the presence of a resistant lesion of syphilis, place emphasis upon the organism's resistance to the drugs only in the sense that those drugs were below par therapeutically and that the indications are a change in the type of therapeutics.

The experimental evidence against is greater than the evidence for the existence (permanent or temporary) of arsenic- or bismuth-fast strains of *Spirochaeta pallida*. Individualization is undoubtedly a *sine qua non* in Wassermann-fast cases. Each patient failing to respond satisfactorily to antisyphilitic medication must be carefully studied and his resistance improved. In the few cases of clinically resistant and the greater number of serologically resistant syphilis seen by us, it has been our experience that a change in medication in the first type and a change or complete cessation of medication in the second, together with attempts to increase the patient's general well-being (removal of foci of infection, exclusion of alcoholic beverages, fresh air, sunlight, Turkish baths, nonspecific and fever-producing agents), have proven of great value.

In the clinically symptom-free but serologic-fast patient who has received care such as this over a period of 3 years, progression of the disease is a rarity indeed. Furthermore, attempts to obtain seronegativity generally fail, nor do such attempts appear to be necessary. Such patients require periodic health examinations and periodic prophylactic courses of one of the newer compounds over a period of years, especially those serologic-fast patients with syphilis who show evidences of visceral scars such as simple or aneurysmal aortitis, aortic valvular disease, and all forms of central nervous system syphilis.

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ABSTRACT OF DISCUSSION

CARROLL S. WRIGHT (Philadelphia): This is one of the most difficult phases of syphilis to discuss, for in many respects resistant syphilis cannot be explained. Dr. Greenbaum has analyzed the probable causes for resistance, and he has satisfactorily proven that repeated exposure of the *Spirochaeta pallida* to antisyphilitic drugs over a period of years has not given rise to a resistant strain.

Perhaps the most extensive inquiry into resistant syphilis was the questionnaire recently sent to various venereologists of Germany, although it was concerned chiefly with seropositive syphilis. Dr. Miescher stated that seropositiveness in an early stage of syphilis should be regarded as serious and recurrences might be expected, and advised in such cases intensive therapy with frequent change of drugs, even calomel and malarial therapy being used. There was a general agreement that primary and secondary syphilis would never prove Wassermann-fast if treatment was instituted early and intensively. One syphilographer stated that the persistence of a positive Wassermann reaction in recent syphilis after sufficient treatment is not an indication for further treatment. If one believes, as Ruhl of Germany and Kolmer of Philadelphia do, that a positive Wassermann reaction is evidence of continued spirocheticidal activity, it would be almost obligatory to continue treatment.

In France, Franck, Sidi, and Pautrat in an intensive study of 45 Wassermann-resistant cases found that all of these were cases in which either the early lesions had been treated insufficiently or not at all and intensive treatment not given until some years later, or in which the syphilis had been discovered only by chance after quite a long time. They believe that Wassermann-fastness does not occur in patients treated regularly and intensively from the beginning, and that it is not the particular drug or combination of drugs used that is important, but early, regular, and intensive treatment. I have had only a single Wassermann-fast case of early syphilis in personally treated cases since Dr. Schamberg introduced the method of conjointly injecting bismuth intramuscularly and neoarsphenamine intravenously in 1924. Clinic results are not so good, owing to lack of coöperation on the part of some patients.

As to cases of early syphilis in which lesions prove resistant to antisyphilitic therapy, although this actually does occur, I have not seen a single instance of it and can offer no explanation better than those suggested by Dr. Greenbaum. In the prearsphenamine era it often was found necessary to give a patient as much as 5 grains of calomel at a single dose to influence certain resistant lesions of syphilis. Cases of resistant syphilis have been noted since the earliest history of the disease and probably will be with us always, although it is hoped that studies such as those undertaken by Dr. Greenbaum and others will eventually solve the puzzle.

HARRY M. ROBINSON (Baltimore): In the last few years we have noted that the lesions of early syphilis, notably those of the skin and mucous membrane, occasionally relapse while under arsphenamine therapy or immediately after the conclusion of an arsphenamine series and while receiving bismuth intramuscularly. It is only after changing the type of arsphenamine (that is, from neoarsphenamine or arsphenamine to silver arsphenamine) and administering bismuth concurrently that we are able to control the progress of the disease. Sometimes it has been necessary to use fever therapy followed by arsphenamine and bismuth treatments. It is our impression that the resistant disease manifestations are not due to the brand of arsphenamine used.

HERMAN BEERMAN (Philadelphia): Our experimental work in rabbits with a strain of *Spirochaeta pallida* recently isolated from a treatment-resistant patient yielded results contrary to those obtained by Dr. Greenbaum. We had 5 of 23 rabbits infected with this strain treated with a potent arsphenamine in which failure to sterilize occurred with doses higher than the minimum curative dose for rabbits infected with the Nichol's strain of *Spirochaeta pallida*.

APPOINTMENT OF SENIOR MEDICAL INTERNS BY THE UNITED STATES PUBLIC HEALTH SERVICE

The United States Public Health Service will consider applications to fill a number of vacancies which exist at the present time and also vacancies which will occur about July 1, 1936, for second-year medical interns. Any young physician not over age 30 who has graduated from a Class A medical college and who has completed or will shortly complete 1 year's internship in an approved hospital is eligible to apply.

The Public Health Service desires to secure applications only from candidates who are interested in the service as a career and who desire to request permission

to appear before a board of commissioned officers for examination for appointment as assistant surgeons in the regular commissioned corps on or about the time they will complete a year's service as interns in the Public Health Service.

Appointments effective on and after July 1, 1936, to vacancies at marine hospitals and the U. S. Narcotic Farm at Lexington, Ky., will carry a gross compensation of \$1,800 per annum, from which a deduction of \$690 per annum will be made if quarters, subsistence, and laundry are furnished. Appointments to vacancies at federal penal and correctional institutions will carry a gross compensation of \$1,620 per annum, from which a deduction of approximately \$240 per annum will be made by the Department of Justice if quarters, subsistence, and laundry are furnished. Interns are required to occupy government quarters whenever they are available. Such quarters cannot be shared by any of the intern's dependents.

Those interested in making application should address an inquiry to the Surgeon General, U. S. Public Health Service, Washington, D. C., stating the date they will be available for duty, and more complete information and the necessary blanks upon which to make application will be furnished.

CONSIDER THE HUSBAND

When the physician's prenatal advice is first sought, his every attention is directed to the mother-to-be. Little consideration is given the father. That some serious professional advice and attention should be given the husband is evidenced by the trite, but nevertheless significant remark, "I've never lost a father yet."

The husband, as well as the wife, is tremendously concerned with the coming event and is anxious to afford his wife every consideration possible. When the wife first consults the physician, she should be instructed to have her husband call upon the physician for the purpose of instructing him in his responsibilities during the pregnancy and postnatal period.

The husband should be advised of the emotional, mental, and physical changes that occur during pregnancy. He should be advised of the possible complications and the course of action to follow when unusual conditions develop. He should be advised of the indications of labor, the frequency of pains just prior to delivery, and when the physician should be called.

Incidentally, such a conference with the husband presents the opportunity for full discussion of a proper fee and arrangements for its payment.—*Wisconsin Medical Journal*, Jan., 1936.

INTERNATIONAL SERUM CENTER IS ESTABLISHED

The Royal Danish Serum Institute at Copenhagen will become a sort of international clearing house for serums used in treating or preventing disease, as a result of action taken by the eleventh Congress of Biological Standardization held in connection with the League of Nations Hygiene Congress.

The Danish Institute has been appointed the international center for preparation and standardization of serum for such diseases as dysentery, lockjaw, diphtheria, pneumonia, and wound fever. London will similarly become the international center for vitamins, insulin, and the sex hormones.

International standards for the preparation and composition of 25 of the medicaments to be distributed from Copenhagen and London have been agreed on by the Congress.—*Science News Letter*, Nov. 2, 1935.

EDITORIALS

NEW STATE BOARD MEDICAL EXAMINERS

On Dec. 24 Governor Earle announced the following appointments to the State Board of Medical Education and Licensure.

Dr. Wm. Cullen Bryant, of Pittsburgh, to fill the vacancy caused by the termination of service of Dr. Harry W. Albertson, of Scranton. Dr. Bryant is a graduate of the University of Pittsburgh School of Medicine, 1894. He is a member of his county and State medical societies and a Fellow of the A. M. A.; a member of the American Urological Association; and a member of the Association of Anesthetists of the United States and Canada. He limits his practice to urology.

Dr. George Willis Hartman, of Harrisburg, to fill the vacancy caused by the death of the late Dr. Clarence Bartlett, of Philadelphia. Dr. Hartman is a graduate of the Hahnemann Medical College of Philadelphia, 1898. He is a member of the Dauphin County Medical Society, the State Medical Society, and a Fellow of the A. M. A. He is also a Fellow of the American College of Surgeons, and limits his practice to surgery.

Dr. Domer S. Newill, of Connellsville, to fill the vacancy caused by the termination of service of Dr. Charles J. Henminger, of Somerset. Dr. Newill is a graduate of the Eclectic Medical College of Cincinnati, O., 1915. He is a member of the Fayette County Medical Society, the State Medical Society, and a Fellow of the A. M. A. He is also a Fellow of the American College of Surgeons. He devotes his practice exclusively to surgery.

Dr. Arthur C. Morgan, of Philadelphia, whose commission expired Oct. 10, 1935, has been advised to continue as an "acting" member.

THE MEDICAL EVANGELIST

The medical evangelist is one who carries the good news of medicine to the layman—news of medical advances in prevention and treatment of illness. He is not really a stranger in our midst, but a by-product of the past. Twenty-five years ago there were ethical medical men who by virtue of their official positions carried the good news of medicine to the masses through the press and the spoken word by way of the public platform. In more recent years mental hygiene

committees, hospitals, and county medical societies through speakers at public meetings have been making use of such evangelistic methods with very gratifying results but, strange to say, still reaching only a very limited group. Such should not be the case. Ignorance still prevails and the good news of medicine remains confined to our own scientific group, only to be released when some such body as the legislature is in session or when some acute issue like socialized medicine arises. Then the cry goes out, "See your legislator; see your congressman."

It may be pointed out that syndicated articles appear in the daily press, radio broadcasts are sent out from our county societies, and so on; but these are only the beginnings. In many areas the field is still virgin. Service clubs, parent-teacher associations, women's clubs, high schools, colleges, and universities are always ready and willing to hear the good news of medicine.

Medical men in great numbers are opposed to such evangelistic technic, and rightfully so, if it is not properly planned and directed. Possibly our technic and methods might be changed. Medical men dislike to appear in public for fear of the cry, personal publicity. They dislike to be quoted in the papers. All of this can be readily understood when we consider the traditional background of the doctor's ethical training. But is there not a way to avoid all such criticism? The writer thinks so and suggests the following: Such evangelists should be men who are not engaged in practice but full-time men in the employ of the state and county societies. They should not be permitted to indulge in additional activities, thereby increasing their incomes from syndicated articles, magazine stories, *etc.*, outside of or within their own state. Their identity should be overshadowed by the group they represent. They should speak only such facts as have been approved by the various specialties or committees of the state associations or county societies. Such an arrangement would not preclude the great advantage of having eminent men of state or county societies appearing on programs at public meetings arranged by the county societies or accepting invitations to speak at any public gathering. No one would even suggest displacing these men. The evangelist would fill in where such talent was not available, and in many instances they are not available on account of professional duties. Neither would he con-

flict with state departments, hospitals, or institutions in carrying out their educational program.

Some such suggestion might form the basis of a real formulation for a general program satisfactory to all medical men. The medical evangelist would be under the control and direction of organized medicine—a medium through which medicine might meet the present-day challenge of disseminating the good news of medicine. The time seems to have passed when such news must be left in the hands of the syndicated group or the fiction writers who burst forth with articles from time to time. We have no grievances against such men. The writer does feel, however, that inasmuch as medicine has taken upon itself public education in the field of prevention, the job should be done in a thorough business-like way by organized medicine.

AUTOMOBILE ACCIDENTS

It is appalling to read the number of automobile accidents that continue to occur, especially the increasing number resulting in loss of life or irreparable injuries. Anyone accustomed to driving an automobile should realize that in order to reduce accidents to a minimum the other fellow as far as possible must always be given the right of way. After all is said and done the question of safe and sane automobile driving resolves itself into the personal equation of the driver. Surely some drastic discipline will finally be adopted which may help to reduce calamities.

Laws do not prevent automobile accidents, but if the laws on the statutes were properly enforced much could be done to help solve the automobile accident problems. Magistrates in the larger centers are easily reached and the charges against the offending driver are whitewashed too often. This has been well demonstrated by the crusade recently conducted by one of the judges of the Common Pleas Court of Philadelphia, who ordered the rearrest of quite a few responsible for automobile accidents who were discharged by magistrates or held for a further hearing (the latter a subterfuge).

Faulty brakes are frequently responsible for accidents. Those who are accustomed to driving on the highways no doubt often wonder what keeps certain cars from falling apart. On Dec. 12, 1935, the Bureau of Highway Patrol and Safety at Harrisburg submitted a report based upon the examination of 1,567,897 automobiles tested in Pennsylvania during the recent compulsory inspection campaign. The report submits the following facts: Faulty brake equipment, more than 528,000 cars; 1,170,000 cars had improper lighting facilities; steering wheels

were found in good condition in 84.1 per cent; mirrors were acceptable in 97.2 per cent; horns met the requirements in 96.7 per cent; windshield wipers were accepted in 82.5 per cent; and tires were approved in 45.5 per cent.

It is of interest to note that 15,364 cars were rejected as being unsafe for operation. It would be of interest to note how many drivers are unfit for driving cars from the standpoint of mental inaptitude. Thoughtless driving and cutting in are no doubt the 2 most responsible factors. Of the cars rejected as being unsafe, 14,804 were repaired to such an extent as to meet requirements for equipment and safety features. Inspectors ordered 560 automobiles off the highway.

Every facility should be offered toward the campaigns being conducted for the reduction of automobile accidents.

DISCUSSION GERMANE TO THE SUBJECT

How frequently do we attend medical society meetings and listen to discussion irrelevant to the title of the paper! Primarily this is due to the presiding officer who is paying little or no attention to this particular phase of his duty. This situation was very well exemplified at the recent Conference of Secretaries of State Medical Associations conducted under the auspices of the American Medical Association at Chicago. The chairman who presided at the meeting is a veteran secretary of a state medical association.

The first paper of the morning session had been read. After some 4 or 5 had participated in the discussion, Dr. Morris Fishbein arose to a point of order, claiming that none of those who had entered the debate had discussed the contents of the paper. In other words, they were permitted to ramble along on various topics which were not germane to the subject. Dr. Fishbein stated that some of the discussers were not even in the room when the paper was read, while others evidently were misguided by those who had preceded and who were off key. He thought it was in order to give an abstract of the paper for the benefit of those who had arrived subsequent to the reading of the paper and to epitomize what the essayist really meant. Accordingly in about 3 minutes he gave an abstract of the paper, much to the edification of those who had not heard it, and the discussion that then followed was relevant to the subject.

It is interesting to read reports of county medical societies and to note how often the high spots of the discussion have not been directly in

line with the title of the paper. If the presiding officer would follow the paper that is being read, and properly interpret what the author is trying to put over and hold the discussion germane to the subject, it would increase the value of the meeting.



EDWARD BALTHASAR HECKEL, M.D.

Dr. Edward B. Heckel, president of The Medical Society of the State of Pennsylvania 1913-15, died at his home in Pittsburgh of pneumonia, on Dec. 23, aged 70. With his passing there departs from the ranks of medical organization a most ardent and unselfish champion of medical science and of the physician.

He was born in Pittsburgh, Jan. 30, 1865, the son of John G. and Mary E. (Koch) Heckel. He was graduated from Allegheny College in 1887 with an A.B. degree, and in 1889 received the A.M. degree. In 1930 the honorary degree of Doctor of Science was conferred upon him by his alma mater.

He received the degree of Doctor of Medicine from Bellevue Hospital Medical College in 1890, and after taking graduate work in the New York Polyclinic, he returned to Pittsburgh to enter practice. He became a member of the Allegheny County Medical Society at a very early date. He was actively interested in its affairs from the outset and his interest in medical organization never flagged. In 1905 he was elevated to the position of president of his county society and was continuously a member of its board of directors for many years.

His particular genius placed him in a position of civic leadership in medical matters and he was always faithful to his profession in the prosecution of this effort.

For nearly 25 years he was a member of the House of Delegates of the American Medical Association and in 1925 was elected a member of the Board of Trustees of this great organization. Within one year thereafter he became chairman of the board and served continuously in this capacity for over 7 years. It requires an intimate knowledge of the practical operations of the American Medical Association to estimate fairly his fine influence and indefatigable pursuit toward modernizing our efforts. The great progress which occurred under his stewardship speaks most eloquently for his qualities as a leader, his vision, and his sincerity of purpose. In 1928 Dr. Heckel was elected chairman of the Section on Ophthalmology of the A. M. A., in recognition of his competence as an ophthalmologist.

He was some time professor of ophthalmology in what is now the University of Pittsburgh. He was president of the Pittsburgh Ophthalmological Society since its organization in 1912, and was also a Fellow of the Pittsburgh Academy of Medicine and at the time of his death was a member of its council.

He was a member of the American Ophthalmological Association and a member of the American Academy of Ophthalmology and Otolaryngology and a Fellow of the American College of Surgeons; also a member of the Phi Beta Kappa, Phi Gamma Delta, and Phi Beta Pi fraternities.

For many years he served as treasurer of the Medical Benevolence Committee of our State Society and his humane understanding and practical judgment added greatly to the purpose of this altruistic enterprise.

Dr. Heckel served as chairman of the Section on Eye, Ear, Nose and Throat Diseases of The Medical Society of the State of Pennsylvania, was keenly interested in its progress, and gave freely of his knowledge in its discussions. He was ophthalmologist to the Allegheny General Hospital, the Pennsylvania Railroad, the Carnegie Steel Company, and the United States Pension Board.

His devotion to the outpatient clinics was characteristic of him and he shared with his associates the routine work. Emblazoned on the walls of the dispensary of the Allegheny General Hospital was his fundamental instruction to his associates and assistants, "Never guess when it is possible to know." His record is replete with his sincere devotion to this admirable epigram to the younger physicians.

The character of service to his patients was typical of the man. No scientific investigation was denied, and the most modern treatment applied in every single case. He was ever "loyal to the royal in us."

He was president of the Children's Service Bureau of Pittsburgh for many years and a trustee of Thorne Hill School. At the time of his death he was a trustee of Allegheny College and the patron of a prize offered annually for distinguished scholarship in science.

Dr. Heckel wrote on frequent occasions upon scientific subjects directly connected with his special training in medicine. Numerous articles have appeared in various journals throughout his career. He wrote also from a philosophic standpoint in his Seventh Bedford Lecture delivered in 1928 before the Pittsburgh College of Physicians on "Realism in Medicine"; this stands as a fine contribution to literature.

His approach was always kind and accompanied by a directness of expression which was ever on the highest level. Professionally and socially and in his public life he was ever thoughtful and humane. There is a permanency about his achievements which will make his influence upon the profession of our state and nation always a factor in the course of our history.

His capacity for friendship and his splendid record for genuine altruism are indelibly inscribed upon our society and they shall stand as a beacon for the guidance of physicians to come. His broad concept and his vision will continue to lead those of us whose privilege it is to carry on. Pennsylvania can proudly say, "We are better doctors because he lived."

Dr. Heckel was married to Miss Matilda Lautner, of Pittsburgh, who with 2 daughters survives.

ELLWOOD R. KIRBY, M.D.

CAT.

Dr. Ellwood R. Kirby, of Philadelphia, widely known Philadelphia physician, world traveler, and connoisseur of drama and the arts, aged 68, was found dead in bed at his home Dec. 26, of heart disease.

Dr. Kirby was born at Ellisdale, N. J., the only child of the late Robert J. and Sallie L. Kirby. His parents, who were Quakers, moved to Philadelphia when Dr. Kirby was age 2. He received his preliminary education at the Friends Central School, Philadelphia.

He was graduated from the University of Pennsylvania Medical School in 1887, and also received the degree of doctor of medicine from the Medico-Chirurgical College of Philadelphia in 1901. He served his internship at the University Hospital and upon termination of this service he spent 3 years in Europe for graduate medical study at Freiburg, Vienna, and Berlin, where he became interested in dueling and started his collection of weapons.

Those who have seen the oil portrait of Dr. D. Hayes Agnew conducting a surgical clinic at the University Hospital may recall the flaxen-haired youth giving the anesthetic: this is Dr. Kirby.

Upon his return from abroad he served for a time on the surgical service of the University Hospital. At various times Dr. Kirby has served as consulting surgeon at the Eastern Penitentiary, Philadelphia; as clinical professor of genito-urinary surgery, Medico-Chirurgical College; and on the surgical service of the University Hospital. During the Spanish-American War he was director of the Red Cross work in Phila-

delphia. For more than 25 years he was medical director of St. Mary's Hospital, where his service won him the Apostolic Benediction from Pope Pius XI. At the time of his death he was consulting surgeon at the Philadelphia General Hospital. Dr. Kirby was also a member of the Philadelphia Board of Health and a member of the Philadelphia Rapid Transit Board of Directors.

His interest in criminology led him to be appointed honorary police surgeon. Like the late lamented Dr. J. Chalmers DaCosta, he chased fires for fun. In 1932 Dr. Kirby's long-time interest in motion pictures was recognized when officials of the Stanley-Warner Company in Philadelphia presented him with a silver plaque proclaiming him "King of Movie Fans and Emperor of Film Lovers."

He was an extensive contributor to the surgical literature. He was a member of his county and State medical societies and a Fellow of the American Medical Association.

Dr. Kirby was unmarried. He was ardently devoted to his mother, from whom he was inseparable until the time of her death several years ago. Dr. Kirby and his mother driving through the streets of Philadelphia in an open yellow touring car with silver trimmings was a daily portrayal of filial love and devotion.

WILLIAM LAWRENCE CLARK, M.D.

CAT.

Dr. William L. Clark, of Philadelphia, distinguished pioneer of electrosurgery, aged 58, died of biliary disease at his home, Jan. 12, after an illness of 3 months. Dr. Clark was born at Honesdale, Wayne County, Pa., July 30, 1877, the son of Mr. and Mrs. Edward C. Clark. He was a descendant of an old colonial family.

His early education was obtained in the Honesdale schools, where he taught for several years after graduation. Pursuing his ambition to study medicine, he entered Niagara University, and later matriculated at the University of Pennsylvania Medical School, from which he received his degree in 1903. His internship was served at St. Joseph's Hospital, Philadelphia, following which he entered upon private practice in Philadelphia. He was always anxious to teach others the technic of the electrothermic method, and was never happier than when demonstrating it to a group of physicians. It was quickly taken up by others and its use has spread throughout the world.

In 1923 Dr. Clark opened a private hospital for the treatment of malignant disease. As a pioneer in the use of radium and roentgen ray,

he was one of the first to use the divided-dose technic in roentgen ray and never departed from this, even in the days when massive doses of roentgen ray were in vogue.

His contributions to medical literature were numerous and have appeared in the foremost medical journals, not only of this country but abroad. He contributed a chapter on electro-surgery to Da Costa's textbook on *Modern Surgery*. He also contributed a chapter on electro-surgical methods to the *Principles of Practice of Physical Therapy*, by Mock, and a chapter on the same subject to *The System of Surgery*, by W. W. Keen.

He was one of the leaders in physical medicine and surgery, having been honored by the presidency of the American Physical Therapy Association, the American Congress of Physical Therapy, and the American Academy of Physical Medicine. In 1933, he was presented with the Gold Key of the American Congress of Physical Therapy and had the honorary degree of Fellow of the American Academy of Physical Medicine conferred upon him by that organization. He was a Fellow of the American Medical Association, a member of the Pennsylvania State Medical Society, the Philadelphia County Medical Society, the Medical Club of Philadelphia, American Radium Society, American Roentgen Ray Society, Radiological Society of North America, and the Philadelphia Dermatological Society.

Dr. Clark was at one time on the staff of the St. Agnes Hospital, St. Mary's Hospital, and Jefferson Hospital. He was lecturer on physical therapy at Jefferson Medical College for a number of years.

Dr. Clark's contribution to medicine and surgery obtained for him a foremost position, not only in the United States but abroad. His determination to complete an undertaking once started in a large measure accounts for his success. His outstanding ability as a teacher was evidenced by the interest displayed by students in the medical school, and by the eagerness with which his fellow practitioners sought knowledge at his feet. His personality and courtesy were such that all who sought received abundantly of his knowledge. His influence on the development of physical therapy was inestimable and his perfection of the electrothermic methods has been one of the great advances in surgery in modern times. His host of friends and patients will greatly lament his passing.

Dr. Clark is survived by his wife, 4 sons, and 2 daughters.

WARD BRINTON, M.D.

Dr. Ward Brinton, of Philadelphia, well known authority on tuberculosis, aged 61, died Dec. 29, at the Pennsylvania Hospital, where he had been a patient for 3 weeks with complications following appendicitis.

He was a son of the late Dr. John Hill Brinton and Sarah Ward. His ancestry, along both maternal and paternal lines, is interwoven with a vital history of Philadelphia and Pennsylvania. His father was on the staff of General Grant during the Civil War and subsequently thereto became professor of surgery at Jefferson Medical College. The late Dr. W. W. Keen was an office student of Dr. John H. Brinton and subsequently became a colleague of Dr. Brinton as one of the professors of surgery at Jefferson. Those who were students at Jefferson during this time will recall with the greatest of pleasure the happy association of Drs. Brinton and Keen.

Dr. Ward Brinton was a graduate of the Episcopal Academy of Philadelphia, the college department of the University of Pennsylvania, and the Jefferson Medical College, 1894. He served his internship at the Jefferson Medical College Hospital.

For 24 years Dr. Brinton served on the tuberculosis division of the Philadelphia General Hospital. In 1929 he was appointed as chief of the Division of Tuberculosis of the Philadelphia Department of Health. For many years he was a member of the staff of the Phipps Institute for the Study and Prevention of Tuberculosis. He was secretary of the Board of Directors of the Pennsylvania Tuberculosis Society and was a member of the board for 32 years, being the only remaining member of the board as it was constituted in 1903, when the organization was known as the Pennsylvania Society for the Prevention of Tuberculosis.

During the World War he was appointed assistant director of the ambulance section of the Second Division and later became major and chief medical officer in overseas hospitals at Mucon and St. Nazaire. He was cited by the French Government for gallantry in action at Chateau-Thierry. He also served with the Medical Corps of the United States Army on the Mexican border. He was a former member of the First City Troop having served with the unit in the Puerto Rican campaign during the Spanish-American War.

He was instructor in medicine at the Jefferson Medical College and clinical professor at the Woman's Medical College of Pennsylvania; he was on the staff of the White Haven Sanatorium, where he was also a director. He was visiting

physician to the Protestant Episcopal Home for Consumptives and the Eagleville (Pa.) Sanatorium. He was a member of the staff of the Northeastern Hospital and was formerly a member of the Board of Prison Inspectors of Philadelphia County. He was a charter member and director of the Babies' Hospital of Philadelphia; a member of his county and State medical societies and a Fellow of the American Medical Association; a Fellow of the College of Physicians of Philadelphia; a member of the Pathological Society of Philadelphia; a Fellow of the Royal Geographical Society of England, and of the Historical Society of Philadelphia. In addition to several clubs he was a member of the Society of Colonial Wars and the Sons of the Revolution.

Dr. Brinton was unmarried. He is survived by a brother and a sister. Dr. Brinton was modest and unassuming, but he was an indefatigable worker especially in the field of tuberculosis.

USEFULNESS OF MEDICAL LIBRARIES

"As the knowledge of what other investigators have done is a primary step in all experimental work, it seems logical that the existence and maintenance of a complete index to medical literature is of vital importance to all research. . . ." We quote from the presidential address of Charles Frankenger, librarian of the Medical Society of the County of Kings and of the Brooklyn Academy of Medicine, at the latest annual meeting of the Medical Library Association. In his address Mr. Frankenger emphasized, among a number of other needs, that of making available for use by the medical profession "all original articles and papers read before societies and contained in all medical publications issued throughout the world."

Perhaps it is not generally known that funds for the purchase of publications for the Surgeon General's Library in Washington have been so drastically reduced that subscriptions to periodicals have had to be decreased by over 400 and the purchase of new books, particularly foreign works, markedly curtailed. This means that the *Quarterly Cumulative Index Medicus* cannot cover hundreds of medical publications, so a vast amount of literature becomes inaccessible to medical research.

Since the *Cumulative Index* has heretofore been limited in its scope, some medical libraries have been indexing individually the contents of the omitted publications. Mr. Frankenger believes that in such work considerable duplication must exist, since one library cannot know what the others are doing along this line. He feels that, if this work could be correlated, an exchange might be established, duplication of work eliminated, and a still wider group of publications indexed. "Until there is sufficient support to make the *Quarterly Cumulative Index Medicus* more inclusive, possibly some arrangement could be effected whereby cooperating libraries would agree to index certain journals, thus reducing somewhat the labor and making it unnecessary for the American Medical Association to subscribe to these publications," he said.

He feels that the most practical and constructive

means toward such an end would be the creation of a standing committee on the indexing of medical literature. Such a committee could coördinate scattered efforts, stimulate interest on the part of foundations and research organizations in providing support toward making the present index to medical literature more complete, and direct any concerted action undertaken in bringing pressure to bear upon Congress to make adequate provision for the proper upkeep of the Surgeon General's Library and the continued regular publication of the *Index Catalogue*.

In concluding his address, Mr. Frankenger stated that, now that the Medical Library Association is an incorporated organization, it is hoped the time will soon come when it will receive bequests and gifts from interested individuals or foundations. Heretofore, whatever has been done has been accomplished with limited resources and through "the fine spirit of co-operation of the officers and individual members, who have willingly and most efficiently served in the various capacities to which they have been elected and appointed."—Editorial, *Medical Record*, Jan. 1, 1936.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY POSTGRADUATE INSTITUTE

A postgraduate institute, offering an intensive and interesting study of the newer work in the field of cardiovascular and renal diseases, will be conducted by the Philadelphia County Medical Society from Apr. 20 to 24, inclusive.

The program, to be held in the Bellevue-Stratford Hotel, Philadelphia, has been designed to meet the needs of all members of the profession, but particularly those in general practice. Physicians from all parts of eastern and east-central United States are invited to attend.

Lecturers, about 30 in number, have been selected from among the foremost teachers in this great center of medical education. While approaching the subject from specialized viewpoints—those of the physiologist, cardiologist, pediatrician, surgeon, roentgenologist, bacteriologist, internist—the presentations will be of a strictly practical nature and should be of real value to the general physician, who finds cardiorenal conditions occupying a large proportion of his time.

The Philadelphia County Medical Society, in conducting the postgraduate institute, is meeting the demands of many physicians who believe that the organized profession should provide them with this type of opportunity for keeping abreast of medical progress and thus maintaining the highest standards of medical service. The only charge is a \$5.00 registration fee to cover the institute's expenses. It is hoped to make the event an annual one, giving special attention each year to a different subject.

THE CONSERVATION OF VISION

The National Society for the Prevention of Blindness held its annual meeting and conference from Dec. 5 to 7 in New York City. At a joint meeting with the American Museum of Safety the following papers were read.

Dr. C. H. Watson, president, National Safety Council, gave an address on "The Problem of Fireworks Accidents." He said in part: Fireworks casualties, with particular reference to the blindness problem, present the same general classification of causes and results that may be found in industries in which small

particles of hot substances or flame flashes occur in proximity to the open eye. Many industries the processes of which involve handling molten metals or hot particulate material from high-speed abrasive grinding tools must meet the question of the eye burn with a constant maintenance of approved first aid. The same thing is true of burns of the corneal conjunctiva resulting from flash explosions such as occur from fireworks. The industrial eye burn from hot foreign bodies or from flash burns has a more favorable hazard than eye burns occurring from the use of fireworks.

The opportunities for the services of an adequately equipped ophthalmologist could not be predicted in advance of the periods when fireworks are going to be exploded. In an industry it is perfectly possible to make available at least the important measures for adequate first-aid care of damaged eyes. From the industrial standpoint the injured eye as the result of a burn of any kind—from hot substances, naked flame, or chemicals—can be benefited through the immediate use of plenty of clean cold water, dousing face and eyes liberally. Don't wait for the doctor. Not infrequently we encounter burns of the corneal conjunctiva and of the lid margins which, if immediate cold water applications had been available, later followed by adequate oil dressings, the formation of adhesions between lids and eye surfaces could have been prevented.

It must not be forgotten that corneal opacities resulting from flash burns and due to proliferating vascular growths throughout the burned corneal area may result in blindness. It is possible now, in certain cases, to have corneal grafts introduced with at least a reasonable measure of success.

Louis Resnick, director of Industrial Relations, National Society for the Prevention of Blindness, read an address on "The Problem of Fireworks Accidents." He said in part: To those who may wonder why the problem of fireworks accidents is made the subject of a special meeting of 2 big national societies in the month of December, the time to begin to eliminate Fourth of July accidents is the fifth of July of the preceding year. December is probably too late rather than too early to prevent Fourth of July accidents of the following year. Most of the fireworks to be used next July have already been manufactured and sold. They have long since been delivered to the wholesalers who will between now and July sell them to a hundred thousand retailers, who will in turn put them in the hands of millions of children and their parents.

In 1935 at least 7738 persons were injured and at least 30 persons killed in celebrating the Fourth of July with fireworks and the accompanying paraphernalia, such as matches and bonfires; these figures do not include the injured and killed whose names did not get into the newspapers.

Until this year practically all that was known about fireworks accidents came from newspaper clippings. Now, for the first time, due to the grant from the Pyrotechnic Industries, Inc., it has been possible to supplement the information provided by newspapers with first-hand information from the families of the persons injured or killed, from the doctors who attended them, from the hospitals to which they were taken, and from the police officers who assisted them.

The analysis of 3000 questionnaires shows the startling fact that among the casualties of the celebration of the Fourth of July in 1935 were large numbers of infants and tiny tots too young to have any notion of what they were celebrating. Of the casualties among persons from age 1 to age 20, 20 children had been

killed and 2069 injured in celebrating the Fourth of July with fireworks. A thousand more injured were found among persons 20 to 80 years of age. Twenty-four suffered such serious eye injuries that one eye had to be removed; in 11 other cases, the total loss of sight of one or both eyes was reported. A total of 214 cases of eye injuries were reported, of which 104 were serious.

These accidents occurred in at least 47 out of the 48 states. Kentucky was the only state from which no casualties were reported. The largest number of fireworks accidents occurred in New York City.

One of the most significant findings is that in general there were as many accidents in cities having laws prohibiting the sale of fireworks as in cities having no such legislation. The reason for this is that, in nearly every case in which a city prohibits the sale of fireworks, fireworks are bootlegged within that city and are sold openly at roadside stands outside the city limits or in neighboring towns. State legislation rather than local ordinances is recommended as a means of controlling the manufacture and sale of fireworks.

As to the time of these 3000 casualties, 2374 occurred on the Fourth of July, 337 in the 2 weeks before the Fourth, and 233 in the 2 weeks following the Fourth.

There are no such things as harmless fireworks. Practically every type of fireworks was reported as responsible for injury or death. The common firecracker is in the aggregate the most dangerous of all fireworks, probably because it is used in larger quantities than any other item. The so-called harmless sparkler, which is frequently recommended for use in the home and by the smallest children, can be deadly. Sparklers caused 90 casualties last Fourth of July, including at least 4 fatalities, the deaths resulting from fires started by harmless sparklers.

The Roman candle, the skyrocket, the pinwheel, fountains, and even red and green lights, the innocent little cap pistol, and the lowly punk used as a substitute for matches, all caused numerous serious injuries.

Next to ordinary firecrackers which caused 2 out of every 3 casualties, the greatest damage was done by the following items of fireworks in the order named: Cherry bombs, 298 casualties; torpedoes, 175 casualties; cannon crackers, 142 casualties. If the fireworks manufacturers would discontinue the manufacture of these 4 items and of the so-called harmless sparklers, it would mean that 20 or more children who are otherwise doomed to die in fireworks accidents next year would be alive after the Fourth of July; it would mean that 7000 persons otherwise doomed to be seriously injured in fireworks accidents next year would escape such injury.

If the fireworks manufacturers do not of their own accord eliminate those items that are causing loss of life and war-like lists of wounded each year, then the time will come before long when America will wipe out the entire industry and with it the barbarous practice of burning children alive, gouging their eyes out, and blowing their hands off in the crazy notion that this is patriotism.

An address was delivered by Dr. LeGrand H. Hardy, Director of Eye Service, Fifth Avenue Hospital, New York City, on "Recent Advances in Medicine and Surgery Which Have Contributed to the Restoration and Conservation of Vision." He said in part:

Radiation of Intra-ocular Neoplasms.—The application of radon seeds to such tumors has been attended with some measure of success and holds forth a promise of more hope for the future.

Keratoplasty: Transplantation of Tissue.—The ophthalmologists are watching with great interest the progress being made in this field. Success, however partial, has in the past 10 years led to greater and more reasonable hopes than were possible before.

Contact Glasses and Telescopic Spectacles.—In the past 10 years more progress has been made than ever before, and thousands of otherwise industrially blind are happily and efficiently carrying on their work in life. It is amazing to see the almost incredible increase in vision these glasses may make possible under suitable circumstances.

These results are more amazing when it is considered that there has never been manufactured a complete set of lenses for trial purposes. Most of the work has been done with a set of 15 or 20 lenses and the most elaborate set in America has less than 30 lenses, so that much more may be expected in the way of improved service and results when there is a larger array of lenses to choose from.

Contact lenses are thin shells of glass which fit over the eyeball, under the lid. Their purpose is to neutralize or destroy optically the effect of the corneal surface of the eye and to replace it by a smooth regular glass surface. The space between the glass and the cornea is filled with normal saline solution or tears which have about the same index of refraction as the cornea. The lens does not touch the clear part of the eye but rests on a narrow collar of glass which is part of the lens and which accurately fits against and is supported by the scleral portion of the globe.

Originally designed for very high errors of refraction, particularly astigmatism, and conical corneas which cannot be corrected by any other means, these lenses with increasing frequency are being utilized to correct high degrees of simple ametropia, particularly nearsightedness, aphakia, and as protective lenses for the cornea, as splints, as a means of holding medication or dressings in place, in plastic surgery, in albinism, in aniridia, and as occlusion disks in squint training.

With an adequate series of such lenses at least 1000 industrially blind persons in New York City could be salvaged to society at a cost of less than \$100 a piece by means of contact lenses properly fitted.

Less spectacular but of great value in certain cases are the newer types of telescopic spectacles. These have served in the past few years to bring to a number of patients sufficient vision to rescue them from the class called industrially blind. They are carefully worked out, short-length, simple telescopes which may be worn in the manner of ordinary spectacles and into which may be ground the individual prescription of the wearer.

Detached Retina.—The outstanding progress of the past few years has been made in the treatment of detachment of the retina.

The newer technic consists of careful study and classification of the type of detachment, the search for and localization of the injury or a hole, and the application of an irritant in such a manner as to produce a scar or adhesion between the membrane and its supporting wall. These adhesions serve to retain the retina in its normal position.

Squint Orthoptics.—It is a fact that many squinting or cross-eyed persons are industrially blind in one eye. It is an equally important fact that practically all of them use only one eye at a time and hence are blind in one eye or the other all the time. More important still are 2 additional facts which have been proved: Much of this blindness is preventable; and monocular

vision represents only a part of human visual potentialities.

In many cases of squint the ability to see as well as the inability to see has been transferred from one eye to the other. To develop or restore vision in an eye by visual training or to develop or restore the absent functions of binocularity or two-eyed seeing, while not so spectacular, is just as valid a procedure in sight restoration as the dramatic surgery of cataract removal.

The surgeon, the physiologist, the educator, the neurologist, and the engineer are all working together to produce, preserve, and perfect the highest type of visual efficiency.

Iconometry and Iseikonic Lenses.—Eyes which cannot be used at all or only very inefficiently are to that extent blind, and any effort which serves to reduce this handicap is worthy of approval.

It has been known for years, though not particularly emphasized, that seeing is done by the brain, the occipital cortex, which serves as a center to which the images formed on the retinas of the eyes are communicated. It has been found that while each eye alone may have perfect vision if the images of the 2 eyes differ by a few per cent in size or shape, the brain is unable to synthesize them efficiently, if at all, and confusion with many other distressing symptoms results.

An optical instrument (the iconometer) for measuring the size of these images, and new lenses (iseikonic lenses) for correction of the defect have been produced and in some cases have yielded remarkable results. If only 4 or 5 per cent of people who wear glasses need or are benefited by these lenses, they will form a valuable contribution to better and more efficient seeing.

The Vasodilators.—Many patients in the past have partially or completely lost their central vision as a result of poisons which affected the central part of the retina or interfered with its blood supply. Sometimes a mechanical fragment, such as a clot of blood freed in some remote part of the body and carried in the blood streams, lodged in and obstructed the vessel supplying this central area. Sometimes the vessel itself suffered from a spasm and shut off the necessary blood supply. By whichever mechanism, this very delicate and sensitive membrane lost its sensitivity with resultant obscuration of vision or blindness. Such blindness could not be influenced by any optical treatment.

A sufficient number of reports have been accumulated to indicate that the systemic use of vasodilators offers frequent, sometimes spectacular, aid to these patients. Due to the dilatation of the blood vessels the local supply of nourishing blood is increased, the lodged fragment may be swept on to smaller and hence less important channels, or the tense spasm may be relaxed permitting blood to pass. Since the retina deprived of blood will very quickly be damaged, the necessity for early treatment is emphasized, but even after prolonged punishment sufficient improvement has resulted from the use of these drugs to characterize their discovery and use as a medical advance in the field of the prevention of blindness.

Optic Tract and Intracranial Injuries.—The neurologist and brain surgeon have overtaken and surpassed the ophthalmologist in some fields directly related to the prevention of blindness.

An injury such as a hemorrhage, a clot, an abscess, or a tumor which presses upon the optic nerve or its pathway anywhere between the eye and the back of the brain will produce visual signs which may sometimes

be used with great accuracy to locate the exact position of the trouble.

Instruments and Equipment.—Another group, insufficiently honored for its services to the conservation and restoration of vision, may be typified by the optical engineer. It includes the physicist, the chemist, the optician, and the instrument maker. Without the refinements in technic made possible by their coöperation, much of the recent progress could not have been made.

Glaucoma.—Much progress cannot be reported in the medical or surgical treatment of this condition. The newer drugs and operations have not been used sufficiently or extensively enough to have become part of conservative practice.

The glaucoma patient is worried, apprehensive, and inclined to wander from doctor to doctor and clinic to clinic looking for some magical relief. The parade goes on, phalanx after phalanx marching toward inevitable blindness. The doctor in his office and clinic is preoccupied and overbusy. The nurse and social worker in a hundred positions along the line have met with tact, sympathy, kindness, and explanations a goodly number of these patients and diverted them into the only course where safety may be found.

COMMENTS AND EXCERPTS

Stomach Ulcer Is Symptom of General Abnormal Condition.—Stomach ulcer is only a symptom of a more general abnormal condition. Dr. Alton Ochsner, professor of surgery at Tulane University School of Medicine, told the American College of Surgeons.

Some people may be predisposed to ulcers by their constitutional make-up, or the tissues of their body may be especially susceptible to ulcer formation. In these persons, the development of stomach ulcers may be precipitated by abundant secretion of the stomach juices, by over-acidity, by focal infections elsewhere in the body, or by injury to the tissues of the stomach and digestive tract.

These conclusions as to the cause of stomach ulcer are based on lengthy research by Dr. Ochsner and his associates, Drs. Mims Gage and Kiyoshi Hosoi, and on researches by other workers in the United States and Europe.

No method is known at present for overcoming the factors that predispose to ulcer, so the only choice is to avoid conditions which tend to bring on the trouble in predisposed persons.

Persons subject to ulcers must change their habits of living for the course of their lifetime, the Tulane investigators advise, pointing out that while surgical treatment may be of value in some complications resulting from ulcer, it will not change the nature of an individual predisposed to ulcer.

Among the habits that must be avoided are those that tend to increase the secretion of the stomach juices or the acidity of that organ. Smoking, especially of cigarettes, alcohol, and the use of condiments with food are to be avoided.

Frequent small feedings were advised to neutralize gastric acidity in persons subject to ulcer. Sodium bicarbonate is not an efficient neutralizing agent for this purpose. Calcium carbonate is better.

All foci of infection should be removed because they tend to stimulate the formation of ulcers both directly and indirectly. Roughage in food should be avoided in order to lessen the possibility of injuring the digestive tract.

The complications for which Dr. Ochsner considers surgical treatment valuable are mechanical obstruction of the digestive tract, perforation of the stomach wall, repeated hemorrhages, or danger of cancer.—*Science News Letter*, Nov. 16, 1935.

Medical Movies.—The introduction of the cinematograph as an adjunct to the medical curriculum is apparently a slow process. Medical movies and talkies constitute an ideal method of teaching the art and science of medicine. Technical perfection has reached such a high point and the taking of pictures even by amateurs has been simplified so admirably that it is really amazing that medical schools are backward in adapting the visual and auditory film to the classroom. Only in a few colleges in this country are there libraries of medical films, and these exceptions are due entirely to the initiative of certain individual members of the faculties.

The time is not far distant, however, when there will be central exchanges for the loan and distribution of medical films. In a way a start has been made by several commercial pharmaceutical houses. *Modern Medicine* (Nov., 1935) lists a group of concerns that have made a diversified number of films available to the medical profession. Many of these are entirely of clinical and scientific interest, and are not at all designed to promote their products. The popular reception which they have attained is evidence of their intrinsic value.

There is another source of medical films which has been greatly overlooked, namely, the large number of privately owned films throughout the country. Conservatively speaking, hundreds of physicians have prepared one or more films for their own amusement or as a hobby, films of operations in which they have been especially interested or of some unusual cases and observations they have made, etc. Generally these films are shown several times at local medical meetings and then stored away and forgotten. Here is the source of the making of a new industry. Let some one open a central registry, listing as many of these films as are available. For a nominal sum physicians all over the country could have access to this collection for a stated period of time. This would bring otherwise unused films out into the open where they belong. Ultimately an all-embracing library would evolve, which would mean the vivifying of modern medicine in keeping with the spirit of the times.—Editorial, *Medical Record*, Jan. 1, 1936.

MEDICAL ECONOMICS

The Rise and Fall of the Doctor.—Professor Harold J. Laski, of the Department of Political Science of the University of London, has an article in *Harper's Monthly Magazine* for November, 1935, in which he comes out definitely for the socialization of medicine on the insurance basis. The title is "The Decline of the Professions," and the thesis is that the individualistic organization of the professions is now fatal to the fulfillment of their function. He includes in his arguments the law, the teaching, and other professions, which presumably are fundamentally related to public welfare.

This is an article for all physicians to read and to ponder on, for the author is a man of learning and writes in an obviously unbiased manner. He was at one time a lecturer at McGill and Harvard Universities, and was a visiting professor at Yale. His writing on social, political, and economic themes are well known, including at least 15 books. How does he look at the doctor as he subjects society to a critical scrutiny?

The clergyman, the doctor, and the lawyer, he says, have been the professional men par excellence; he had in mind possibly the classical eulogy of Stevenson. The American physician particularly has outdistanced all other types as the embodiment of public virtues. Idealism has always been the keynote. Tradition has always been that in medicine public service was more vital than private profit.

But this idealism cannot be judged and evaluated solely on the basis of the great men of medicine. The test is its workability. How does it assert itself in daily life, in everyday practice? How does the individual doctor stand in relation to this idealism? Can he maintain his exalted standards while of necessity engaged in offering his services for hire?

"A world in which, at least predominantly, the medical man competes with his fellows in the market for patients is one in which neither his skill nor his knowledge is the primary basis for success," Professor Laski says. In order to offset the subordination of the doctor to the need for personal gain, the profession should be organized as a public institution, for the economic handicaps prevent scientific progress, hamper self-expression, and interfere with progressive attitudes. The rules under which the doctor maintains his professional life are for his own economic safeguards rather than for the protection and advantage of the patient. That the doctor may not suffer personally, the public becomes the victim. How then can one speak of ideals?

The solution, as he views it, is the socialization of medicine. It should be organized in the interests of public welfare. "To make the whole profession a public one, even in a capitalist society, we require only to extend the idea of insurance for medical care to all members of the population." While this is the aim of a socialistic society, yet even now it is aptly possible in medicine, since there are already vast public medical organizations in operation. Many preventive and research measures are already in public hands; it would be comparatively simple to extend the idea.

The fault, he insists, lies with the doctor, who has never fully begun to consider the social implications of his calling. To fulfill his destiny the physician must be a public servant. "The average doctor, in such a scheme, could become in the full sense a citizen, for the simple reason that his science could then become conscious of its social obligations in a way that is not now open to him."

These are the observations of a man who views society and the impacts of society in all dimensions. Is the status of the doctor declining, as he believes? Are the ancient and exalted implications of the healing art giving way before the regressive trends of the times? Will the doctor fall, but to rise a public servant in fact as well as in theory? Is some form of socialized medicine the only bulwark against a weakening idealism? Or can the doctor rise to the traditions and glories of the past despite the precariousness of the times? The answers to these questions are in the making, and the doctor should prepare himself for their making by being well informed on all angles of the problems.—Editorial, *Medical Record*, Dec. 18, 1935.

Report on the Study of Abuses in Chicago's Outpatient Practice.—The Chicago Medical Society conducted a survey of the use of free medical service and outpatient practice in Chicago, under the direction of William Henry Walsh. The survey extended over a period of several months.

The purpose of the study was to determine the ex-

tent of abuse of free medical service by those able to pay private physicians and to ascertain the standards used in determining the economic eligibility of patients accepted for free care.

The report showed that in the 6 teaching outpatient departments studied, which handle approximately 60 per cent of the entire free outpatient work in this city, there was an abuse of the free service to the extent of 13 per cent, ranging from 22 per cent in one institution to 6 per cent in another.

The institutions selected for this study by the committee were: Central Free Dispensary, Children's Memorial Hospital Dispensary, Mandel Clinic of Michael Reese Hospital, Mercy Hospital Free Dispensary, Northwestern University Medical Clinics, Research and Educational Hospital Dispensary of the University of Illinois. Those familiar with Chicago institutions will recognize that the institutions selected are among the best in the city and all except one are either directly connected with medical schools or have teaching affiliations. The report states that the committee was guided by an earnest desire to secure the fairest possible sampling rather than the worst obtainable.

Of the 5615 consecutive admissions reviewed, 1484 (26.4 per cent) were found to be appropriate for home visit; 300 (5.3 per cent) were not appropriate for home visit because they were nonresidents of Chicago, deceased, etc.; 478 (8.6 per cent) were cases excluded because the question of abuse did not enter into the matter; and 3353 (59.7 per cent) were cases receiving relief when admitted, which cases the Committee on Medical Economics agreed were not to be included as it was presumed that sufficient investigation of these had already been made and they were entitled to free care. Complete information was secured on 1043 (70 per cent) of the 1484 cases suitable for home visit, information being unobtainable on the balance for one reason or another.

In determining the ability of families to pay for private medical care, 8 factors which the best practice holds essential for consideration in deciding eligibility for outpatient care were taken into account:

1. Nature of the disease and kind and amount of treatment needed.
2. Cost of such treatment at usual private rates.
3. Family income.
4. Patient's family responsibilities, number of dependents, etc.
5. Members of the family needing medical, hospital, or other care.
6. Length of employment and the financial strain under which the family was living; indebtedness due to unemployment.
7. Previous family illness, expense involved and debts to physicians, hospitals, etc.
8. Family resources, other than earnings, to meet unusual demands.

A family budget which was prepared in coöperation with experts on home economics was used as a measuring rod to determine income eligibility; this budget runs from \$121.57 a month for a family of 5 to \$45.03 for a working woman living alone. Those within these economic brackets were not considered in the investigation to be able to meet the cost of private medical service excepting for the most minor conditions.

Of the 1015 families completely investigated (1043 cases), it was found that 66.1 per cent had incomes of less than \$1000 per year and that 90.8 per cent received less than \$1500. *Bull. Amer. Hosp. Asso.*, Dec., 1935.

Additional Data on Medical Economics

Chester County—p. 369.

Erie County—p. 370.

Northampton County—p. 375.

MEDICOLEGAL

Cross-Examination of Roentgenologist.—The Indiana Appellate Court held, in a personal injury action, *Yellow Cab Co. vs. Kruszynski*, 196 N. E. 136, that the cross-examination of a roentgenologist as to whether "there could be a dislocation and inflammation, and the part replaced in the socket or back in proper position and no evidence in the roentgenogram of any inflammation after 11 months" was permissible as against the objection that there was no evidence of dislocation or placing the jaw back into position.—*Medical Record*, Jan. 1, 1936.

Method of Taking Roentgenogram.—The Kentucky Court of Appeals, *Equitable Life Assurance Soc. vs. Reynolds*, 259 Ky. 504, held that the fact that a roentgenogram of a heart was not taken according to textbook rules and that the theory of the medical witness giving testimony based thereon conflicted with that of the author did not render the roentgenogram or the opinion based thereon incompetent. It was for the jury to accept the testimony of the witness or the theories of the author.—*Medical Record*, Jan. 1, 1936.

Original Injury or Malpractice.—A case illustrating the necessity for proof, by the plaintiff in an action for malpractice, either that the damage complained of resulted from the malpractice and not from the original injury or that the damage was due to the original injury and not to the defendant's negligence, so that the jury shall not be permitted to speculate upon the relative amount of injury or damage due to either cause, was recently decided by the Circuit Court of Appeals, Ninth Circuit.

The original injury in this case was a fractured hip, the negligent diagnosis, treatment, and care of which were alleged. The treatment applied was correct if defendant's diagnosis of an impacted fracture was correct. It was conceded that it was not correct if the fracture was not impacted and required reduction by traction.

Five expert witnesses for defendant testified that in their opinion the fracture was impacted. One witness for plaintiff testified that he was unable to say from a roentgenogram, taken by the defendant before diagnosing the injury as an impacted complete fracture of the surgical neck of the right femur, that the fracture was not impacted, but that, in his opinion, if the fracture were impacted, the patient should have been able to stand after the limb was broken and before treatment. The other experts testified that in case of such a fracture, whether impacted or unimpacted, the injured man would not be able to stand.

The plaintiff's other expert witness, who had been consulted more than 2 years after the injury, when he took a roentgenogram of the fractured bone, which showed that the femur had slipped past the head about 2 inches and that the fibrous union occurred at this point of contact (upon which imperfect result the plaintiff based his claim for damages), attributed the defective union of the bone to the fact that the fracture was not properly reduced.

The first of these 2 witnesses testified in effect that the defective union was due partly to the failure to re-

duce the fracture by traction and partly to the premature use of the leg by the patient. The second testified that the defective result might have been caused from either a failure to reduce the fracture or a slipping of the fragments after a proper reduction, without stating whether or not a slipping was or might have been caused by premature use of the leg.

Thus, the court said, 2 of the plaintiff's witnesses assigned either or both of 2 causes for the defective union of the bone. If both causes were negligent, it would not be necessary for plaintiff to distinguish between the damages resulting from the 2 separate acts of negligence, but, when one act is negligent and the other is not, the burden is upon the plaintiff to prove the damages which flow from the negligent act.

It was held that no such error of judgment in diagnosis had been shown as would justify a recovery. It was also held that no recovery could be had for negligence in ordering the patient, 6 months after the injury, to use his leg freely and put weight on it, since it was not shown that the use of the leg was premature. Moreover, even assuming that both the initial treatment and the subsequent care of the plaintiff were negligent, it was held that there was a fatal defect in the proof because it was not shown that proper treatment would have produced a better result.—*Editorial, Medical Record*, Dec. 18, 1935.

HOSPITAL ACTIVITIES

Voluntary Aids in Hospitals.—The Community Chests and Councils have listed 10 assignments which may well be done by voluntary workers in hospitals. The list includes the following:

1. Aids at information desk at entrance to hospital and also on the floors to assist, under supervision, in giving information and guiding callers.
2. Clinic secretaries to take notes (in longhand) for doctors.
3. Aids in handling ward visitors, etc.
4. Clerical aids at the registration Desk in outpatient department, taking necessary information from patients and routing patients to clinic.
5. Aids to have charge of library for patients, delivering books and magazines to patients.
6. Tutoring in children's ward if teacher is not available or extra help is needed.
7. Assistants in central supply room, making dressings.
8. Messengers, taking messages, records, mail, flowers, etc., from one part of the hospital to another.
9. Aids in social service department. These will need special training and supervision if they are to do case work. They may also assist with errands and other work.
10. Publicity aids, who write feature stories for the newspapers and assist with other publicity.—*Bull. Amer. Hosp. Assn.*, Dec., 1935.

Shall Voluntary Hospitals Be Continued?—Robert Jolly, past president, American Hospital Association, asks the question, "Should voluntary hospitals be continued?" His answer is yes—if they are performing the functions for which they are supposed to be maintained.

There is no reason for closing a voluntary hospital or any other type of hospital if it is adequately filling a need in its community. He gives several reasons why voluntary hospitals should be preserved.

There must be voluntary hospitals to care for a large group of people who are able to pay for full hospitalization. There must be hospitals to supplement the city or governmental division in caring for the indigent sick. They carry on the tradition of scientific leadership by providing opportunity for research and experimentation in surgical, medical, and nursing technic. Voluntary hospitals should be preserved to give an opportunity to donors to spend their money on just such things as the voluntary hospital sponsors—not only on research and experimentation but on the care of indigent patients. For the government to continue to build hospitals and increase admissions not only from ex-soldiers but also from the increasing horde of government employees and others with political pull will send to the scrap heap millions of dollars' worth of the best hospital property in the country. Voluntary hospitals should be continued to train personnel for all, especially government, hospitals.

In this country we must preserve the voluntary principle in government, education, religion, and charity. There must be coöperation between all the hospitals in a given community to ascertain the best policies to pursue and then to pursue them fearlessly and honestly. The hospitals should study their means of support.—*Hospital Management*, Dec., 1935.

Negro National Hospital Fund.—The executive secretary of the Negro National Hospital Fund has announced his plan to redeem his race. It is his opinion that the negro physician has absolutely no chance in any of the public hospitals of the United States. In fact, there is only one public hospital in America, apart from the 2 negro tax-supported hospitals in Missouri (one at St. Louis and one at Kansas City), in which a negro physician may practice surgery, and that one is the Harlem Hospital, New York City. The negro physician and nurse are virtual outcasts from the hospital system of America. He considers the only solution of this problem of adequate hospitalization for the negroes in America and proper training of negro physicians, nurses, and social workers is for the negroes to take the initiative in founding their own institutions and provide for their own development.

The executive secretary is of the further opinion that the white man will help the negro to get his own institutions but will not share the institutions with which he is connected with him; accordingly, the only thing to do is for the negro to face these facts and meet them as a simple practical problem.

The plan of the Negro National Hospital Fund to raise \$150,000,000 for the construction of negro hospitals is based on the hope that each of the 12,000,000 negroes in the United States will donate one cent each week to the Fund. The aim is given as "a standard hospital for negroes in every city of the nation where there are 10,000 or more negroes." If it is desirable from the standpoint of the patients that separate hospitals be established for negroes and that these be manned largely or entirely by negro physicians and nurses, does the plan proposed by the executive secretary have enough chance of success to merit support and effort by those who wish to help the negro race?

The board of trustees has adopted a constitution, elected officers, and officially launched the nationwide campaign for funds.

While *The Modern Hospital* is entirely sympathetic with efforts to provide better hospitalization for any uncared-for group of citizens, white or colored, it does not wish to endorse the Negro National Hospital Fund

until such time as it has been demonstrated that the plan is sound and practical and that the money collected will be scrupulously handled and a public accounting made therefor. The constitution of the Fund requires quarterly or semi-annual audits by a certified public accountant and publication of all gifts to the fund in a magazine to be established.—*The Modern Hospital*.

INDUSTRIAL MEDICINE

Reduction in Industrial Accidents in Germany.

—According to investigations instituted by Oberregierungsrat Wicke, a general reduction in the number of accidents to German workmen is observed. This observation is the more surprising when one considers how many among those workmen recently put to work have become unaccustomed to work through enforced idleness. Wicke holds that this reduction in the number of accidents is ascribable particularly to the indefatigable accident prevention campaign that has been waged in recent years. In the building trades it has been established that, in 1932, 7.87 per thousand full-time workmen suffered their first compensated accident and that 0.55 of these accidents (per thousand workmen) proved fatal. In 1933 the corresponding figures were 5.19 and 0.43; in 1934, 4.80 and 0.45. In 1932 in underground operations 15.48 per thousand full-time workmen suffered their first compensated accident and 0.92 of these accidents (per thousand workmen) proved fatal. The corresponding figures for 1934 were 5.75 and 0.66. During the first 7 months of 1935 there was a still further decrease in the number of accidents.—*J. A. M. A.*, Dec. 28, 1935.

PHYSICAL THERAPY

Editorial Comments

It is interesting to observe the remarkable progress made by a subject once it is taken up by men who are capable and scientifically trained. Physical therapy for many years was in the hands of quacks and poorly trained men. During the World War physicians took up the subject and found much of value in it.

This interest has led to the remarkable development which we have seen in physical therapy. Today there is not a modern hospital which does not have a fully equipped physical therapy department under the direction of a competent medical man. This interest has produced some of the most outstanding developments in modern medicine. The surgical use of the high frequency current which owes its development to the late William L. Clark, of Philadelphia, has opened up a vast field in the treatment of growths, both benign and malignant, and in other types of surgery. Many a victim of advanced carcinoma, particularly in the oral cavity, has been cured or relieved from conditions which in the past had no adequate therapy. The use of the cutting current has found many useful fields, particularly in genito-urinary surgery and in surgery of the brain.

Artificial fever therapy has opened up another large field of usefulness. This originated in the use of malaria, but modern research in physical therapy was able to supplant this uncertain form of fever with an aseptic fever, which could be controlled accurately as to height and duration, and thus it became an absolutely accurate method of treatment. Artificial fever in the treatment of cerebrospinal syphilis has produced results equal to those of malaria, without its attendant dangers, and there is reason to believe that, as a result of the research

work carried on by numerous groups throughout the country, there will soon be an efficient method of treating primary and secondary syphilis with greater certainty of results.

Among the other conditions successfully treated are many which heretofore have been without an adequate form of treatment, such as multiple sclerosis, Parkinsonism following acute encephalitis, and many of the metastatic forms of gonorrhea. The future will unquestionably show that many other conditions for which we do not have a successful form of treatment will be benefited by artificial fever.

The recent introduction of short and ultrashort wave diathermy is the latest addition to our armamentarium. Although it will never supplant long wave diathermy, which has been used for years, it is apparently successful in many conditions for which diathermy has been used in the past. There are, however, some advantages, the principal one being its remarkable effect in infections. The treatment of boils and carbuncles and other infections has been greatly simplified. A most remarkable relief of pain follows one or 2 treatments; in most cases the pus is discharged freely without the necessity of surgical intervention. If there is deep-seated pus, the progress can be hastened by evacuating the pus. This therapy is still in the experimental stage so far as other conditions are concerned, but some very interesting cases are being reported.

Increased interest in physical therapy has resulted in a coordination and return, under more definite medical control, of such procedures as massage, hydrotherapy, muscle reeducation, and corrective exercise. The director of a department of physical therapy should be well grounded in the use of these various forms of treatment, so that he can utilize the advantages of each and be of service to the staff in a consultative capacity. There is no field in medicine today in which so great an opportunity exists for original scientific investigation. The future holds much in store because of the interest manifested at the present time. The results of investigations being carried out in numerous universities and hospitals throughout the country will undoubtedly add much of great value to this branch of the practice of medicine.

Roentgen Therapy of Thrombo-angiitis Obliterans.—In a recent article by Dr. George E. Pfahler, appearing in the *American Journal of Roentgenology and Radium Therapy*, Dec., 1935, on "Roentgen Therapy of Thrombo-angiitis Obliterans (Buerger's Disease)," some interesting results are reported.

Thrombo-angiitis obliterans is a peripheral vascular disease characterized by thrombosis of the peripheral arteries and veins, resulting in intermittent claudication, localized pain, edema, ulceration, gangrene of the digits, and, in the later stages, mass gangrene. It has been shown that in this disease there are definite histologic changes in the sympathetic ganglia. This has justified the removal of these ganglia by surgery.

Numerous authors have reported improvement from surgical removal of the ganglia and operation upon the suprarenals. Mayo and Adson reported 87 per cent of their patients markedly improved following sympathectomy.

Having in mind the pathology of the condition and the fact that diseased organs are generally more sensitive to radiation than healthy organs, Pfahler applied roentgen therapy in the treatment of this condition. His technic was as follows: Deep therapy roentgen ray of 200 KV with 5/10 mm. copper filter was used in dosage of from

20 to 30 per cent (150 to 200 R), the distance being 50 cm. The area treated involved the paravertebral region, from the eleventh dorsal to the fifth lumbar vertebra. It seemed advisable to give treatments about 3 times a week until a total of one-half to a full erythema dose had been given of each portal or the whole area. Low voltage rays from 100 to 150 KV with filtration of 5 to 6 mm. aluminum has also been employed by other authors, with good results.

The pain is usually relieved in 2 or 3 weeks. Intermittent claudication disappears sufficiently within 2 weeks for the patient to be able to walk without distress. Circulatory and trophic disturbances improve in 4 to 6 weeks. Ulceration shows a tendency to improve within a few weeks and disappears within a few months. Gangrene, when present, tends to become dry and separates easily. The cachectic color and the agonized expression disappear. The patient gains in weight, looks rested, and becomes happy and hopeful. The favorable factors for good results are the early character of the lesion, the augmentation of the pulsation following a warm bath, the predominance of vasospasm over organic lesions, and the absence of destructive trophic disturbances.

PUBLIC HEALTH

Why England Has No Rabies.—While Pasteur preventive treatment is of the utmost importance as a personal prophylactic, it has nothing to do with the proper eradication of rabies in any community.

Certain measures adopted by England have entirely freed that country from rabies in dog or man. An immediately effectual measure is to require the muzzling of all dogs at large and the killing of all ownerless dogs. There must be active and energetic dog wardens to capture stray and ownerless dogs and dogs whose owners permit them to wander about without muzzles. To be effective, however, this measure must be strictly and universally enforced over a wide area. These measures in conjunction with a national quarantine of 6 months against dogs entering the country are the ones by which England and several other European countries have proved that rabies can be eradicated and prevented.—*Ohio Health News*, Nov. 1, 1935.

Smallpox, Typhus, Relapsing Fevers Epidemic in Ethiopia.—Death and disease are real enemies along the lengthening Italian-Ethiopian battle lines. Reports on disease conditions in Addis Ababa as communicated in consular reports to the U. S. Public Health Service read like the index to a medical book.

Epidemics of typhus fever, relapsing fever, and smallpox are harassing the Ethiopian capital and surrounding country, according to the latest report. The number of cases or even of deaths in these 3 epidemics is unknown, as no statistics on sickness, deaths, or births are collected. Vaccination against smallpox is not practiced.

Leprosy is very common in Ethiopia. So are venereal diseases, and syphilis is reported to be more prevalent there than in any other country. It is said that 90 per cent of the adult population is affected by some venereal disease. Malaria of course is always present. Tuberculosis, influenza, pneumonia, quinsy, asthma, and dysentery are other diseases reported prevalent. Practically all the adults in the country have tapeworms.

Cholera and plague are not mentioned in the consular reports, and Ethiopia is out of the yellow fever and sleeping sickness regions. But as one health official put it, if these 4 diseases are not present in the

country, they are about the only ones the Ethiopians do not have. *Science News Letter*, Oct. 12, 1935.

Surgeon General's Report to Congress.—In his annual accounting of the public health of the United States the Surgeon General of the United States Public Health Service states that health conditions in general remained good during the year ended June 30, 1935. For the calendar year 1934 the preliminary death rate was 10.9 per 1000 population, slightly higher than in 1933, in which year the rate was 10.5, but lower than any recorded rate earlier than 1932, when the death rate was 10.8 per 1000.

It is of especial interest to note that the birth rate increased in 1934, being 3 per cent higher than in 1933, which means that there were about 94,000 more babies born in the United States in 1934 than in 1933. The birth rate in this country has been decreasing for several decades.

The infant mortality rate, that is, deaths of infants under age 1 per 1000 live births, increased slightly in 1934 as compared with 1933, the rates for these years being 59.9 in 1934 and 58.2 in 1933; but the 1934 rate was lower than the rate for any year earlier than 1932.

The death rates from typhoid fever and diphtheria for the calendar year 1934 were both 3.3 per 100,000 population. In 1900 the death rate for typhoid fever was 35.9 per 100,000 and the diphtheria death rate was 43.3. In other words there were 91,000 fewer deaths from these 2 causes in 1934 than would have occurred if the 1900 rates had prevailed.

The tuberculosis death rate continued to decrease, and the 1934 rate of 56.2 per 100,000 population was the lowest ever recorded by the Public Health Service.

Neither cholera nor yellow fever appeared in the United States during 1934, but about 1000 cases of cholera were reported in the Philippine Islands.

In May, 1934, an outbreak of poliomyelitis occurred in California, reaching its peak in June. For the year the incidence of this disease was higher than usual in the Pacific Coast states and in the Northwest. In the early summer of 1935 an outbreak of poliomyelitis occurred in North Carolina and Virginia, and later increased incidence of the disease was noted in most of the New England states, New York, New Jersey, Michigan, Kentucky, and some of the other states.

An unusual occurrence of dengue fever was noted in some of the southern states in 1934, about 2000 cases being reported in Florida, 1962 cases in Georgia, and 1072 cases in Alabama. The actual numbers of cases occurring were much larger, as many cases of dengue fever are not reported.

The incidence of measles increased in 1934 as compared with 1933, and this increase continued into 1935. For the first 13 weeks of the latter year 650,000 cases were reported, as compared with an average of 387,000 for the corresponding period of the 7 preceding years.

The death rate from pellagra, which has been decreasing since 1928, continued the decline through 1934, the rate being 3.2 per 100,000 population as compared with 3.6 in 1933 and 3.9 in 1932.

A fatal case of bubonic plague occurred in Oregon in May, 1934, and a case was reported from California in June.

A total of 5371 cases of smallpox was reported to the Public Health Service for the calendar year 1934, the smallest number for any year since records have been kept. In 10 states and the District of Columbia no smallpox was reported during 1934.

During the year 254,551 cases of syphilis and 161,810

cases of gonorrhea were reported to the Public Health Service by state health departments. That these figures do not represent the true conditions regarding the prevalence of venereal diseases, however, is shown by special surveys, which indicate that there are approximately 518,000 new cases of syphilis in the United States each year and 1,555,000 cases of gonorrhea.

Studies of various phases of the relation of sickness to the depression were continued, and great differences in sickness rates were found between persons on relief and those not on relief.

The first federal narcotic farm located at Lexington, Ky., was dedicated and opened for admissions on May 29, 1935. This institution is for the care and treatment of addict prisoners from federal penal and correctional institutions and for those narcotic addicts who voluntarily apply for treatment. It has 1000 beds. The other narcotic farm will be located at Fort Worth, Texas.

Pneumonia Campaign in New York State.—Reduced mortality from pneumonia may be expected if plans of the Medical Society of the State of New York are successful. The campaign will be a joint project of the Medical Society of the State of New York, the New York State Department of Health, the State Association of Public Health Laboratories, the Metropolitan Life Insurance Company, and the Commonwealth Fund.

According to the committee in charge, the public should know that almost every case of pneumonia starts with a cold accompanied by fever. Early diagnosis is imperative for effective medical care.

The following statement was issued by the medical society: "While serum is not available for all types of pneumonia, it is for some of the most prevalent forms. We hope to bring to the attention of the public the vital need for skilled nursing care. Generally, members of the household will not do. In no other disease does nursing care count for more in the battle the patient is making for his life. Nursing organizations are planning to extend nursing care for pneumonia patients. Too much must not be expected of the serum; it is a great help, it is true, but it will not supplant adequate medical and nursing care."

Public Health Workers Plan Campaign on Mental Diseases.—Public health workers are lining up their forces for a fight to the finish on mental illness. Those valiant disease fighters who have brought under control such foes of mankind as smallpox, typhoid fever, and diphtheria laid plans at the meeting of the American Public Health Association for the attack on mental sickness, which fills half the hospital beds in the country.

The drive will start with efforts to promote mental health in children. School physicians and teachers hold the key positions, it appears. Mental disease, it is agreed by mental hygienists, is mainly acquired in childhood.

It is a family disease in the same sense that tuberculosis was a family disease in that some adult has communicated it to the child by prolonged and repeated exposure during a period of weak resistance.

Since it is agreed that mental patterns are laid down in childhood, the prevention of mental disease becomes a problem of leadership and guidance on the part of psychiatrists in the schools and home.

From one-tenth to one-half of mental maladjustments are perhaps preventable, Dr. Frederick L. Patry, psychiatrist of the New York State Education Department, pointed out. Dr. Patry presented a 10-point program for the guidance of health officers and school physicians in their drive to prevent mental disease.

One point is that the school physician should pay special attention to every child who is failing at school, who is a misfit in the group, or who is unhappy and protesting his unhappiness with nerves. No child wants to fail, failure means only one thing: That someone has blundered; someone has failed to show the child off to advantage on his own level of ability to succeed.

Another of the 10 points related to the importance of the home. This is the most important educational institution of society with respect to mental health. Every effort must be made to see that every child has this part of his birthright guaranteed.

If the start of life's journey is well prepared, there should be little fear of maladjustments later on, although it must be kept in mind that human machinery may go awry at any point along the life span.—*Science News Letter*, Oct. 19, 1935.

Morbidity in Pennsylvania in November, 1935

Location	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	2	1	1	0	0
Allentown	3	4	4	0	39
Altoona	3	0	21	0	4
Ambridge	0	0	0	0	0
Arnold	0	0	0	0	0
Beaver Falls	0	0	16	0	0
Bellevue	0	0	1	0	0
Berwick	0	1	0	0	1
Bethlehem	0	1	2	0	11
Braddock	2	0	1	0	4
Bradford	0	0	1	0	1
Bristol	0	0	0	0	0
Butler	0	1	1	0	15
Canonsburg	0	0	0	0	0
Carbondale	0	4	4	0	0
Carlisle	26	0	4	0	0
Carnegie	2	0	4	0	0
Chambersburg	0	0	5	0	0
Charleroi	0	3	0	0	0
Chester	0	0	7	0	8
Clairton	0	0	2	0	0
Coatesville	0	0	5	0	0
Columbia	0	0	0	0	0
Connellsville	0	0	2	0	0
Conshohocken	0	0	3	0	0
Coraopolis	0	0	7	0	1
Dickson City	0	0	0	0	0
Donora	0	0	0	0	0
Dormont	0	0	1	0	0
Du Bois	0	0	0	0	3
Dunmore	0	0	1	0	2
Duquesne	0	0	1	0	0
Easton	0	0	4	0	0
Ellwood City	0	0	5	0	0
Erie	0	2	15	0	9
Farrell	1	0	0	0	0
Franklin	0	0	4	0	10
Greensburg	0	0	0	0	0
Hanover	0	0	0	0	0
Harrisburg	0	0	0	0	0
Hazleton	1	0	4	0	7
Homestead	0	3	0	0	0
Jeannette	0	1	3	0	0
Johnstown	3	0	1	1	6
Kingston	0	0	2	0	0
Lancaster	1	0	9	1	7

Location	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Latrobe	0	0	1	0	0
Lebanon	0	0	3	0	0
Lewistown	0	1	0	0	0
McKees Rocks	2	0	0	0	0
McKeesport	2	0	0	0	0
Mahanoy City	11	0	2	0	0
Meadville	2	1	1	0	0
Monessen	0	0	5	0	0
Mount Carmel	3	0	1	0	0
Munhall	0	0	1	0	0
Nanticoke	0	1	0	0	0
New Castle	0	11	10	0	2
New Kensington	3	1	1	0	1
Norristown	0	0	1	0	0
North Braddock	1	0	0	0	5
Oil City	1	0	1	0	8
Old Forge	0	0	0	0	0
Olyphant	0	4	0	0	0
Philadelphia	22	100	282	7	192
Phoenixville	0	0	0	0	0
Pittsburgh	18	25	241	1	88
Pittston	1	0	1	0	0
Plymouth	0	1	1	0	0
Pottstown	0	0	6	0	0
Pottsville	0	0	0	0	0
Reading	0	4	10	1	1
Scranton	0	1	16	0	4
Shamokin	11	0	0	0	0
Sharon	1	0	3	0	0
Shenandoah	0	0	0	0	0
Steelton	0	0	1	0	0
Sumbury	0	0	0	0	1
Swissvale	1	0	0	1	0
Tamaqua	1	0	4	0	8
Taylor	2	0	0	0	0
Turtle Creek	1	0	0	0	3
Uniontown	0	0	3	0	0
Vandergrift	0	0	0	0	0
Warren	0	0	2	0	1
Washington	0	2	3	0	0
Waynesboro	0	1	4	0	0
West Chester	1	1	3	0	11
Wilkes-Barre	2	0	12	0	10
Wilkesburg	0	2	2	0	6
Williamsport	0	1	2	0	13
York	1	0	7	2	0
Townships					
Allegheny County:					
Harrison	0	0	3	0	0
Mt. Lebanon	0	0	0	0	0
Stowe	0	0	0	0	0
Delaware County:					
Haverford	1	0	7	0	1
Upper Darby	2	3	8	0	56
Luzerne County:					
Hanover	2	0	2	0	0
Plains	0	0	0	0	0
Montgomery County:					
Abington	0	0	2	0	2
Cheltenham	0	1	17	0	6
Lower Merion	1	0	12	0	10
Total Urban ..	137	182	822	14	557
Total Rural ..	81	184	697	41	474
Total State ..	218	366	1519	55	1031

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the coöperation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

PNEUMOTHORAX treatment for lobar pneumonia is still on trial. A tuberculous lung is collapsed without fear of untoward incidents. In lobar pneumonia, however, the disease process is acute, violent, and extensive; consequently the risks are increased. How shall we evaluate this new form of treatment? Klein and Tuck report a series of 45 cases of lobar pneumonia treated by artificial pneumothorax. Their results are encouraging, but the authors urge that further studies of larger series of cases be made before a final interpretation of this form of therapy is reached. Abstracts of the article follow.

PNEUMOTHORAX IN LOBAR PNEUMONIA

In 1921 Friedman reported 7 cases of lobar pneumonia treated by artificial pneumothorax; all of these patients recovered without complications. The same year David reported a series of 6 cases with complete recovery. In 1928 a group of pediatricians reported 17 cases in children with 3 deaths and advised against this form of treatment mainly because most children recover from lobar pneumonia with the more conservative treatment. From time to time since then articles on the subject have appeared sporadically, but it was not until Lieberman and Leopold treated 18 dogs with unilateral pneumonia that this form of treatment was placed on a scientific basis. Three of the dogs died whereas, of the 18 control dogs, 13 died. Stimulated by this work the authors studied the clinical value of pneumothorax in unilateral pneumonias at the Philadelphia General Hospital.

Effects of Collapse

The advantages of the procedure are twofold. First, by separating the inflamed visceral and parietal layers of the pleura, pleural pain is relieved instantly. This allows for a slowing of the respiratory rate with deeper inspiration and better ventilation by the unaffected lung. Cyanosis diminishes or disappears. Second, the affected portion of the lung is compressed (as shown by necropsy and roentgenographically), and thus the blood flow in the affected lung is cut down. Lymph-stasis probably helps reduce

the toxemia. In many cases there is a rapid fall in temperature and pulse rate, with an increase in the sense of well-being. The blood pressure shows no marked variation. The leukocyte count falls rapidly after the fall in temperature and is most marked in that group of patients in whom a crisis is precipitated. In the vast majority of cases the febrile period is shortened and days of hospitalization are diminished. A definite crisis occurred in 19 cases within 48 hours after the initiation of pneumothorax therapy. In 18 cases the temperature came down by lysis. Four patients, all of whom were moribund at the time of air injection, died from 2 to 19 hours after the initial treatment.

The age of patients varied from age 13 to age 69. There were 6 females and 37 males; 24 patients were colored and 19 white. Eight of the cases had positive blood cultures. By sputum-typing, the cases were divided into the following groups: 7 of type 1; 5 of type 2; none of type 3; 15 of type 4; and 1 of Friedländer's bacillus.

Complications were widespread and interesting. A large percentage showed a small collection of fluid which in most cases remained sterile and did not necessitate drainage. Various other complications are described in the article.

Mortality

In the pneumonia wards during the interval in which these cases were treated, there were 243

cases in all. Two hundred of these were treated by other forms of therapy, such as routine symptomatic, foreign protein, and dehydration measures. Serum therapy was not used owing to its cost. Of this group, 83, or 41.5 per cent, died. Thirty per cent of this group had positive blood cultures, with a mortality of 77 per cent. In the pneumothorax group, none of which was especially selected and, if the case was seen late and doing well, was not given this form of therapy, a mortality of 14 deaths, or 32.6 per cent, occurred. If the 4 patients who were moribund at the time of collapse and to whom only one injection was given are excluded, the mortality would be 25.6 per cent. This the authors believe to be the more sensible classification. Of the 8 patients with positive blood cultures, 4, or 50 per cent, recovered.

Conclusions

1. Pneumothorax therapy in unilateral lobar pneumonia is of definite value in the relief of pleural pain. It also diminishes to a great extent the accompanying cyanosis and toxemia.

2. An early crisis is precipitated in a large proportion of the cases (44.2 per cent in this group).

3. The mortality in this group, as compared to other forms of therapy, excluding serum therapy, was distinctly less (25.6 per cent as against 41.5 per cent).

4. Further studies should be made upon a larger series of cases to evaluate eventually a correct interpretation of this form of therapy.

Artificial Pneumothorax in the Treatment of Lobar Pneumonia, Thomas Klein and Vernon Lee Tuck, Am. Rev. of Tuberc., Nov., 1935.

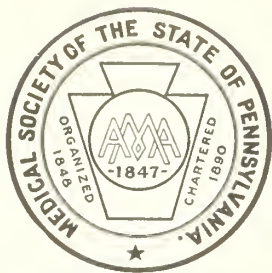
In contrast to the somewhat optimistic evaluation of pneumothorax in lobar pneumonia, summarized above, is another study of 37 cases. In a well-documented and illustrated article, Bullova carefully weighs the relative advantages of lung collapse in pneumonia and reaches the conclusion that "inherent hazards outweigh the advantages alleged by advocates of the treatment." Space limitations permit reproducing here only the author's summary.

PNEUMOTHORAX IN PNEUMONIA

Pneumothorax induction immediately relieves severe pleural pain. This may also be accomplished by other methods and occasionally by such a slight pneumothorax that it is not visible radiographically. This occurred 10 times in a single year in the performance of routine lung suction for diagnosis among 400 patients. Pneumothorax may be induced accidentally as the result of lung aspiration without apparent change in the course of the disease. There is an ample margin of safety and, with a capacious chest, one lung may provide sufficient surface for gas exchange. The relief of pain may be followed by oppression and soreness in the chest. Contralateral involvement may occur or be present, and in that case the pneumothorax increases the anoxemia. Displacement of the mediastinum may occur and require relief. Pneumothorax has no effect on the immunity mechanism and does not prevent or cure bacteremia. The disease may not be shortened.

The symptoms of anoxemia are more frequent and more severe in some pneumonia patients with pneumothorax. The performance of pneumothorax does not absolve the physician from the responsibility of promptly determining the type of pneumococcus involved, and the use of available specific sera of proven value to prevent and cure bacteremia. Early use of serum in pneumonias due to pneumococcus Type I prevents empyema. The treatment is not one for the home, and while being evaluated should be employed with roentgen-ray guidance only by those accustomed to pneumothorax therapy and its hazards and by those familiar with the pneumonias and equipped to study their problems.

Pneumothorax in Pneumonia, Jesse G. M. Bullova, M.D., N. Y. State Jour. of Medicine, Oct. 15, 1935.



'THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh. Pa.

THE 1936 HONOR ROLL

During the year 1935 the State Society had received dues from 8167 members, which was 123 more than in any previous year in the society's history. Also, on Jan. 30, 1936, more than one-third of our 60 component county societies had forwarded to the office of the State Society Secretary 50 per cent or more of their members' dues for the current year, as follows:

Juniata	100%
Clinton	71%
Perry	71%
Lycoming	68%
Carbon	67%
Bucks	66%
Columbia	65%
York	63%
Dauphin	62%
Franklin	60%
Montgomery	59%
Somerset	56%
Blair	52%
Montour	51%
Allegheny	50%
Berks	50%
Center	50%
Chester	50%
Clarion	50%
Elk	50%
Huntingdon	50%
Mifflin	50%
Potter	50%
Susquehanna	50%
Wayne-Pike	50%

Congratulations to our energetic secretaries and other county society officers for the splendid results achieved; also a word of warning to members whose county society dues remain unpaid, remembering that the delinquent date is March 31. Members whose dues are not received by that date will not be entitled to any benefit of the Medical Defense Fund from January 1 until the date of payment of their 1936 dues, for any suit for alleged malpractice which may be brought against them later.

HOSPITAL INSURANCE

By Groups or Single Hospitals

Since it has recently been demonstrated in Northampton and Jefferson counties that hospital insurance plans may suddenly confront the management and the staff of any hospital serving any community in Pennsylvania, it undoubtedly behooves the medical society of each county so to inform itself on such plans as eventually by its influence to preserve to the community, the hospitals, and the physicians "over the long pull ahead" the best possible hospital service and medical service (not a combination of *insured* hospital service and *insured* medical service).

We know of no real demand from the public for insured hospital service that provides **ONLY** room, board, ordinary medication, ordinary nursing care, but again and again observe that in order to make it attractive to the subscribing public *more* and *more* benefits, including the services of physicians, must be added at *less* and *less* cost to the subscriber.

The contemplation of such a course is of great import to a community since the economic interests of the hospital management and of the members of the medical profession immediately concerned are so inextricably related.

We repeat and urge that members of the county medical societies read carefully the following references:

PENNSYLVANIA MEDICAL JOURNAL, May, 1934, page 676.

PENNSYLVANIA MEDICAL JOURNAL, July, 1934, page 852.

PENNSYLVANIA MEDICAL JOURNAL, August, 1934, page 949.

PENNSYLVANIA MEDICAL JOURNAL, June, 1935, page 744.

Journal of the American Medical Association, Oct. 19, 1935, page 1275.

We quote herewith from one of these references, from the report of the 1934 State Society's Committee on Medical Economics:

"Concerning the Washington Plan, developed through consultation and coöperation with the medical profession, it will be of interest, from the point of view of the profession, to know—

"A. That each member hospital must be endorsed by the medical society.

"B. That a subscriber can be admitted to a hospital only through his or her private physician, and remain there only so long as under the care of such physician. This physician must be acceptable to the staff of the hospital to which admission is being sought.

"G. That the plan confines itself strictly to hospital care.

"H. That the benefits offered members do not include the services of the subscriber's attending physician or surgeon, radiologist, pathologist, physiotherapist, anesthetist, special nurses, or their board.

"I. That the plan has nothing to do with clinics or outpatient departments."

APPROPRIATE FOR FIFTY PENNSYLVANIA COUNTIES

The following rules and regulations for medical services to those receiving aid from the Board of Poor Directors were adopted Jan. 7, 1936, by the Board of Poor Directors of Mercer County and the Mercer County Medical Society, becoming effective at once.

1. The patient shall have free choice of physician.
2. Only emergency service shall be rendered without a written order from one of the poor directors. The order for the emergency services shall be obtained as soon as possible.
3. The following fee rate shall be in force and effect:
 - \$1 for office calls
 - \$2 for home visits within 2 miles of physician's office
 - \$3 for home visits 2 to 5 miles from office
 - \$4 for home visits 5 to 8 miles from office
 - \$25 for obstetric cases. This shall include delivery and adequate pre- and postnatal care.
4. For the treatment of surgical conditions as fractures and operations, the fee shall be arranged with the Board of Poor Directors and the physician. It is understood that 50 per cent of the usual fee for such conditions will constitute a working basis.
5. A roentgen-ray fee of \$5 in all fractures or suspected fractures where it is necessary to determine the presence or absence of fractures shall be paid by the Board.
6. For hospital cases, \$2 per day shall be paid by the Board of Poor Directors to the hospital, where other

funds are not available. All chronic cases requiring long hospitalization must be referred to the County Poor Home Hospital.

7. It is understood that this service shall be a minimum consistent with good medical practice and bills rendered shall be in accordance with the conditions treated.

8. All bills shall be itemized and rendered the twenty-fifth of the month in which the service was rendered.

9. In all differences of opinion relative to these fees and regulations, the Advisory Committee of the Mercer County Medical Society shall meet with the Board of Poor Directors in an attempt to arrange a satisfactory settlement of the dispute.

Approved and signed this seventh day of January, 1936.

MERCER COUNTY MEDICAL SOCIETY
JAMES D. HOFFMAN, *Pres.*,
JONATHAN B. PERRINE, *Sec.*,
JOHN M. JAMISON, *Chairman*
of *Advisory Relief Committee*.

BOARD OF POOR DIRECTORS OF MERCER COUNTY
EARL R. DRESCH, *Pres.*,
J. C. MCINTIRE, *Sec.*,
J. H. MCKEAN, *Vice-Pres.*

The above is brought to attention as worthy of consideration by the physicians and the Poor Directors of the average Pennsylvania county. This is the fourth year of its adoption in Mercer County. Similar plans are in operation in Beaver, Blair, Crawford, Lehigh, Northampton, and York Counties.

SPEAKING OF HIGH SCHOOL DEBATES

In a discussion at a recent annual meeting of one of our larger component societies, the writer in his remarks, stressing rather heavily the need for further study by physicians of certain tangible phases of the discussion pro and con regarding the socialization of sickness service in the United States, was challenged to suggest a program for a meeting of the county medical society which might prove helpful. The following, which is a copy of the outcome of this request for a suggested program, will interest at least the 9 necessary members in the subject and should stimulate thought and study among all who attend the meeting:

SYMPOSIUM

What Is Involved in the Proposed Socialization of Sickness Service in the United States?

The origin of and the effects on the profession of medicine of compulsory sickness insurance in Germany?

10 minutes.

In England?

10 minutes.

The financial cost of and the effects on mortality and morbidity of compulsory sickness insurance in Germany?

10 minutes.

In England?

10 minutes.

What are the proposals and the promises of the pro-

- ponents of the socialization of the private practice of medicine in the United States? 5 minutes.
- What are the provisions of the Model Bill of the American Association for Social Security (Epstein Bill) offered in the legislatures of a number of states, including Pennsylvania, in 1935? 5 minutes.
- What would be the political set-up and the cost in money to the taxpayers, the employers, and the employed in Pennsylvania resulting from the adoption of a bill similar to the Epstein Bill? 5 minutes.
- What are the comparative facts regarding morbidity and mortality in the United States and Europe? 5 minutes.
- What are the contentions and proposals of the organized medical profession of the United States in their opposition to proposed socialization? 15 minutes.

MAIL PACKAGE SERVICE APPRECIATED

The new library was launched according to schedule in January, and judging by the requests which have been received real interest is being evidenced in the undertaking. Every effort is made to fill requests satisfactorily. With the excellent coöperation of authors who send their reprints for the library collection, it is felt that this service is one which will become increasingly useful as it develops.

If you desire late reprints on a subject in which you are interested send 25 cents in stamps to cover postage and part of the expense of collecting the material. Reprints of your articles, in duplicate if possible, will be welcome.

LIBRARY COMMITTEE.

A JOB WELL DONE

Commonwealth of Pennsylvania
State Emergency Relief Board

Dec. 21, 1935.

DR. WALTER F. DONALDSON, *Secretary*,
The Medical Society of the State of Pennsylvania,
Pittsburgh, Pa.

Dear Doctor Donaldson:

This will acknowledge receipt of your letter of Dec. 16 and the accompanying resolution passed by the Board of Trustees of The Medical Society of the State of Pennsylvania.

I first wish to express to you my sincere appreciation of the coöperation given by the physicians of Pennsylvania under the guidance of the officers of the society and the respective committees appointed by them. The experiences of the past year have convinced me that the profession has fully accepted the responsibility imposed upon it, and to the State Medical Society belongs the credit. A record of 2 years of service without a single proven case of neglect is a remarkable achievement when we remember that at times we have had as many as 2,000,000 people on relief, suffering as they did, not only from the usual ailments, but from many conditions caused by other needs inadequately met owing to the financial limitations of the program.

When the Relief Department passes into history and a final appraisal is made, I feel safe in predicting that the State Medical Society will be proud of its accom-

plishments, and the verdict will be "a job well done to the mutual benefit of relief recipient, physician, and taxpayer."

During the remaining period of my administration, I assure you that every effort will be made to continue the medical program, and your resolution will be brought to the attention of my successor.

With kindest personal regards, I am

Sincerely yours,

ROBERT L. JOHNSON,
Relief Administrator.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to Jan. 10:

ALLEGHENY: *New Members*—George R. Kennedy, Logans Ferry, Parnassus; Leigh L. Darsie, 803 Amity St., Homestead; James C. Dobler, 637 California Ave., Avalon; Paul A. Sica, 634 Washington Road, Mount Lebanon; Harold I. Humphrey, 401 Charles St., N. S.; William P. McCorkle, 659 Sherwood Ave., W. E.; William B. McLaughlin, Jenkins Arcade, J. William Mendoza, 1909 Murray Ave., Onnie O. Ranta, 3044 Preble Ave., N. S., Pittsburgh. *Removal*—Sara E. Schwerer from Mayview to 860 Ford St., Crafton Heights, Pittsburgh; Ernest G. Kuhlman from Pittsburgh to 761 Main St., Wellsville, O. *Death*—Edward B. Heckel, Pittsburgh (Bellevue Hos. Med. Coll. '90), Dec. 23, aged 70.

BEAVER: *New Members*—Harry E. Douds, 1208 Eighth Ave., Beaver Falls; Harry I. Snyder, 320 Franklin Ave., Aliquippa. *Transfer*—Edward Kisel, Ambridge, from Allegheny County Society. *Death*—Francis H. McCaskey, Rochester (Univ. Pgh. '01), Dec. 24, aged 65.

BERKS: *New Members*—Thomas Barnett, 359 Schuylkill Ave., Reading; Linton E. March, 409 E. Main St., Birdsboro. *Death*—Charles G. Loose, Reading (Univ. Pa. '68), Dec. 6, aged 90.

BRADFORD: *New Members*—Raymond L. Evans, Sayre; Willis A. Redding, Towanda.

BUCKS: *Reinstated Member*—George A. Enion, Morrisville.

CAMBRIA: *New Member*—George H. Hudson, 1033 Bedford St., Johnstown.

CHESTER: *New Members*—Theodore L. Mercer, Avondale; Fred L. Wright, Veterans Hospital, Coatesville.

CUMBERLAND: *New Members*—R. C. Edson, Boiling Springs; Ephraim B. Hays, Carlisle.

DELAWARE: *New Members*—Jules T. Vogel, 265 Brookline Blvd., Brookline, Upper Darby; Paul A. Loefflad, 201 Long Lane, Upper Darby. *Removal*—William R. Stecher from Yeadon to 32 N. Third St., Easton (Northamp. Co.).

ELK: *Resignation*—Albert C. Shannon, St. Marys.

ERIE: *Reinstated Member*—Frank E. Bowser, 641 W. Tenth St., Erie.

FAYETTE: *New Members*—David E. Hemington, 46 W. Fayette St., Uniontown; Paul Staman, Morgantown and Church Sts., Uniontown; Harold L. Wilt, 3 Market St., Brownsville.

GREENE: *Reinstated Member*—William R. Vernon, Perryopolis.

HUNTINGDON: *New Members*—Harry Hull Negley, Jr., Alexandria; Wolfgang F. J. Vogel, Huntingdon.

LACKAWANNA: *New Members*—Ernest Z. Bower, Jr., 2033 N. Main Ave., William F. Lamberti, 505 N. Main Ave., Enrico A. Leopardi, 111 N. Main Ave., Morris L. Steckel, 216 Connell Bldg., Walter J. Reedy, Jr., Connell Bldg., Talcott Wainwright, 529 Vine St.,

Frank R. Notz, 702 Pittston Ave., Scranton; John M. Wagner, 316 S. State St., Clarks Summit; Roy T. Agostini, 130 N. Main St., David A. Goddman, 117 Moosic Road, Old Forge; Albert J. Kuschner, Clifford (Susquehanna Co.); Charles S. Speicher, 51 S. Church St., Carbondale; Lucian J. Fronduti, 311 Powell Ave., Jessup.

MERCER: *New Member*—William J. Harrer, Jr., 229 Case Ave., Sharon.

MONTGOMERY: *New Members*—Paul R. Miraglia, Conshohocken; Matthew J. Zakrzewski, Conshohocken; Siegfried Strauss, Glenside. *Death*—Irwin Z. Kinsey, Souderton (Jeff. Med. Coll. '26), Dec. 10, aged 46.

NORTHUMBERLAND: *Reinstated Member*—Joseph D. Millard, 13 E. Independence St., Shamokin.

PHILADELPHIA: *New Members*—Charles L. Brown, 3401 N. Broad St., William F. Delaney, 1350 Orthodox St., Harold J. Isard, 6900 Rising Sun Ave., Gottlieb S. Leventhal, 337 S. Eighteenth St., Leo Rowman, 211 E. Wyoming Ave., Harvey Bartle, Jr., 424 W. Hottter St., Jacob Lichstein, 3099 Kensington Ave., Hans May, 449 W. Price St., Gtn., Jacob Shapiro, 5911 Pine St., Philadelphia; Malcolm W. Miller, 122 Main St., Darby. *Reinstated Members*—Frank B. Baird, 723 S. Fifty-second St., Morton Reese-Cohen, 1529 Pine St., Edward W. Gilhool, 3818 N. Broad St., Richard F. Northrop, 601 Medical Arts Bldg., Herbert J. Darmstadter, 4617 York Road, Philadelphia. *Transfer*—Herbert S. Raines, 6897 N. Nineteenth St., Philadelphia, from Clinton County Medical Society. *Removal*—Carl Bachman from Montreal, Canada, to Dept. Obst. and Gynec., Univ. Pa., 34th and Spruce Sts., Philadelphia. *Resignation*—William W. Farr, George P. Katzenstein, Alfred S. Butz, Philadelphia; James S. Shipman, Merchantville, N. J.; Berta Whaland, Bridgeton, N. J. *Deaths*—Ward Brinton, Philadelphia (Jeff. Med. Coll. '94), Dec. 29, aged 62; John F. Gorman, Philadelphia (Jeff. Med. Coll. '06), Dec. 26, aged 55; Ellwood R. Kirby, Philadelphia (Univ. Pa. '87), Dec. 26, aged 68.

VENANGO: *Reinstated Member*—Paul Bruner, 234 Seneca St., Oil City. *Death*—Carm Y. Detar, Oil City (Univ. Pgh. '92), Nov. 28, aged 65.

WASHINGTON: *New Members*—Wilbur J. Hawkins, Jr., Fredericktown; Bernard J. Hackett, R. D. 1, W. Brownsville.

WESTMORELAND: *Reinstated Member*—Daniel O'Connell, Jeannette. *Transfer*—John I. Wiseman, Torrance, from Allegheny County Medical Society.

YORK: *New Members*—Vallindigham Hawkins, Fawn Grove; Robert L. Feldman, 1253 W. Market St., York. *Transfer*—August John Podboy, 803 S. George St., York (formerly of Harrisburg), from Dauphin County Society.

PAYMENT OF PER CAPITA ASSESSMENT

The following payment of per capita assessment has been received since Dec. 12. Figures in first column indicate county society numbers; second column, State Society numbers.

Dec. 13	Lehigh	1-2	163-164	\$15.00
	Berks*	170-171	8144-8145	15.00
	Huntingdon	1-4	165-168	30.00
14	Montgomery	14-23	169-178	75.00
16	Carbon	1-7, 9-11	179-188	75.00
	Washington	6, 13	189-190	15.00
17	Cambria	5	191	7.50
	Bucks	14-26	192-204	97.50
18	Greene	1-3	205-207	22.50
19	York	31-41	208-218	82.50

* 1935 dues.

Dec. 21	Chester	27	219	\$7.50
	Bucks	27-32	220-225	45.00
	McKean	4	226	7.50
	Allegheny	46-58	227-239	97.50
23	Montgomery	24-42	240-258	142.50
	Lycoming	5-38	259-292	255.00
28	York	42-50	293-301	67.50
30	Montgomery	43-62	302-321	150.00
	Lackawanna	2-14	322-334	97.50
31	Carbon	12-15	335-338	30.00
	Greene*	27	8146	7.50
	Greene	4-6	339-341	22.50
1936				
Jan. 2	Clarion	10-14	342-346	37.50
	Somerset	6	347	7.50
3	Elk	7-11	348-352	37.50
	Washington	1-5, 7-12,		
		14-21	353-371	142.50
	Potter*	13	8147	7.50
4	Columbia	16-22	372-378	52.50
	Chester	28-30	379-381	22.50
6	Fayette	1-12	382-393	90.00
	Delaware	5-24	394-413	150.00
	Lackawanna	15-47	414-446	247.50
	Bradford*	40-41	8148-8149	15.00
	Juniata	1-5	447-451	37.50
	Montour	1-10	452-461	75.00
	Westmoreland*	167	8150	7.50
7	Venango*	56	8151	7.50
	Cumberland	1-4	462-465	30.00
	Franklin	3-14	466-477	90.00
	York	51-73	478-500	172.50
	Fayette	13-15	501-503	22.50
	Huntingdon	5-10	504-509	45.00
	Greene	7	510	7.50
8	Bucks	33-39	511-517	52.50
	Philadelphia	12-22	518-528	82.50
	Philadelphia*	2158-2161	8152-8155	30.00
9	Erie	1-38	529-566	285.00
	Erie*	160	8156	7.50
	Northumberland	1-13	567-579	97.50
	Mifflin	1-2	580-581	15.00
	Delaware	25-38	582-595	105.00
10	Fayette	16-18	596-598	22.50
	Montgomery	63-105	599-641	322.50
	Dauphin	7-69	642-704	472.50

* 1935 dues.

EMERGENCY MEDICAL RELIEF IN PENNSYLVANIA

HAROLD A. MILLER, M.D., *Director*
Harrisburg, Pa.

MEDICAL CARE

The average number of medical orders and dental orders issued per day was about the same in September as in August. Cod liver oil was again made available after having been eliminated in the mid-summer months when hot weather made it unnecessary. Cod liver oil is now provided as a part of the medical program, i.e., with prescriptions issued to the relief recipient by the attending physician and filled in a drug store of his own choice.

The average cost per medical order has remained approximately constant for some months. Expenditures for medical relief in Pennsylvania compare favorably with those of other states despite the fact that here physicians are permitted to make repeated visits in acute cases without waiting to obtain authorization each time. The value of this method is particularly appreciable in such emergency cases as acute appendicitis or diphtheria, especially when the intervention of a week-

end makes it impossible for the doctor to obtain authorization for his next visit without a lapse of several days. In Pennsylvania, after being authorized to attend a case, he continues his visits as he feels they are needed. If any question is raised later as to the necessity for these visits and the justice of his charge, the matter is settled by the local advisory committee.

The conscientiousness of these local committees and the coöperation of other physicians have united to make this decentralized system operate effectively without raising average costs for medical relief here above those of states which require that a separate authorization be issued from relief headquarters to the doctor before a second compensable visit is made. There is a local committee in every county composed of 3 doctors who render this voluntary advisory service after they have been nominated by their county medical societies and appointed by the State Emergency Relief Administration.—*Pennsylvania Monthly Relief Bulletin*, Oct., 1935.

County Society Reports

ALLEGHENY

Dec. 17, 1935

The meeting was held at 8:30 p.m. with the president, Richard J. Behan, in the chair.

The Scientific Exhibit was viewed in the lobby before and after the meeting. A collection of old surgical instruments was displayed by Mrs. David B. Ludwig. Mrs. Ludwig is chairman of the Committee on Archives of the Woman's Auxiliary to the State Society. In contrast, an exhibit of modern surgical instruments, particularly those of Gustave Berg for bone work, was displayed by St. John's Hospital.

William J. McGregor, coroner of Allegheny County, had on display a very complete exhibit of all types of weapons and ballistic equipment. Supplementing this was a demonstration of the lie detector, loaned by the courtesy and demonstrated by a member of the State Police Department.

In an intermission at the midpoint of the program, Mrs. Herbert E. Woelfel brought greetings from the Woman's Auxiliary and also sang 2 numbers.

"Therapy of Rest and Motion" was presented by Eben W. Fiske, who said in part: Rest and motion are primarily antagonistic principles of treatment, and the problem of their choice is frequently confusing. Medical history reveals that the controversy is not new.

A study of the pathologic response to injury is necessary to rationalize their proper use. Satisfactory tissue repair by fibroblastic proliferation demands healing by primary intention, which is favored by close and continuous apposition of the traumatized surfaces. Rest and protection are therefore necessary to avoid the stretching and weakness resulting from a poor scar. On the other hand, excessive plasmatic exudate stretches the tissues, interferes with circulation, and produces adhesions and limitation of motion. Overprotection causes stiffness from extensive scar tissue, and stasis. Motion will increase cellular activity, aid absorption, and improve muscle nutrition as well as overcome restriction from scar and adhesions. Shall complete repair be obtained by rest with danger of stiffness and functional disturbance, or by mobility with the risk of insecure healing? An example of how both ends may be attained without incurring either hazard is demonstrated in the

treatment of an acute sprain of the external ligament of the ankle. Healing is assured by compressing the effusion away from the torn ends of the ligament and setting the ligament like a fracture by fixing the joint in a position which will relax and approximate the lacerated surfaces. At the same time early stimulative measures by massage and heat and later exercises which will not strain the scar will prevent the complications of which we have been warned. Other methods of treatment for sprain are mentioned, but it is to be noted that most advocates of motion advise its use within protective limits and not as a substitute for protection. Various forms of motion are described. Active motion has many advantages over any other type of physical treatment, as it alone can build up muscle, restore normal use of the part, activate the entire neuromuscular pathway, and set up the important reflexes of an accompanying vasomotor excitation and an inhibition of the opposing muscle group. Passive motion is properly employed only to stretch tissue; it cannot improve muscle strength or control, and is more dangerous as it is not under the control of the patient. Motion produced by mechanical means has even less place in modern therapy. Electrical stimulation of muscle may stimulate but cannot duplicate active motion, especially in its reflex and general effects. Manipulative treatment is definitely indicated for pain due to adhesions, for the actual locking of joints, and for referred pain from spinal inflammation. It demands a technical skill, a knowledge of joint movements, and care that no stress be placed upon inflamed physiologic structures. Trained physicians should not be too skeptical of the value of manipulation and may well replace poorly trained cultists, as there is nothing mysterious in its practice. In spite of the trend toward a greater use of physical measures, the favorable course of nature's method of healing must never be prevented in the presence of structural injury. Overprotection may create a functional impairment, but there are more bad after-results from incomplete repair than from insufficient activation. Only by a comprehensive therapy, adapted to the immediate needs of the case and including the best of both measures, may we avoid either a structural or a functional disaster. Particularly, we must visualize the underlying histology and adapt the treatment accordingly if we would end our confusion between such apparently unrelated principles.

In discussion, Frank R. Bailey emphasized the fact that the decision on how long to use rest or how soon to use motion depends directly on the pathologic picture of the injury in question; that rest is the one primary essential in all injuries that must not be overlooked, but the judicious use of the various physiotherapeutic appliances at hand, as well as massage and motion, very materially can aid and hasten recovery; and that where overprotection creates a functional impairment there are more bad after-results from incomplete repair than from insufficient activation.

John A. Heberling considers that the Willems' method of treating acute suppurative joints affords a very good chance to secure movable and in many cases practically normal joints so far as function is concerned.

"Treatment of Hand Infections" was read by John W. Fredette, illustrated with slides. He emphasized the following: (1) A knowledge of the anatomy of the hand, together with a proper diagnosis as to the nature of the infection and the location of the pus, is essential; (2) the differential diagnosis between lymphangitis and suppurative tenosynovitis is most important; (3) incisions must be made freely and in po-

sitions where the least damage will be done and the most adequate drainage obtained; (4) during the course of treatment the hand should be maintained in the position of function, with the fingers flexed; (5) tension splints may be necessary to overcome contractures; (6) physical therapy, in its various forms, should be diligently employed during convalescence; (7) the physician who first treats the case is responsible, in a very large measure, for the end result.

In discussion, J. Huber Wagner drew attention to the importance of disinfection in these cases, particularly the Carrel-Dakin method.

"Injuries of the Shoulder Girdle, with Particular Reference to the Prevention of Deformity" was presented by Wilton H. Robinson, illustrated with slides. He reviewed briefly the treatment of fracture and dislocation of the scapula and clavicle. In connection with the fractures of the neck of the scapula he cited his own experience as being unfavorable to traction with the Thomas arm splint because it keeps the patient confined on his back in bed and because the ring interferes with circulation. The abduction spica at 50 to 60 degrees abduction is more satisfactory. The feature of the paper was the presentation of his own modification with the plaster yoke. Having used it routinely in all cases of fracture of the clavicle for a period of 5 years, he is certain of its efficacy. The principles involved in the use of the plaster yoke are that the broad surface conforming to the contour of the back and side of the thorax causes the rami or those turns over the front of the shoulders to maintain an upward and backward thrust; and that the weight of the appliance is exerted on the convexity of the shoulders and thus splints the clavicle the same as any other long bone. The method of application is either to place the patient on his back on a narrow, tightly stretched hammock on the plaster table or on narrow strips of metal or wood between 2 operating tables. Padding of cotton batting and figure-of-8 turns of 4-inch plaster bandages should be applied, keeping the crossing as low as possible. While the plaster is still soft, the section in the axilla should be flattened against the chest wall and the upper edge pulled down or trimmed so that there is one-half inch of the chest wall visible.

In discussion, Hugh E. McGuire praised the method advocated for fixation in fracture of the clavicle, particularly in fat persons. Lloyd W. Johnson said that he has used the yoke for some 5 years and that the modification as suggested would increase its efficiency.

Rutherford T. Johnstone gave an illustrated discourse on "Interpretation of the Electrocardiogram for the General Practitioner." Because of the lateness of the hour motion pictures showing the correlation between these findings and action of the heart had to be omitted. It was Dr. Johnstone's intention to show the importance of the electrocardiogram as a prognostic agent.

In discussion, Arthur B. Thomas stated that the instrument itself is an expensive piece of equipment and unless it can be efficiently utilized increases the cost of electrocardiograms to the patient, and that its importance as a prognostic aid has been overemphasized.

HAROLD P. HOOK, *Reporter.*

BERKS

Dec. 10, 1935

The meeting was held at Medical Hall, Reading, President William L. Krick presiding; 52 members and guests were present.

James W. McConnell, professor of neurology, Graduate School of Medicine, University of Pennsylvania, spoke on "Neuropsychiatry as It Pertains to the General Practitioner." Dr. McConnell said in part:

Neuropsychiatry is defined as the branch of medical science dealing with nervous and mental diseases—not a specialty, nor yet a special branch, but a branch of medical science. The term general practitioner is the honorable title conferred on the gentleman who perhaps labors in places distant from medical centers, reads his journals, to keep him abreast of the times, treats pneumonias and scarlet fever, sets fractures and reduces dislocations, removes appendices and drains gall-bladders, and has his rest disturbed by the midnight call to an obstetric case. He may not be able to discuss pathology, but he studies the habits of his patients and becomes conversant with the symptoms of the processes that disturb their physical make-ups. He recognizes the dysfunction of the nervous system or some part of it; he senses the possibilities of abnormal trends of thinking or of behavior. Not infrequently, when he finds the solution to some of his problems perplexing, he comes for counsel to his friend, the neuropsychiatrist.

The general practitioner must be ever on the alert to recognize the possibilities of a neurologic lesion such as brain tumor simulating mental illness. Familiarity with the ophthalmoscope and appreciation of slight alterations in the reflexes are necessary.

A differential diagnosis between paralysis and atrophy of the muscles of the upper left extremity and adjacent pectoral muscles produced by myelitis following protein injection, and the paresis of intercurrent poliomyelitis is difficult, the differentiating feature being that the patient may recover entirely from the former condition, but in the latter even improvement is rare.

The general practitioner knows the anatomy and physiology of the cerebrospinal system, yet often fails to give the same consideration to neuropsychiatric symptomatology that he does to other forms of disease.

In the compilation of statistics it was found that 60 per cent of general medical cases contain definite neurologic interest. The general practitioner is responsible for the erroneous idea that the diagnosis of a disease should be synchronous with the signing of the death certificate. Although the diagnosis of an organic nervous affection does occasionally consign the patient to a useless career, many things can be done to ameliorate these disorders, and as doctors, not as neurologists, the accomplishment of these should be our ambition. Before anything is done, however, a diagnosis must be made, and in order to do so the physician should know something about the symptomatology of neurologic conditions.

A few suggestions relative to the study of the motor features of neurologic disorders may be acceptable.

Station.—This refers to the posture assumed by the individual. The peculiar stooping of Parkinson's disease, the lordosis of the muscular dystrophies, and the uncertainty in standing of the advanced tabetic mean much in the evaluation of the static symptoms. Normally a person sways slightly on standing with eyes open and the base of support diminished by bringing the feet together. This uncertainty is increased very slightly when the eyes are closed. In certain diseases of the spinal cord and in multiple neuritis, the marked increase of sway observed when the feet are closely approximated and the eyes are closed is known as the Romberg sign. Occasionally a paradoxical observation is made as to this symptom. In amaurotic tabetics, when

the optic nerves are entirely atrophied, the Romberg sign is absent until these blind patients close the eyelids. Then they are quite unable to maintain the erect position.

Gait.—Alterations in gait are often keynotes. They are best studied by observation, which if sufficiently frequent gives a visualization of the peculiarities of walking that serves far better than verbal descriptions. The recognition of the ataxic gait of tabes, of the spastic gait of lateral sclerosis, of the steppage of peripheral motor neuron disease, of the festination of the parkinsonian syndrome, and of all the other modalities of walking dependent upon neurologic disorders aids materially in concluding the diagnosis. A differentiating point between the gaits of organic and of inorganic diseases of the nervous system is the constancy of the deviation from normal in the first named. The functional case and the malingerer are invariably exposed by the irregularity and inconstancy of the divergence from normal. In considering alterations of motor power, with reference to locating them in their topography, the rule is as with gaits. In an organic paralysis the loss of power follows an unchanging type, whereas the functional syndromes show variation at some time or other.

Reflexes.—In considering reflexes the physician must establish what is the normal response and what is abnormal. The normal deep reflex is that which is obtained when the exposed tendon of a completely relaxed, unaffected limb is lightly tapped with the finger or with a percussion hammer and the muscle of that tendon contracts sufficiently to be felt or seen. The excursion of the limb is immaterial. Rarely or never is a deep reflex absent in a perfectly healthy individual, and its failure to appear after proper testing should lead the examiner to try again and again or to search for additional symptomatology. Variations in the degree of normal response are frequently seen. They hold the same relation to the health of the possessors as do differences in so-called normal blood pressure. Pathologic deviation from the normal is shown by exaggeration in response beyond average limits or by definite diminution or loss. Wherever a tendon is exposed there a reflex can be elicited.

In conclusion, Dr. McConnell discussed the work of the State Society Committee on Mental Hygiene.

In discussion, O. Paul Holmer said that about 35 per cent of patients in general practice present neurotic symptoms. After a few consultations with the general practitioner, who is too busy to devote as much of his time as the patients think they should have allotted to them, they eventually, after spending their last penny on various quacks and cultists, end in the mental health clinics. Ralph L. Hill stated that probably the 2 most universally noted physicians were Sir William Osler and Lewellys Barker, because they devoted sufficient time to the study of the life of the patient and his family as well as to his chief complaint.

PEARL E. HACKMAN, *Reporter.*

BRADFORD

Oct. 29, 1935

The meeting was held at the Ward House, Towanda.

Rene Berguet, of Elmira, N. Y., gave a talk on "Psychiatric Suggestions for General Practice." Dr. Berguet is psychiatrist to the Elmira Reformatory. His opening remarks were a plea for the early recognition

and institution of proper therapy in treating the mentally ill. In the full-blown stages the type of mental disease is easily diagnosed while in their earliest manifestations the seriousness of the situation is not readily appreciated by the general practitioner, who is usually the first to see the patient. The mildly depressed manic-depressive is often diagnosed neurasthenia or hysteria and is not properly treated, and the attending physician may have the unpleasant surprise some day to learn that this patient has committed suicide. The dangerous ones are the mildly depressed because they act more quickly on their conclusions. Because of this the family should be warned against removing the patient too soon from the hospital on the first sign of improvement. It is these individuals who commit suicide shortly after returning to their homes from the hospital.

Another type of mild psychosis which is prevalent is hypomania. The hypomaniac shows mild overactivity, is a bit more talkative, commits useless acts such as excessive buying. Usually there are no hallucinations or delusions. They appear normal enough to fool everyone and are insane enough to do much damage. In patients of this type the danger of promiscuity is ever present because of their amicable and sociable tendencies whereby friendships with undesirables are formed. The embarrassment which may come to families, particularly if one of its female members is suffering from hypomania, at once becomes evident.

The 3 forms of schizophrenia are readily recognized when fully developed, but the simple type in the early stages is hard to diagnose. The diminution, absence, or apathy of emotion may be so little changed from the normal that the divorce between thinking, feeling, and acting is poorly defined. Delusions are not present and hallucinations are rare or difficult to elicit. The type of child which most often develops this condition is the pedantic, overly obedient, "goody-goody" child. They are poor mixers but excellent students, who frequently show beginning failure in school work, loss of interest, and failure of powers of concentration.

The general practitioner sees these children first, and because of the absence of any pathologic physical findings or abnormal laboratory examinations the child is thought to be stubborn. The dangerous age is between 12 and 17 years.

In the early stages general paralysis of the insane is not recognized because too much dependence is placed on the blood serologic findings. Because this condition is not recognized, individuals so afflicted often do much harm to themselves, their families, and the public. Frequently, they simulate arteriosclerotic dementia. The presence of the pinpoint pupil is an important sign and indicates the necessity of doing a spinal tap.

Dr. Berguet stressed the ever-increasing problem of toxic psychosis because of the use and abuse of the barbituric acid sedatives and hypnotics. Manic excitement and visual hallucinations are quite common in these patients.

In conclusion he made an appeal for the humane handling of the mentally ill patient, stressing the importance of talking frankly to the patients about their mental ills before committing them to a mental hospital. It is good psychotherapy and often helps the patients to gain some insight into the conditions from which they are suffering. Not infrequently it is much appreciated by patients and aids materially in the treatment of such individuals.

WILFRED D. LANGLEY, *Reporter.*

CHESTER

Nov. 19, 1935

The meeting was held at the Coatesville Hospital. Luncheon was served. George M. Coates, professor of otolaryngology at the University of Pennsylvania, reviewed the etiology, diagnosis, and treatment of sinus disease, and particularly discussed the various means by which the sinuses become infected, such as swimming, diving, *etc.* Frequent and continued nasal catarrh with inadequate drainage of the sinus is unquestionably another major cause. The cardinal symptoms of sinus headache, leukocytosis, fever, *etc.*, were discussed. He spoke of an increasing knowledge concerning certain lung changes in relation to sinus disease. Shrinking of the turbinate bones causing better drainage of the sinus is an important factor in the treatment. Various preparations of ephedrine constitute the classical method of treatment in this regard. Infra-red heat has been a valuable adjunct in relieving sinus pain. Various degrees of surgical interference become necessary in proportion to the seriousness and persistency of the sinus infection. Dr. Coates also discussed the common cold and particularly stressed its very important relationship to sinus disease. Two motion picture films were shown illustrating the mechanical way in which sinuses become infected; the anatomy and physiology were demonstrated.

The report of the Executive Committee was presented. Discussion followed the suggestion that a possible appropriation of \$10,000 from the county commissioners for the treatment of tuberculosis patients might be forthcoming. It was finally decided that this suggestion be accepted in principle and that \$10,000 be requested from the commissioners. Further discussion and investigation by the Public Health Commission was advised relative to the expenditure of this money.

A report from the secretary of the State Society outlining the position which the State Society has taken concerning contract practice in state-owned schools and colleges was read. This action is the result of a long and continued effort on the part of John A. Farrell for constructive action on this form of contract practice.

Dr. Dickey gave a report of his work for the past month and spoke of the program as planned for the immunization of school children against diphtheria. Free toxoid is available for this work and may be obtained from Dr. Scattergood, either personally or through Dr. Dickey.

Dec. 17, 1935

The meeting was held at the Chester County Hospital. Luncheon was served. Acting President Hughes presided.

The report of the Executive Committee reviewed the work of the Economics Committee and referred principally to the active part which the society has taken in fostering an educational campaign in opposition to state medicine. The Public Health Commission reported that 2 public health meetings had been held during the past month, one in West Chester and one in Kennett Square. The Public Health Commission reported that a communication had been received from the County Nurses' Association asking that a representative of the society be appointed to meet with the nurses and to advise them concerning policies, *etc.* The Executive Committee further reported that the West Chester State Teachers College was desirous of consulting with the society in the matter of its student health service.

Dr. Dicks said there were flagrant violations of medical

ethics existing in the community in the matter of insurance companies designating certain physicians to do their compensation work. This matter of contract practice was referred to the Economics Committee for further investigation.

Edward B. Hodge, surgeon at the Chester County Hospital, gave an address on "The Significance of Hemorrhage from the Bowel." Dr. Hodge spoke of the causes of intestinal hemorrhage and referred particularly to hemorrhoids and carcinoma of the rectum as leading causes for such symptoms. Operation for cancer of the rectum is a most serious surgical procedure, but should be recommended in all cases of cancer of the rectum if diagnosed early in the course of the disease. The artificial anus is not such a matter of distress as might be supposed. Other causes of intestinal hemorrhage, such as colitis, are more difficult to diagnose and very resistant to treatment. Intestinal hemorrhage from typhoid ulcers is infrequent today due to the relative rarity of this disease. Duodenal ulcers are many times more frequent than gastric ulcers and are prone to occur in the male sex. Thin, highly nervous individuals are much more disposed to develop this condition. Importance of roentgen-ray diagnosis cannot be overestimated in detecting ulcers of the stomach and duodenum, and is most useful in observing the improvement following treatment. All duodenal ulcers should receive medical treatment for several weeks before surgery is attempted. As to gastric ulcers, the size and location of the ulcer are important factors in determining the treatment. Small ulcers of the lesser curvature may be treated medically for a short time, but should be operated on promptly, if relief is not obtained early in the disease. Posterior gastro-enterostomy and gastrectomy are performed on these patients depending on the individual case. Gastric carcinoma is exceedingly common and must be diagnosed very early if any hope of cure is to be entertained. Practically all lesions on the greater curvature of the stomach are malignant. Surgery in gastric lesions is much more urgent than in duodenal lesions, because of the fact that cancer is common in the first group and almost unheard of in duodenal lesions.

JOSEPH SCATTERGOOD, JR., *Reporter.*

DELAWARE

Dec. 12, 1935

The meeting was held at 9:15 p.m., at the Chester Hospital; President Eynon presided.

Russell Richardson, pathologist at the University of Pennsylvania, read a paper on "Pathological Laboratory Suggestions of Interest to the Practitioner."

He limited his discussion to 3 or 4 specific subjects and the pathologist's relation to them. He stressed the fact that many clinicians expect the laboratory to act as a "yes or no" science and that the laboratory is not such. The laboratory report should be but one item in adding up the sum total of all factors in a diagnosis.

Anemia.—He would not attempt to classify the anemias, as the classifications are changing rather rapidly with the passing of time. The value of hemoglobin tests was stressed when estimated in grams per 100 c.c., the normal being 15 to 16 grams. Anemia can be considered to be present if the red blood cell count is below 4½ millions and if the hemoglobin is less than 13½ grams per 100 c.c. of blood. The white blood cell count and the blood smears are of valuable aid in estimating the degeneracy of the red blood cells in anemias. As anemia progresses the smears are apt to

show a state of progress by the increasing or decreasing of the number of abnormal blood cells found. Other tests which are of value in anemia are the bilirubin tests. Two of these may be performed, either the icteric index or the van den Bergh. A low icteric index points to the possibility of aplastic anemia. No change in the bilirubin is found in cases of external hemorrhage. In internal hemorrhage the blood shows an increased amount of bilirubin.

The various laboratory aids in estimating the normal or abnormal functioning of the kidneys were considered. Tests which are of value are concentration and dilution tests, Mosenthal's test, the van Slyke, and the urea and nonprotein nitrogen tests. The concentration tests are of value in that they indicate to a certain degree the stages of nephritis. Dilution tests, which are not up to normal, are a rather certain indication of early kidney destruction. Mosenthal's test is of value as an indicator of the degree of nephritis. The van Slyke test is most satisfactory as a measurement of kidney function. Urea and nonprotein nitrogen percentages can be used as an indicator of the amount of kidney deficiency.

As to liver functioning, considerable liver damage can be present without any laboratory means of diagnosing the amount or degree. Certain tests are of value: (1) The bromsulphalein test. In this test the material is injected into the arm and the blood collected from the other arm in 5 and 30 minute intervals. Normally one-half of the material is destroyed by the liver in 5 minutes. Deficient liver functioning is shown when the colorimeter test shows a larger than normal factor; (2) bilirubin tests previously mentioned are also of value; (3) the urobilin test in the urine is also a valuable indicator of liver damage; (4) levulose and galactose tests may be done but their particular value is questionable.

Diabetes.—When the clinician requests a blood sugar analysis, it is usually for one of 4 reasons: As an aid in diagnosis; in determining the renal threshold; as an aid in standardizing the therapy in the disease; and as an aid in the follow-up treatment.

In blood sugar estimation, hypoglycemia is not necessarily an indication of shock. Cases of intestinal shock have occurred with but slight diminution in the amount of blood sugar found.

C. Irving Stiteler, editor of the Delaware County Medical Society *Bulletin*, gave a report of the Secretaries' Conference at Harrisburg.

A buffet supper was served.

E. ARTHUR WHITNEY, *Reporter*.

ERIE

Dec. 4, 1935

The meeting was held at Hamot Hospital, Erie. Arthur C. Christie, of Washington, D. C., addressed 2 gatherings: A medical audience on "The Diagnosis and Treatment of Bronchiectasis," and a mixed audience on "Medical Economics." Arthur G. Davis presided.

In discussing bronchiectasis, Dr. Christie pointed out the fact that it is only since the work of Sicard and Forestier in visualizing the bronchial tree, reported in 1922, that the frequency of the disease has been recognized. It is now considered a common respiratory disease; earlier it was confused with tuberculosis, and most cases of expectoration and hemoptysis were considered as due to the latter.

The etiologic factor is a preceding infection, accompanying influenza, pertussis, or measles; or a non-aerated or atelectatic lung. Obstruction of a bronchus by new growth or foreign body also may be the cause. Inflammation of the bronchial mucous membrane leads to swelling and the inflammation extends to the entire wall of the bronchus, thence to the peribronchial tissues; atrophy of the wall of the bronchus results in permanent damage. The disease may appear in any age period.

Early diagnosis of the disease is based on the following: Persistent, annoying cough with or without sputum; no physical signs; hemoptysis may be present for several years and is usually not severe. Clubbing of the fingers is present only in the long-standing case. Recurring attacks of fever or several attacks of pneumonia may be the first manifestations. A negative diagnosis of bronchiectasis is not to be made until all methods have been exhausted.

Bronchography is essential in order to diagnose the case early.

Treatment of bronchiectasis has never been satisfactory, but some advance has been made in the past few years. It is important to eradicate disease of the paranasal sinuses. If a foreign body is present in the bronchus, it should be removed. Postural drainage, peroral creosote medication, and vapor and steam inhalations are major aids in conservative treatment. Autogenous vaccines are worthy of trial. Bronchoscopic drainage and instillation of menthol, iodoform, creosote, or iodized oil have proved extremely helpful in chosen cases. Unilateral cases have been helped by pneumothorax, phrenicectomy, and thoracoplasty. Surgical removal of the infected area is a radical procedure but offers permanent cure if the patient survives.

In discussing Medical Economics, Dr. Christie said the whole sociologic problem has to deal with the matter of food, clothing, and shelter as well as medical attention, the latter of which must be solved by the medical profession itself. The medical profession has been unjustly criticized from all sides as looking too much to the scientific and not enough to the sociologic side of medicine. We ought to be exempt from the accusation that we are reactionary and obstructing progress, for statistics show that medical progress has been rapid in that the life span has been increased 12 years in the past decade and a half. Most of the criticism is coming from paid secretaries of foundations who are trying to put over plans contrary to the ethics of the medical profession. The medical profession has the right to oppose something it considers harmful to medical progress and medical ethics.

Ninety-five per cent of the medical profession and all of the medical organizations are opposed to compulsory health insurance. The reasons for this opposition are: (1) We are certain from the experience in European countries that such plans will cause a fall in the quality of medical care. This is proved by the panel system in England as well as in the contract practices in the United States. Eventually the best minds will not enter the study of medicine and medical progress will slow down or cease entirely. (2) Compulsory health insurance causes a rise in the cost of medical care. It has been proved that sick days have increased from 7 to 17 under sickness insurance because of trivial ailments and malingering. The cost of bureaus and personnel for the proper administration of affairs adds to the cost of medical care. (3) It will put the doctor under the control of the government bureaus and the insurance company, which will tend to limit the doctor in his duties.

Dr. Christie outlined the plan of hospital insurance as it is functioning in Washington, D. C., under the name of the Group Hospital Incorporated Association. Under this plan the individual is assured of 21 days hospitalization at a small fee per year, and the association pays the hospital. This does not include medical care. The care of the indigent in Washington as elsewhere is quite a problem as is also the care of those who can pay a small amount. To deal with these patients a Central Admitting Bureau has been instituted, where each patient is interviewed before being sent into the hospital. This bureau has saved the Community Chest of Washington about \$40,000 in one year. A Medical-Dental Service Bureau has been devised whereby patients who owe a doctor or dentist bill can arrange to pay it up over a period of 12 months, the bureau retaining 10 per cent of the fee collected for the purpose of building up a reserve fund.

This plan is working out to great advantage in Washington, but plans elsewhere must be made to fit the community.

RALPH D. BACON, *Reporter*.

LACKAWANNA

During the first week in November, for the first time in many years in Lackawanna County, there was co-operation between the many local agencies for the betterment of public health, and the result was by far the most successful Health Week in the history of the Lackawanna County Medical Society. A large committee aided Michael J. Stec, general chairman of the affair, in providing a program.

The focal point of interest during the week of city-wide observation was a large group of exhibits on the ground floor of the Central Building at Scranton. These displays were seen by thousands of people who thronged the hall daily. The many attractively arranged booths with continuous slide projectors and motion pictures claimed much attention and favorable comment. In addition, there were many window displays in department stores. Special talks were given before school groups and service clubs, and good use was made of a dozen motion picture films which were available.

Nov. 19, 1935

The meeting was held in the auditorium of the Chamber of Commerce, Scranton, with President Raymond J. Garvey in the chair. James W. Kennedy, of Philadelphia, president of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, discussed "Urgent Conditions." A summary of the paper follows.

Typical of the times is the fact that during recent years, 60 per cent of the papers presented at the meetings of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons have considered the subject of obstetric emergencies. Even adequate prenatal care does not always prepare the physician to meet the urgent conditions. Why is prenatal mortality rising? An article on the use of a cake of soap and a nail brush would do more to lower maternal mortality than any classical paper.

"Watch and wait" should be the primary precept taught to all students of midwifery. This and absolute cleanliness are the essentials. Medical students obtaining their training in the slums of Philadelphia were given a cake of soap and a scrubbing brush. Each patient was similarly supplied. After the patient and the hands of the examiner were thoroughly scrubbed,

one internal examination was allowed. With this simple procedure infection and maternal mortality resulting therefrom has rapidly approached a minimum.

The death rate in ectopic pregnancy is steadily rising and is now 5 to 6 per cent. The legitimate rate should never be over 1 per cent. Diagnoses are seldom made early enough. If carefully taken, the clinical history alone will make the diagnosis in 98 per cent of the cases. Three general questions will cover all the information that is necessary: (1) When was the last period, and have the periods been regular? (2) Is there any pain? (3) Has there been any vaginal discharge? The combination of 3 answers—a delayed period, lancinating type of pain, and a black discharge—always means ectopic gestation.

On physical examination in ectopic pregnancy there is a very tender cervix, more tender than any lateral mass. This is in contradistinction to tubo-ovarian conditions, in which the adnexae are generally more tender. Operation should never be delayed. Immediately upon diagnosis, the surgeon should operate. Any delay will increase the probability of mortality. The least bit of blood in the abdomen shocks the patient; it does not take a massive hemorrhage. The quiet, resigned patient is quite frequently in shock, while the patient with extensive hemorrhage is restless, semimaniacal, and hard to nurse.

During the past few years 6000 articles have been written on the early diagnosis and treatment of appendicitis, and yet the mortality rate is steadily rising. What has been done in these last 20 years? We have become too technical; the surgical pathologists believe that they can classify these cases in operative and non-operative stages. But no one is a fine enough diagnostician to differentiate absolutely gradations of this condition. There is entirely too much teaching of ultra-conservatism. The diagnosis being made, the patient must be operated upon immediately regardless of peritonitis, and radical surgery done. Improvement in the general mortality rate will come only from early diagnosis and immediate operation.

Although it is now considered quite radical, the method of evisceration, taught and practiced by the late Dr. Joseph Price, of Philadelphia, in these cases of peritonitis and the employment of coffer dam drainage, will result in the absence of postoperative bowel obstruction and distention. If the bowel is carefully lifted out without traction, under a stream of hot water, and the adhesions carefully separated, it will be found in the majority of cases that distention is generally due to paralysis of the terminal ileum, most frequently in the last foot of small bowel at its junction with the cecum.

In cancer of the cervix, the histopathologists attempt to classify the stages of malignancies. This looks well on paper, but the only hope in any type of cancer of the cervix is early surgery. Most of the complications, bowel obstruction, perforations, and fistulae, are a result of deep therapy or the use of radium. And of the surgical methods in this condition, the operation of choice should be that of vaginal hysterectomy, clamp method.

Nov. 26, 1935

The meeting was held in the auditorium of the Chamber of Commerce, Scranton; President Raymond J. Garvey presided. John F. Erdman, of New York City, professor emeritus of surgery at Columbia University Medical Center, read a paper on "Cholecystitis, Cholechochitis, and Cholangitis." A summary of this paper follows.

In very rare instances a condition of choledocholithiasis is found which is not accompanied by a calculus cholecystitis except in those patients who have been operated upon for a calculus cholecystitis in which the choledocholithiasis was not found or not searched for at the time of operation.

There are the attacks of paroxysmal pain with possibly a slight degree of jaundice. The pain is more localized in the midepigastrium. There may or may not be any rise in temperature. Later the attacks become more frequent and severe with subsequent chill, fever, and marked jaundice. Then the syndrome of Charcot, known as Charcot's fever, is evident in many patients. This condition is a result of choledochitis with a varying degree of cholangitis. In these cases is found a stone of the ball-valve type. The stone becomes engaged in the smaller portion of the duct and the syndrome of Charcot is on. As the spasm of the duct releases the stone, drainage around the stone is again instituted and all manifestations disappear until the next cycle, and so on until the patient has submitted to surgery.

Cholangitis is an extension of the choledochitis to the immediate surroundings and the system of the terminal hepatic ducts. The signs and symptoms are much the same as those of choledochitis, but the pain is more severe and the liver markedly tender and enlarged. There is a greater possibility of pathologic involvement of the blood stream. If not relieved early, all the evidences of such a condition—ecchymotic blotches, hemorrhages, *etc.*—may appear, with resultant death.

There is no curative treatment or remedy. His only suggestion was that the patient refrain from eating fats or anything that contains either vegetable or animal fat.

When patients do come to operation a complete removal of the gallbladder should be done.

If a cholecystectomy has been done, the source of a possible cancer has been removed, as the cancerous condition may be the result of irritation by calculi. If papillomata have been found in the gallbladder, another cancer source has been removed. Another factor in favor of a cholecystectomy is the absence of those disagreeable sinuses which follow an incomplete operation. In the incomplete operation, a stone or stones, bits of drainage, or a purulent mucous discharge from a thoroughly diseased gallbladder will cause a sinus to form. Such sinuses will continue as long as the foreign body remains.

The mortality of cholecystectomy patients is one-eighth to one-half of one per cent, less than in the cholecystostomy patients. The dangers of injury to the common duct are, as a rule, due to cholecystostomy.

When an operation is performed for stones in the duct, the surrounding structures should be freed so that the duct may be outlined. If there is any question as to whether or not the duct is the object for which the search is being made, a diagnostic needle may be used. Dr. Erdman recently has had a needle constructed at an angle so that it penetrates the suspicious structure, as the transfusion needle does the vein; i.e., parallel to the duct instead of an angle of 90 degrees or less. The needle is an 18 gauge with a regular Luer slip; the length is about 3 inches, and the last three-quarters of an inch is angulated at about 60 degrees; the bevel and point are standard for this type needle. A suction tube, bent at an angle of 15 degrees for 2 inches from the tip, may be used for withdrawing bile, small stones, or detritus. In the event that a stone is impacted in the duct, the stone may be broken by needling with a fine needle so that the removal of the fragments is

easily accomplished. Recently ether has been advocated as a means of dissolving such calculi in part or entirely so that the operator may then remove the muddy solution with a scoop.

In the past 5 years, Dr. Erdman has operated upon 493 patients; 129 were males and 364 females. The records show that 327 of these patients were calculus-bearing. Twenty-seven cases of cholangitis were reported. There were performed 477 cholecystectomies, 13 cholecystostomies, and 33 choledochostomies. The appendix is removed if possible. In this series 245 appendices were removed. In 18 cases, there were added subtotal or complete hysterectomies.

Of these 493 patients 25 died, and only one of these deaths could be assigned to hepatic dysfunction.

Dec. 3, 1935

The meeting was held at Scranton; President Raymond J. Garvey presided. Edward L. Bortz, of Philadelphia, chief of medical service "B" at the Lankenau Hospital, discussed "Diabetes Mellitus and Other Metabolic Problems."

Dec. 10, 1935

The annual business meeting and election of officers was held at the auditorium of the Chamber of Commerce, Scranton; President Raymond J. Garvey presided. Cooperation and cohesion have been on a very high level, the membership has been steadily increasing, the finances have been very satisfactory and the sinking fund substantially increased. During the year there were 40 scientific sessions as well as several clinical meetings in local hospitals, all of these assemblies being addressed by recognized leaders in the profession from clinics of the east and mid-west. In addition, the Carbondale members have been supporting graduate seminars held in the hospitals of the upper end of the county.

Officers elected for the coming year include: President, Jacob J. Lonsdorf, Scranton; vice-president, John W. Lyons, Jessup; second vice-president, Emlyn T. Davies, Old Forge; secretary, Charles E. Thomson, Jr.; secretary-editor, Frederic B. Davies; librarian, Byron Jackson; and trustee, Ernest L. Kiesel.

FREDERIC B. DAVIES, *Reporter.*

LANCASTER

Nov. 12, 1935

The meeting was held at the Medical Club rooms. J. William Hinton, assistant attending surgeon, New York Post-Graduate Hospital, and associate attending surgeon, Bellevue Hospital, New York City, gave an address on "A Review of 746 Gastric and Duodenal Ulcers." A summary of this address follows:

In discussing the treatment of gastric and duodenal ulcers the question of gastric ulcer undergoing malignant degeneration has such an important bearing on both the medical and surgical management of this type of ulcer that one should state his views on this point. Dr. Hinton's opinion is based on observation in the stomach clinic of the Fourth Medical and Surgical Division at Bellevue Hospital. During the past 8 years they have observed 746 ulcers and 10 carcinomas of the stomach and duodenum, a total of 756 cases. Of the 746 ulcer cases, 642 were duodenal and 104 gastric, a percentage of 14 for gastric. Adding 10 cases of gastric carcinoma to the gastric ulcer group will give 114 gastric lesions, with only 8.7 per cent malignant. From the practical point of view the emphasis on gastric ulcer

becoming malignant has been overstressed. Primary carcinoma of the duodenum does occur, but there has never been reported a case of duodenal ulcer undergoing malignant degeneration. If ulcer is such a common forerunner of gastric cancer, then it should occur occasionally in the duodenum.

Certain factors influence the development of ulcer: *Sex*—more common in the male; *age*—may effect a person at any age, but is most frequent between age 30 and age 40; *heredity*—ulcers are familial; *occupation*—this does not seem to influence the incidence.

The diagnosis of peptic ulcer can be made nearly as accurately from a careful history and physical examination as by roentgen-ray studies. Both are needed in the complete diagnosis and treatment, however. Do not be misled by a single negative report on the roentgen-ray examination in a patient with epigastric pain radiating to the back or in a patient with tarry stools or hematemesis. It is sometimes impossible to demonstrate posterior duodenal ulcer roentgenographically because of its being on the posterior wall and often adherent to the pancreas. Therefore, careful clinical study combined with special studies is essential.

The treatment is medical as long as symptomatic relief can be obtained. There is definite danger in prolonged medical treatment when symptomatic relief is not obtained. This is due to an associated chronic pancreatitis. Medical treatment of stomach peptic ulcers is more lasting and occurs more readily than it does in duodenal ulcers. The chances of peptic stomach ulcer undergoing malignant change are slight. It is well to emphasize that it may be very difficult to differentiate between ulcer and carcinoma in a patient past middle life in whom the roentgen rays show a suspicion of cancer. A gastric lesion, if it be an ulcer, will respond quickly to treatment, whereas, if it be a cancer, it will seldom do so.

The Sippy régime is used in the Bellevue clinics. It is necessary to adhere to the treatment for years to produce permanent relief. Medication is not given in the clinics unless the patient does not respond to dietary régime. Alkalies are used when indicated, and all other preparations such as gastric mucin, synodal, larostidin, vaccines, and foreign proteins have been given a trial. Some have been excellent in certain cases. At present silicon dioxide is being used.

All foci of infections are carefully removed if possible, because their removal tends to raise the resistance of the patient. The patient should have at least 9 hours of good sleep and should avoid tension as much as possible.

When operation is decided upon, a difficult decision is at hand. A patient with a 50 to 100 per cent residue at 6 hours is not a surgical problem unless medical treatment has failed; about 70 per cent of the cases of this sort do well on medical care. Hemorrhage is not an indication for operation except in a selected group.

The hemorrhage cases are divided into 5 groups: (1) Hemorrhage occurring in patients with peptic ulcer under competent medical management; (2) hemorrhage in patients operated upon for an acute perforation or chronic ulcer, who never had a hemorrhage until months or years following operation; (3) hemorrhage in patients previously operated on for hemorrhage but continuing to bleed at intervals postoperatively; (4) severe hemorrhage occurring in patients with negative or very short gastric histories without the patient knowing that he was ill previously; and (5) patients ad-

mitted with hemorrhage and a long history of ulcer symptoms but without regulated medical treatment.

In group 1 surgical intervention is desirable after the patient has recovered from the acute hemorrhage and is properly prepared for operation. A fatality in this group is unusual, but the disability from recurring hemorrhages is discouraging. In group 2, unless the patient has had 2 or more hemorrhages, a reoperation should not be considered, as the hemorrhage has occurred in spite of previous surgery and possibly as a result of surgery. In group 3, unless a definite marginal ulcer can be demonstrated, it is wise not to reoperate. In group 4 it is questionable whether operation should be done or not. If it is done in the acute stage, resection will be needed or the surgery will be of no avail. Transfusions will be needed before the operation can be done as a rule. In group 5 more misunderstanding was encountered than in any other group. The results from conservative treatment without surgery have been sufficiently encouraging to warrant this treatment, at least at first.

The one indication for operation is pain which cannot be overcome by any methods of medical management; this symptom usually means that the ulcer is adherent. When an ulcer becomes adherent to another viscus, it constitutes a definite indication for operation. That can be determined only by the clinical course of the case. When the pain is evaluated, it is found not to be of the ulcer type, but it is more severe and penetrating and the intensity usually necessitates sedatives for sleep. The type of operation will be either a pyloroplasty or a gastro-enterostomy. The conservative operations at the clinic have not been encouraging.

The type of operation will be determined after the abdomen has been opened. When chronic pancreatitis exists, a gastro-enterostomy for relief of pain is not satisfactory. When adherent to the pancreas a subtotal resection will be needed. In cases having a large residue with a large stomach gastro-enterostomy may be the operation of choice, but these get marginal ulcers also. The mortality following subtotal resection is not higher than the general mortality after gastro-enterostomy.

Dec. 4, 1935

The meeting was held at the Medical Club rooms. A. C. Broder, professor of surgical pathology in the Medical College of Virginia, gave an address on "Microscopic Versus Gross Diagnosis of Cancer." He said in part:

The removal of the pectoral muscles was advised by Hippocrates. It is indeed safe to assume that cancer antedated history. Lately pathologists have been placing in the category of carcinoma many conditions formerly thought to be inflammation and also have been taking out of the carcinoma group conditions now known to be epithelial hyperplasia.

Carcinoma of the lower lip is seldom caused by the use of tobacco. Seventy-five to 80 per cent of these patients get well with proper treatment.

In squamous cell epithelioma of the cervix 90 per cent are in grades 3 and 4, whereas in adenocarcinoma of the body of the uterus 60 per cent are of grades 1 and 2.

In melano-epithelioma it is observed that the blacker the tumor the longer the patient lives. The nonmelanotic epithelioma (white mole) is the most malignant of all tumors.

Hypernephroma of the kidney should receive another name, as it is an adenocarcinoma and varies in malig-

nancy, giving metastasis to bone and lungs. The tumors which tend to metastasize to bone are those of the breast, thyroid gland, prostate, and kidney.

Carcinoma of the rectum is rarely seen associated with hemorrhoids, as it is usually well above the anus.

Leukoplakia is a dead product, produced by thickening of the stratum corneum. Carcinoma starts from the basal cells beneath this layer, not from the leukoplakia layer. A small percentage of cases of leukoplakia do become carcinoma, especially those in the tongue of a syphilitic. Those of the lip, bladder, and kidney almost never do.

The grading of tumors is dependent upon von Hanseman's principle. The nearer the cells imitate the normal cells, the less malignant are they. They tend to control their own growth by differentiating into nearly normal cells, later becoming keratinized.

Carcinomas of the skin, grade 4, are almost impossible to cure. It is much easier to cure grade 4 cancer of the cervix.

Most tumors of the thyroid gland are carcinoma and not sarcoma. The papillary adenocarcinoma of the thyroid usually metastasizes to the lymph nodes, only rarely by way of the blood stream.

Bowen's disease and Paget's disease of the nipple are examples of carcinoma in situ. In the case of Paget's disease, it is always wise to do a radical breast amputation, not because of extension of the nipple tumor, but because this tumor is so frequently associated with adenocarcinoma in the breast. The tumors are independent however.

In discussion, Louisa Keasby disagreed with Dr. Broder in the placing of melanomas with the epitheliomas, believing that they belong with tumors of neurogenic origin.

Slides were shown.

WILHELMINA S. SCOTT, *Reporter*.

LEHIGH

Dec. 10, 1935

The meeting was held at the Sacred Heart Hospital, Allentown. Stanley P. Reimann, director of the Lankenau Hospital Research Institute, Philadelphia, spoke on "The Bearing of New Factors and Theories of Cancer on Its Practical Management." A summary of his remarks follows:

The growth of the cells in malignancy was compared with the growth of normal cells. Anatomically, the phases of cell growth are divided into those of multiplication, differentiation, and organization. The deviation from the normal in malignancy is particularly evident in organization, less so in differentiation; up to the present, no definite differences have been discovered in proliferation. The difficulties in organization are said to be due to changes within the cells and these changes are often called somatic mutation. Several chemical compounds such as histidine, arginine, and tryptophan were discussed, and their specific effects on growth and development were cited.

VAUGHAN SPRENKEL, *Reporter*.

LUZERNE

Dec. 18, 1935

The meeting was held at Wilkes-Barre. Leo Grohowski, of Freeland, was elected to membership. Joseph P. Dougherty, retiring president, presided.

The newly elected officers are: President, Vivian P. Edwards, Edwardsville; vice-president, John Howorth, Wilkes-Barre; secretary, Irving O. Thomas, Wilkes-Barre; treasurer, Boyd Dodson, Wilkes-Barre; financial secretary, John J. McHugh, Wilkes-Barre; censor for 3 years, Manfred H. Kudlich, Hazleton; director for 3 years, William Baurys, Nanticoke; editor and librarian, Lewis T. Buckman, Wilkes-Barre; and, reporter, Marjorie E. Reed, Plymouth.

MARJORIE E. REED, *Reporter*.

LUZERNE (HAZLETON BRANCH)

Nov. 20, 1935

The meeting was held in conjunction with the Hazleton Dental Society, in the Hotel Altamont. Harold F. Robertson, instructor in medicine in the University of Pennsylvania Medical School, gave an address on "The Importance of Reflex Pain to the General Practitioner and Dentist." A summary of his remarks follows:

It is only in the smaller proportion of cases which the general practitioner sees that the more intricate methods of examination are of use or are available. In the great majority of cases, the reflex symptoms are obvious, and it is often on these alone that he has to rely for diagnosis and treatment. The general practitioner sees a vast number of cases which are never encountered in hospital wards. The ineptness of disease is seen far more frequently by him than by the authors of textbooks and highly specialized consultants. It is, therefore, his especial duty to familiarize himself with a few anatomic and physiologic facts which will enhance his diagnostic acumen.

The thoracic and abdominal viscera possess no sensory nerves, nor do the visceral or parietal peritoneum. How, then, can we explain the pain of angina pectoris, gastric ulcer, gallstone, and renal colic; the vague discomfort of an enlarged and congested liver, especially noted in cases of failing right heart; the peculiar sensations attendant upon well-marked visceroptosis; the shoulder pain in gallbladder disease, in some instances extending down the outer side of the arm; the hypogastric pain of a distended urinary bladder; perineal and genital pain when fundus irritation exists, as in calculus at the base of the bladder? Briefly, it will suffice to say that the viscera are richly supplied with vagus and sympathetic fibers. These enter the cord at various levels, and are efferent in relation to cerebrospinal nerves, which emerge at the same levels. Irritation in an autonomic area is, therefore, conveyed to the level of the cord where the visceral nerves enter, and flowing over to the centers of the cerebrospinal nerves it stimulates a motor reflex resulting in hyperalgesia and muscular rigidity. Hence, the extent of peripheral manifestation is not measured by the size or position of an organ, but by its anatomic associations and the degree of irritation. In no other way could we explain the pain association of such widely removed parts as the kidney and testicle, gallbladder and shoulder, and retention of urine in perineal suture. From the standpoint of diagnosis, this is a topic which deserves painstaking study, for it often sheds light where otherwise naught but darkness would prevail.

Peritonitis, typhoid perforation, appendicitis, and disease of the gallbladder may all be closely simulated when the actual lesion is within the thorax and, in numerous instances, operation has been performed unnecessarily. Locomotor ataxia serves as another ex-

ample in point. Abdominal pain in tabes is universally recognized, yet it has not always been kept sufficiently in mind, since needless operations have been performed. On the other hand, in tabes dorsalis, because the posterior columns of the cord are blocked, appendicitis, peritonitis, or any usually painful abdominal condition may be overlooked. The absence of vibratory sensation and the absence of pain upon dilating the anal sphincter would suggest the presence of tabes in such cases.

There are a few facts which may be of interest to the dentist. We see sometimes a unilateral furring of the tongue, which frequently is associated with diseases or irritation of the second and third divisions of the fifth nerve. Such disease of these divisions of the fifth nerve may be due to a decayed tooth on the same side, tuberculosis of the gasserian ganglion, and a basal skull fracture across the foramen rotundum containing the second division of the fifth nerve.

The essayist expressed indebtedness to John Gunter, of Philadelphia, for the following reports on the results of irritation of the branches of the fifth nerve. Irritation of any branch of the fifth nerve may cause pain in its whole distribution or any part thereof. The area of distribution of the maxillary and ophthalmic divisions of the fifth nerve are most frequently the seat of these intractable neuralgias with accompanying associated pains in the region supplied by the posterior divisions of the cervical nerves.

Case 1.—This patient had severe pain in the right upper edentulous alveolar process for 2 months. While retained roots or unerupted teeth were suspected, nasal examination revealed an enlarged right middle turbinate, after surgical excision of which the pain ceased within 6 days, never to return.

Case 2.—This patient had pain for 8 days in the region of the left maxillary molars and premolars, associated with pain over the left eye. Nasal inspection revealed decided bulging of the septum to the left. Astringent applications relieved the pain, and suitable drops kept the patient comfortable.

We can readily appreciate the impulse to extract teeth had there been pulpless teeth in the jaw. The importance of oral diagnosticians having a knowledge of the normal and pathologic anatomy of the nasal cavities and accessory sinuses is obvious. The foregoing will serve as a reminder of the importance of nasal and oral pathology where intractable neuralgia of the head, face, and neck are concerned.

JOHN M. DYSON, *Reporter*.

McKEAN

Dec. 31, 1935

The annual meeting was held at the Emery Hotel, Bradford, Pa., and the following officers were elected for 1936: President, Ralph E. Hockenberry; first vice-president, Harold S. Callen; second vice-president, Julius L. Waterman, secretary-treasurer, Robert D. Donaldson; reporter, Chas. E. Cleland; censors, Floyd W. Hayes, Guy S. Vogan, and Earle M. McLean; district censor, Homer A. Wilson.

CHAS. E. CLELAND, *Reporter*.

NORTHAMPTON

Nov. 15, 1935

The meeting was held at the Easton Hospital; Drs. McCutcheon and Dreyer were elected to membership. Arno R. Zack, of the Economics Committee, spoke

about the hospitalization plan of the Easton Hospital and read a letter from the State Society condemning it. He stated that the Northampton County Society had already passed a resolution against any such plans as they all tended toward socialized medicine. Donald C. Richards said that the present plan does not provide for physicians' services, for these are to be entirely separate from any benefits purchased through the plan. Paul Correll said that the principle of this hospitalization plan was submitted to the Economics Committee of this society in May, 1934, and was approved in general at that time. A contract similar to or stronger than this exists in more than 25 communities in this country, and the plan should not be opposed but watched as an experiment. Delbert K. Santee said that the plan would act to the advantage of the physicians, for the people who will make use of it will be those who at present spend most of their funds for hospital bills in medical crises; by getting hospital care for a small expenditure, they will have more money left to pay the physicians. Francis J. Conahan felt that the matter should be referred to the Public Relations Committee for further study.

An illustrated talk on "The Causes of Bronchial Occlusion and Their Importance in the Production of Pulmonary Symptoms" was delivered by John T. Farrell, Jr., Philadelphia, associate professor of radiology, Jefferson Medical College. Dr. Farrell said in part:

Bronchial occlusion is due to 2 general types of occluding forces—those which plug the bronchus from within, and those which press upon it from outside. The principal causes of the first type are inhaled foreign body; bronchial granulation and scar tissue, due either to acute or tuberculous inflammatory changes; polyps; intrabronchial neoplasms which may be either benign or malignant, primary or metastatic; and retained tenacious secretions. The principal causes of the second type are aneurysms, mediastinal tumors, and enlarged and fixed mediastinal lymph nodes.

The most common of the intrabronchial causes is the inhaled foreign body. It is seen more frequently in children than in adults and its action has been likened to valves, the 2 more important types being the check valve and the stop valve. The check valve produces only partial occlusion; it allows air to enter with inspiration but prevents its exit at expiration. The stop valve leads to total occlusion; air can neither enter nor leave the lung.

Manges has best described the roentgenographic signs of bronchial occlusion. When the bronchus is only partially occluded by a foreign body of the check-valve type, the lung supplied by the bronchus at expiration shows evidence of overdistention (obstructive emphysema), the heart and mediastinal structures are displaced away from the side of obstruction, and the diaphragm is held in the low position of inspiration. When there is total bronchial occlusion, air distal to the point of occlusion is absorbed, the portion of the lung supplied by the bronchus collapses and becomes opaque to the roentgen rays, the heart and mediastinal structures are displaced toward the side of the occlusion, and the diaphragm rises on this side.

The most frequent cause of partial obstruction is the inhaled foreign body seen in children. The most frequent cause of total occlusion is intrabronchial neoplasm seen most often in adults.

Dec. 20, 1935

The monthly meeting was held at the Bethlehem Club, at 11 a. m.; Francis J. Conahan presided.

A brief summary was given of the work done by the Physicians' and Dentists' Business Bureau of the Lehigh Valley. This organization has handled about 25,000 accounts. Of these 20 per cent have been collected in full, 10 per cent have been skips, 43 per cent have been found to be charity cases, and the remainder have been satisfactorily settled. A resolution presented by the Economics Committee that the bureau be sponsored by this county medical society was adopted.

The executive committee of the society was empowered by a resolution to proceed with arrangements for accepting advertisements in the monthly bulletin.

Harvey O. Rohrbach discussed the Emergency Child Health Program. He said that tact should be used in dealing with the volunteer workers who bring children to be examined. Unless this work continues to be done in the doctor's office, it will be done by the state through the use of tax-raised funds.

The society was officially notified that the PWA project sponsored by this society had been rejected.

Donald C. Richards read a letter from a man in Bethlehem who stated that he was a chronic invalid suffering from multiple sclerosis, a burden to his family, and in constant misery, and requested that he be given the benefit of a "mercy death." The matter was humorously received by the majority of the members. George L. deSchweinitz, however, felt that the question was a serious one and advised that the letter be referred to the Public Relations Committee.

Frederick O. Zillessen suggested that the old records of this society be transferred to the State Society Archives room in Harrisburg for safe-keeping. Donald C. Richards thought that they should be bound first. William L. Estes, Jr., stated that a copy of these records should be easily available here.

Reporting for the Graduate Study Committee, Dr. Estes, Jr., said that arrangements are under way to form a group in Bethlehem and also in Easton.

Martin S. Kleckner, proctologist at the Allentown General Hospital, spoke on "The Relationship of the General Practitioner and the Proctologist in Anorectal Disease." Aided by lantern slides he described the anatomy of the anorectal region. In discussing history taking he said that the 5 cardinal proctologic symptoms are bleeding, pain, pruritus, protrusion, and change in bowel habit. In making rectal examinations the finger can explore only about $3\frac{1}{2}$ inches of the lower end of the rectum. A sigmoidoscope should never be used unless the examiner has been trained in the proper handling of it. After discussing some of the common rectal diseases, Dr. Kleckner presented the following questionnaire:

1. Do you take a history of the rectal cases that you see?
2. Do you make a routine rectal examination of these cases?
3. If your patient objects to rectal examination, do you acquiesce?
4. If you cannot feel anything by digital examination, are you sure that everything is normal?
5. Should you suspect carcinoma in every unusual case until it is proven absent?
6. At what age should you expect malignancy in the rectum or colon?
7. Do you prescribe soapsuds, salves, and suppositories for these cases irrespective of the disease present?
8. Having done "your bit" for the patient and failed, do you always request a consultation?
9. Do you believe that rectal cases can be treated satisfactorily in the office?

10. Do you treat rectal and colon cases as you would want yourself or a member of your family to be treated?

FREDERICK J. PEARSON, *Reporter.*

PHILADELPHIA

Nov. 27, 1935

SYMPOSIUM ON PULMONARY DISEASE

"The Laboratory Aspects of Pulmonary Disease" was presented by Claude P. Brown. He stated that a clinical diagnosis, as well as a differential diagnosis, of early pulmonary tuberculosis was at times difficult. It is exceptional when tubercle bacilli are found in the sputum in the early stage, and the blood picture likewise cannot be relied upon. The polymorphonuclear cells are regarded as the chief cells in tuberculous abscess. The lymphocytes are associated with repair and the monocytes with tubercle formation. In advanced cases with secondary infection and activity of the secondary invaders, the white blood cell count may increase to 10,000 or 15,000 with a polymorphonuclear increase. Pulmonary hemorrhage like any other hemorrhage usually increases the white blood cell count. There has been some effort to arrive at a monocyte-lymphocyte ratio that would be of prognostic value, that is, where the monocytes are proportionately increased with a decrease in the lymphocytes, the outcome is favorable; however, it would seem at present that this lacks corroboration. Blood platelets are usually increased in the active stages of the disease but, when the latter becomes generalized, they are decreased. It is very rarely possible to demonstrate by blood cultures the presence of tubercle bacilli in the blood stream despite the universal assumption that they must be there. The blood chemistry fails to show any changes distinctive of this disease. The subject of the sputum was discussed in detail, particular stress being laid upon the importance of frequent examinations. The tuberculosis sedimentation test must be recorded as a nonspecific reaction, as the normal sedimentation rate changes even in some physiologic processes. It does have a place, however, in differentiating activity or renewed activity in tuberculosis. As regards the stomach, acid-fast bacilli may be found after stomach lavage in tuberculous children. Positive findings in stomach lavage have severe prognostic significance. Guinea pig inoculation gives more positive results, both in stomach lavage and stools, than direct smears. In very young children examination of the stools may be the only way of demonstrating tuberculosis. The urine shows nothing significant.

"The Differential Diagnosis of Certain Lung Lesions in the Chest by Roentgen Examinations" was presented for Eugene P. Pendergrass by Philip J. Hodes. This paper was illustrated by a number of lantern slides depicting the characteristics of the various pulmonary affections under roentgenologic examination. The essayist stressed the value of repeated roentgenologic examinations, and the assistance they give in differential diagnosis was demonstrated.

"The Differential Diagnosis of Pulmonary Tuberculosis from the Clinical Standpoint" was discussed by Isadore Kaufman. This paper concerned itself chiefly with the ulcerative types of pulmonary tuberculosis. While diagnosis in the advanced stages of this disease presents no difficulties to any careful physician, it is important to remember that many people who have symptoms of advanced pulmonary disease are not suffering from tubercular infection. In differentiating such

conditions it is necessary to study at least 10 specimens of sputum within a period of 3 weeks. Often it is necessary to search for other organisms. Instances were cited where other pulmonary conditions were confused with tuberculosis. Hemorrhage and effusion are important factors in diagnosis. A history of recurrent attacks of so-called typhoid fever or malaria is presumptive evidence of tuberculosis. While the presence of tubercle bacilli in the sputum is conclusive evidence of the tuberculous process, other diagnostic factors should not be ignored. Auscultation with cough is important in demonstrating the presence of râles. Roentgen-ray examination is of the greatest value in diagnosis but is subject to certain limitations. Several instances were given. This paper was replete with the differentiation of conditions within the chest that are confused with pulmonary tuberculosis. Physical signs limited to the lower half of the chest should be considered as nontuberculous until tubercle bacilli are actually found.

In discussion, Robert G. Torrey stated that tuberculosis could be regarded as the reaction of our present urban population to the tubercle bacillus under our complicated living conditions. He referred to the varying degree of resistance shown by different types of people.

"Tracheobronchial Drainage in Nonspecific Infections in the Prevention and Cure of Bronchiectasis" was presented by Gabriel Tucker in an elaborate series of slides, and was discussed by Louis H. Clerf. Out of these presentations may be gleaned the fact that the removal of a foreign body from the lung does not always terminate the medical consideration of the case. Prolonged sojourn of the foreign body is often followed by bronchiectasis and also at times those of a short sojourn. Bronchial obstruction, partial or complete from any cause, if continued long enough, makes the patient a potential case of bronchiectasis. Many of the lung-tissue obstructions and lesions of the lung that do not conform to type should be considered from a bronchoscopic standpoint.

Dec. 11, 1935

SYMPOSIUM ON PEPTIC ULCER

"The Laboratory Findings in Peptic Ulcer" was presented by Robert A. Kilduffe, director of laboratories, Atlantic City Hospital, Atlantic City, N. J. He stated that it is only just to regard the laboratory procedures as phases of the examination, made to secure information as to the symptoms, which is not otherwise obtainable. Their value and significance differ widely with varying circumstances. They prove most important when it becomes obvious that such findings are not isolated, but rather indicate the trend of the phenomena under consideration. He stressed the value of gastric analysis but also stated that it is difficult to avoid the conclusion that it has proved of less value than anticipated.

Three factors appear most frequently—hyperacidity, hypermotility, and retention of gastric contents arising from pyloric spasm. By reason of the various factors which may and do exert influence upon such determinations, these cannot be relied upon to furnish a clinical and certain diagnosis. Of no less importance are the influences of dilution for the test meal and the effects of varying tests upon individuals, not only in different individuals but in the same individual at different times. In view of these facts it is difficult to avoid the conviction that it is not one particular determination that is of significance but rather the persistence and constancy with which the condition is encountered. Gastric analysis, therefore, cannot be entirely relied on to give

diagnostic and conclusive evidence of the presence or absence of gastric ulcer, although it may furnish data of value. Such evidence is as often secured by relatively simple procedures as by detailed and complicated examinations.

The influence of histidine upon gastric secretion was cited. He also referred to the importance of the recognition of occult blood in the feces and secondary anemia in gastric and duodenal ulcers. The technic for the determination of occult blood in the feces was given. In summarizing the value of laboratory study in peptic ulcer, he further stated that such studies derive their best and greatest value from their careful correlation with all the other findings, and may well follow rather than precede the other findings.

"Roentgen-Ray Findings" was presented by Willis F. Manges, who limited himself to a talk upon the stomach. He stated that the roentgenologist is not justified in making a diagnosis of peptic ulcer unless he can demonstrate a lesion repeatedly. One of the greatest difficulties encountered by the roentgenologist in a study of the stomach is the change that occurs in the mucous membrane particularly and the other coats of the stomach rather than in the stomach walls. In order to limit spasm, the patient should be given belladonna for a period of days unless he has very definite evidences of the physiologic action of the drug. Dr. Manges' talk was well illustrated by 20 lantern slides showing the several variations of the stomach picture in the diverse phases of stomach ulceration. Of particular interest was the variation of the picture according to the patient's position.

"The Medical Aspect of Peptic Ulcer" was presented by Martin E. Rehlfuss, who said in part: The cause of peptic ulcer is unknown. Most experimental work emphasizes the concrete importance of acidity. But the factor which first destroys the viability of the gastric cell is an unknown and elusive factor, as elusive as it was 30 years ago. In experimental work, it has not been possible to develop a bacterial strain which would continue to produce a typical ulcer. The surgeon operates not only to remove the lesion but also to control over-acidity. The history may be most suggestive, as it usually is in uncomplicated duodenal ulcer, and the physical signs may be suspicious, but modern diagnosis begins by demonstrating the lesion. Gastric analysis is a physiologic study. The greater frequency of duodenal ulcer as compared to gastric ulcer was mentioned. Gastric ulcer disappears far more readily under medical treatment than does duodenal ulcer, largely due to the promptitude with which the patient comes under treatment and the acceptance of intensive treatment. Gastric ulcer heals with great rapidity but also recurs with equal rapidity. Duodenal ulcer is usually a chronic lesion and requires 6 months at least and sometimes as much as 2½ years of treatment. Bed treatment is not sufficient for this type of case. The difficulties attendant upon the treatment of these cases were discussed in detail. The question of diet was considered. Reference was also made to the use of antacids and mucin. When peptic ulcer is treated by carefully rechecking and surveying the habits of life, etc., as is done in tuberculosis, far better results will be obtained than in the past.

In discussion, Truman G. Schnabel referred to the controversies of the past in the matter of etiology. He believes that hydrochloric acid is a big factor in the production of the condition. Reference was made to the work of the surgeons in treating these cases, but he also emphasized the fact that all patients whether treated

medically or surgically are compelled to follow a certain medical and dietary régime or recurrence will follow. Such patients must be put on frequent and repeated feedings and the diet should be well-balanced and made up of all types of food. In the main his contentions agreed with those of Dr. Rehfuess.

"The Surgical Aspect of Peptic Ulcer" was read by Donald Guthrie, Robert Packer Hospital, Sayre, Pa., who said that in no other field of abdominal surgery is it more important for the surgeon to approach the patient with an open mind. The man who applies gastro-enterostomy and a certain type of gastric resection to all types of gastric ulcer is bound to have unsatisfactory results. There is no type of operation applicable to all cases. A careful clinical follow-up of all postoperative cases would be a great aid in determining the choice of operation. It is important for all these patients to have periods of medical observation and treatment. Gastro-enterostomy is still a good operation for chronic duodenal ulcer, but cannot be accepted as a cure-all for all types. Operation should follow a reasonable amount of medical treatment, and the patient should be advised of the dangers and symptoms indicating massive hemorrhage and perforation. The technic of the Judd operation was described in detail. It prevents the formation of jejunal ulcer. Statistics were quoted showing the favorable results from this operation in the speaker's experience. The majority of peptic ulcer cases will eventually require operation. The danger of these cases becoming malignant was also mentioned. The importance of postoperative medical care over a long period was likewise stressed.

In discussion, Eldridge L. Eliason confirmed the surgical points emphasized by Dr. Guthrie. He also showed that the high-strung, irritable, "Cassius type" of individual, with hyperacidity, hypermotility, and a too-acid picture is a poor surgical risk. The facility with which the stomach reflects all sorts of remote conditions makes it necessary to go into elaborate studies of its physiology to determine the existence of actual disease. Perforation, hemorrhage, and obstruction provide the justification for the consideration of peptic ulcer surgically. These catastrophes are more frequent, according to the surgeons, than the medical men are prone to admit. Dr. Eliason made a plea for careful follow-up of all cases.

SAMUEL HORTON BROWN, *Reporter.*

WARREN

Dec. 16, 1935

Twenty-eight members were present. The secretary, Hamblen C. Eaton, gave a report of the meeting of the county medical society secretaries at Harrisburg.

Our members have been very much perturbed over the action of the newly appointed trustees of the Warren State Hospital. As has happened throughout the state, the boards of state hospitals have been changed and there have been many applications of a political nature for the positions in the control of such boards. Warren has been singularly free from favoritism in the past, and 25 years ago a faithful and capable superintendent lost his position because he would not permit certain practices of a graft-like nature to occur. When Dr. Harry W. Mitchell came to the institution he retained for himself the power to hire or dismiss the employees under him, and the trustees respected that right. Ira A. Darling, who has been on the service 23 years and who succeeded Dr. Mitchell as superintendent,

has labored earnestly to maintain the high rank the hospital holds and has the confidence of the medical profession and the public. He has been active in advancing scientific medicine as it relates to psychiatry, and there has been no criticism of his ability as an administrator or of his character as a man. He was dismissed by the new board, and the reasons for this summary action have not been made public. Robert H. Israel, who has been at the hospital 10 years, was appointed his successor.

The society after much discussion felt they were powerless, but a resolution was introduced and passed which reads as follows:

"The Warren County Medical Society voices its disapproval of the action of the Board of Trustees of the Warren State Hospital in summarily dismissing Dr. Ira A. Darling from the position of superintendent, which he has filled in such a capable manner."

Harold L. Foss, of the Geisinger Memorial Hospital, Danville, gave an address on "The Thyroid Gland." He discussed the various discoveries which led to the isolation of thyrotoxin and other iodine products from the gland. He presented a colored motion picture showing in detail the operation of thyroidectomy as practiced at the Geisinger Hospital.

Silk ligatures are used in preference to catgut for tying vessels, and skin clips, which are removed on the second or third day, are used. Just before the skin clips are inserted the patient is allowed to recover slightly from the anesthetic so as to open up any thrombosed vessels and thereby permit oozing vessels to be tied and so prevent secondary hemorrhage.

Dr. Foss claims that the mortality in exophthalmic goiter operations has been reduced so that it is less than 2 per cent.

Following the meeting a dinner was served, Roy L. Young, Paul and Adelaide Weston, and Edwin S. Africa acting as hosts.

MICHAEL V. BALL, *Reporter.*

YORK

Nov. 20, 1935

The meeting was held in York, with President Robert L. Ellis in the chair. James H. McKee, of Philadelphia, gave an address on "The Common Infectious Diseases of Childhood, Including Treatment."

Dr. McKee said in part: Diphtheria and the respiratory diseases will not be discussed.

Measles.—The etiologic factor is probably a filtrable virus. Experimental measles has been produced artificially in man before eruption appears. Humans under age 6 months are immune from measles. Koplik's spots and prodromes were mentioned. The cervical lymph-node involvement is not marked or is entirely absent; the roentgen-ray examination shows lung involvement during some stage of the disease; the bowels are usually loose, and gurgling is heard; Ehrlich's reaction is present; albumoses are absent. Leukopenia complications may be present and serious; under age 3 they are often fatal, and under age 5 they are usually serious. Latent tuberculosis in the chest may become active. The treatment consists of prophylaxis, hygiene, and the prevention of complications. Convalescent or adult blood is useful up to 4 days before eruption occurs; placental extracts are of some use. In the unprotected adult measles is a serious disease. Raw recruits should be exposed before being taken into camp. In school a census should be taken of all children having "colds." Two-

room management is ideal, with moisture in the atmosphere. Transfusion of whole or citrated blood is indicated in hemorrhagic cases. There should also be rest, cold boric-acid compresses to the eyes, 1 per cent yellow oxide of mercury ointment to the lids, ephedrine in the nose, 1 per cent phenol with borate of soda for itching, cod-liver oil when appetite returns, and fresh air during convalescence.

German Measles.—The cause is unknown, but probably is a filtrable virus which affects the skin, mouth, nose, and lymphatic nodes posterior to the posterior belly of the sternocleidomastoid muscle. There is a morbilliform rash with longer incubation than measles. Prodromes are slight or absent. If there is fever, a complicating severe tonsillitis may be the cause. There is usually a slight fever for about 2 days only. The rash is rose pink. Enanthema occurs on the palate. The patient should remain in bed for one week and in the room for another week. The diet should be the same as for measles, with tonic treatment for one month.

Scarlet Fever—There are 2 etiologic factors involved: Invasion with a specific hemolytic streptococcus and the patient's response to a specific toxin, also a filtrable virus. The skin lesion is a definite dermatitis, and the tonsils or fauces are often seriously implicated. Complications are glomerular nephritis and middle ear disease. In recent years attacks have been much milder probably because children are more commonly tonsillectomized. Incubation usually lasts from 3 to 7 days or longer. The symptoms are any attack of tonsillitis with vomiting, punctiform enanthema on soft palate, rash which may appear first on the face, and circumoral pallor. The rash may spread to the trunk, upper arms, and thighs; it is punctiform and deep dusky red. Pastia's sign is often noted on the folds of the elbows and groin. The vasomotor sign (Dochez's) to convalescent serum or Dochez's serum is pathognomonic. The soles and palms are mottled, desquamation occurring later. The tongue is coated a heavy white and is strawberry-like. These are the severe, septic, toxic, and anginoid types.

Renal lesions such as toxic or diffuse nephritis occur generally in the third to fourth weeks of the disease. There is often leukocytosis with eosinophilia, the polynuclear cells predominating. Prevention consists of vaccination, Dick-testing before the child enters school, and 5 inoculations of Dick toxin at weekly intervals with occasional severe reactions. Dochez's or convalescent serum is not recommended.

Treatment: Keep the patient in bed 4 weeks.

Diet: No milk as long as there is fever or sore throat; no animal meat or broths should be given during all 4 weeks; eggs may be allowed in the third or fourth week.

In postscarlatinal nephritis serum may be used if sepsis and toxicity are marked. The nose is treated with a mixture of Lugol's solution and glycerin with guaiacol, 5 drops to the ounce. Carbolic lotion is applied to the skin and antiseptic ointment for desquamation. Open a bulging ear drum early.

Chickenpox.—This is a mild disease but it has a long list of complications such as intertrigo, abscesses, pyemia, thrombosis, pneumonia, and those incident to scratching the rash. Keep the patient in bed one week and in the room another week. There should be no meats or broths in the diet. Skin lotions are useful.

Mumps.—This disease is caused by a filtrable virus. The lobe of the ear is the center of swelling; the orifice of Steno's duct stands out from the surrounding mucous membrane and feels boggy on palpation. Pan-

creatitis, orchitis, or purulent parotitis may be complications or become sequelae. Exclude acid juices at first. The toilet of the dry mouth is important, some slightly antiseptic solution being used every 3 hours. An ointment containing 25 grains of lead iodide with 5 per cent guaiacol and 10 per cent ichthyol in lanolin should be applied locally twice daily and properly maintained with a well-fitting cap about the jaws to cause pain and swelling to subside rapidly.

Whooping Cough.—The gross pathology of its complications is known. It often excites a latent tuberculosis in children. Further, every upper respiratory infection following an attack may light up the old paroxysmal cough. Danger to others is in the early stage. The incubation is 10 days. The cough may vary from a hack to a cough of the paroxysmal type, usually worse at night. The plate method is recommended for diagnosis.

Some form of vaccine is recommended for treatment. Sauer's is much heralded at present. The course of the disease is from 28 to 30 days. There is danger of pneumonia and hemorrhage. Belladonna, antipyrine, and bromides should be given, and occasionally luminal for night rest. An elastic belt should be applied to the abdomen when the cough is severe. Ether by rectum is better than by intramuscular injection. Keep children in the open, and have them avoid foods causing cough.

Vaccination in Children.—For smallpox it should be done before teething; for diphtheria, in the second 6 months; and for whooping cough if that disease is known to exist in the community.

In discussion, Harris R. Lecombe, York, asked if the author's patient with septic sore throat got well. In the discussor's case, which followed an infected tooth, the patient died. He also asked if phenol, when dissolved in alcohol or glycerin, is not more readily absorbed and perhaps more dangerous if not well diluted. Joseph C. Atkins, Red Lion, asked how early to start immunizing contacts in pertussis, and at what age after birth to immunize. Edward W. Stick, Hanover, asked if appendicitis may eventuate in measles at times. Benjamin A. Hoover, Wrightsville, asked how to give the doses of Sauer's vaccine in pertussis.

Dr. McKee, in closing, stated that he has seen "tippet-neck" once in the anginoid type of scarlet fever. This was fatal. Phenol has a cooling effect and he has not seen any bad results from its application. He has seen appendicitis with measles. Babies in contact with whooping cough should be immunized, for pertussis in babies lasts only about 2 days. Sauer's vaccine is given as follows: Ten billion microorganisms in one arm, and a week later 10 billion in each arm. Some severe reactions occur. Immunity lasts about 2 years.

Dec. 18, 1935

James F. Wood, Mt. Wolf, president pro tem., presided.

Henry K. Gaskill, Philadelphia, spoke on "Ringworm Infections." He said in part:

At present athlete's foot is a fashionable disease; the public has a fear of skin diseases and it does not like the word ringworm. Ringworm is very contagious, not unclean, and is quite common.

Types of Ringworm.—It is annular on the scalp and may be nodular on the face; it attacks the nails of fingers and toes, the bearded region, the axillary region, and the genitocrural region.

Sources.—It is acquired by direct contact, generally an intermediary contact such as towels and showers; it is

rare in women. Reinfection is very serious and may occur from an entirely new cause, generally because the area infected has not been cured.

Laboratory findings at times are of inestimable value; the Trichophyton test plus clinical findings establishes the diagnosis. Preventive inoculation of the Trichophyton is not successful. Prepuberal cases on the scalp will always get well. Various epidemics of ringworm were reported by the speaker.

Treatment.—Roentgen-ray therapy is an adjunct; tinea tonsurans, which is most resistant, is benefited markedly by roentgen ray. Sulphur, salicylic acid, and resorcin are helpful. At times it may be necessary to denude the area treated. Thallium acetate is a very dangerous depilatory and is very toxic by mouth; chrysarobin may be used on other parts of the body but not on the face; trichloroacetic acid may be applied locally in full strength except on the scalp where it is neutralized with water and applied to a small area at a time. The physician must combat heat and moisture where the infection occurs and the Kleinert shield, napkin, or suspensory should be used. On the scalp use 12 per cent chrysarobin, and on the body 3 to 4 per cent; also zinc stearate and Balsam of Peru powder may be used.

Face.—Deep-seated lesions are rare. Use roentgen ray for the bearded region; on tinea circinata of the face, use resorcin, trichloroacetic acid, or milder remedies.

Nails.—Roentgen ray is of some value, but file the nails short and touch the matrix deeply with pure

salicylic acid at least twice daily; keep the nails soft. It is not so prevalent on the nails of the feet but occurs between the toes, and here it should be differentiated from eczema. Separate parts with cotton pledget and apply salicylic acid powder or zinc stearate and Balsam of Peru powder. Roentgen-ray treatment is not so successful, for it is difficult to apply. Two remedies are of greatest value: Liquid trichloroacetic acid on the circinate variety used moderately in the groin, and between the toes, and chrysarobin on the scalp and on the groin.

In discussion, James F. Wood, Mt. Wolf, asked if a physician should use any ointment or grease when using roentgen-ray treatment. Benjamin A. Hoover, Wrightsville, said that acetic acid, when applied, will form a creamy exudate and will cure many cases; calomel powder is used for infected nails, and hypochlorite of soda solution for ringworm of the feet. Joseph C. Atkins, Red Lion, asked the speaker how he applied trichloroacetic acid. Louis S. Weaver, York, asked why prepuberal cases responded. George E. Martz, York, asked if a commercial mercuric nitrate ointment is useful. Harris R. Lechrone, York, has used a gasoline bath for foot infections.

Dr. Gaskill, in closing, said that it is unknown why ringworm disappears at puberty. Trichloroacetic acid is used full strength for 40 to 60 seconds and should be neutralized with water. This leaves a white mark which fades in 20 to 30 minutes. Mercuric nitrate ointment is hardly strong enough and certain proprietary preparations are not bactericidal enough to be helpful.

H. MALCOLM READ, *Reporter.*

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

February brings with it the mid-year board meeting and, too, the thought that the remaining working months are few. Mrs. Herbert E. Woelfel, of Pittsburgh, is formulating plans for the State Convention. May each auxiliary president think then in terms of her year's report, using the coming days to their fullest.

In October your president sent to each county president "Suggestions for 1935-1936." Did you find one or more of these that would catch the spirit and the coöperative effort of your members? Every auxiliary may have a part in at least 2—"Medical Benevolence" and "Increase of Membership"; the former still needs your loyal support, as in other years, and the latter, your continued effort.

One of the president's objectives is "A Health Institute in Every County." Have you had one, or are you planning for one? Pennsylvania was

the first state at the National Convention to report health institutes.

Pennsylvania's influence in this direction has spread to the Pacific coast, for recently in Oakland, California, was held a 2-day session with 6000 attending.

The State Auxiliary Public Relations Committee is doing a comprehensive piece of work. A well-schooled auxiliary reaches out into every phase of woman's organization work. The doctor's wife takes a part, and generally a prominent part, in public welfare, parent-teacher work, and federated club activities. Since this is true, a helpful service could be performed if every auxiliary member would seek and secure the opportunity to safeguard the programs of these other groups, by keeping out faddists and securing the service of reputable and qualified speakers, who can bring truthful and instructive messages, preferably medical men, with sound

ethical principles, who can present the facts acceptably.

From our national president, Mrs. Rogers N. Herbert, has come the following request: That your president help in ascertaining the number of auxiliary women who are members of lay organizations and the number that are serving lay organizations officially. This information will serve a great purpose in strengthening our value and our work with the medical profession.

Send the desired information at once to your county president, with your name and with the names of the organizations of which you are a member, other than the auxiliary. May Pennsylvania, to a woman, respond to this request.

Visits to Stroudsburg and to Scranton again prove to your president the kinship of the auxiliary.

MRS. W. BURRILL ODENATT.

COUNTY AUXILIARY REPORTS

Allegheny.—The auxiliary held its annual benefit party in the William Penn Hotel, Pittsburgh, on Dec. 2. This was one of the most unique affairs that has been presented, and a sum of more than \$340 was raised for the State Society Benevolence Fund.

There were readings and vocal selections. Chances were sold for a painting donated by Mrs. James I. Johnson, our past state president. The entire sum is for the Benevolence Fund. One of our own members, Mrs. Clarence H. Ketterer, is the winner. Refreshments were served.

Center.—The meeting of the auxiliary was held at Bellefonte, Dec. 4. The auxiliary held its fall meeting at the Nittany Country Club, Nov. 12. Luncheon was served. A report of the annual convention of the State Society Auxiliary held at Harrisburg was given by Mrs. John V. Foster.

Mrs. David W. Thomas, state president-elect and chairman of district councilors, gave a talk on the activities of the auxiliaries throughout the state.

The following committees were appointed: Publicity, Mrs. Melvin Locke; public relations, Mrs. Paul M. Corman; *Hygia*, Mrs. Charles H. Light; archives, Mrs. David Dale; legislative, Mrs. Enoch H. Adams.

Delaware.—On Dec. 12, the auxiliary held a Christmas party. Each member present received a gift which was drawn from a generous pile at the foot of a decorated tree. Cards were the chief entertainment of the evening, but all enjoyed the auction of a plum pudding, the proceeds of which were donated to the Medical Benevolence Fund.

Mrs. William B. Evans entertained the executive board of the auxiliary at luncheon on Dec. 20. At this meeting the invitation from the medical society to attend the annual dinner in January was accepted.

Fayette.—The auxiliary, at its meeting held Dec. 6 in the White Swan Hotel, witnessed an interesting dramatization of the 1935 Christmas Seal, presented under the auspices of the County Tuberculosis Association. Mrs. Ralph L. Cox, president, presided. The auxiliary authorized the purchase of a \$10 Health Bond. Edward L. Sittler, Jr., local campaign chairman of the Tuberculosis Association, was master of ceremonies

and gave an introductory talk which preface the presentation of the scenes representing the picturesque Christmas Seal. A dramatic interpretation of "The Funeral of Mr. Tubercle Bacillus" was given by a member of the auxiliary.

Indiana.—The meeting of the auxiliary, held at Indiana, Dec. 12, was the annual Christmas party, and was held at the home of Mrs. Benjamin F. and N. Marguerite Coe. A musical program was presented. There was also a Christmas play depicting how difficult conditions are today. A buffet luncheon was served by the hostesses: Mrs. George C. Martin, Mrs. Frank B. Stevenson, Mrs. Stewart F. Brewen, and Mrs. Joseph C. Lee.

Luzerne.—On Dec. 18, the auxiliary held its meeting at the Woman's Clubhouse, Wilkes-Barre. Mrs. Clarence W. Prevost presided. Mrs. Augustus S. Kech, of Altoona, state legislative chairman, was the guest speaker, and her subject was "Legislation in Connection with Medicine." Mrs. Kech is of the opinion that state medicine in some form or other is bound to come, so she urged us to be awake to the fact that the doctors must be preparing some concise and advantageous plan to offset any bill that may injure the status of the practice of medicine in Pennsylvania. There was a musical program.

The executive board entertained Mrs. Kech at a dinner at the Westmoreland Club before the meeting.

Lycoming.—The meeting of the auxiliary was held at the Woman's Club, Williamsport, Dec. 13; the president, Mrs. James H. Burrows, presided. It was approved that the auxiliary subscribe for the *Quarterly News Letter*.

Mercer.—The auxiliary met Nov. 13 with the doctors at Grove City, at the home of Dr. and Mrs. James H. McClelland, as guests of the Grove City members. Supper was served. There were also readings and vocal and instrumental selections. A report showed that 18 children had been equipped with glasses. The fund for this purpose was recently increased to the extent of \$101.65, received from the card party which was given at Sharpville in the St. Bartholomew's church auditorium.

On Dec. 11, the auxiliary met with the doctors as guests of the Buhl Hospital in Sharon. Dinner was served. Dr. Samuel H. Sedwitz, of Youngstown, O., gave "A Review of the More Common Peripheral Vascular Diseases." Christmas carols were sung by a group of high school students and appropriate readings were given. It was decided to give Christmas flowers to our honorary members; there are 2 honorary members and 61 active members. As this was the Christmas party, the evening was spent in a social manner.

Montgomery.—The auxiliary held its meeting on Dec. 4 in the form of a bridge tea for the benefit of welfare. There were 21 tables. Refreshments were served.

Philadelphia.—The auxiliary held its regular Board of Directors' meeting Jan. 7. The Public Relations Committee reported that 16 Christmas baskets were prepared and delivered through the Aid Association to the list of very needy physicians' widows and families. Mrs. John B. Lowmes reported that 130 nightingales were made by the auxiliary and distributed on Christmas morning to the female patients in the tuberculosis

wards of the Philadelphia General Hospital. The Juniors distributed 50 toys to children in the Philadelphia General Hospital for Christmas. The Ways and Means Committee has held 4 card parties, one dance, and the annual White Elephant Sale for the Aid Association.

Mrs. Milton F. Percival gave a Christmas tea at her home for the wives of the visiting physicians at the Graduate School of Medicine. Mrs. W. Burrill Odenatt, State Auxiliary president, was a guest of honor. Mrs. David W. Thomas, of Lock Haven, State Auxiliary president-elect, was also an honored guest.

The membership committee reports 417 members to date.

The auxiliary has appropriated the following: Benevolence Fund, \$450; Red Cross, \$50; Community Chest, \$100; State Aid, \$100; Christmas Cheer, \$50; Salvation Army, \$25; Student Loan Fund, \$100.

Medical News

Engagements

MISS HARRIET E. SCHINDLER and Dr. Edwin R. Anderson, both of Warren.

MISS ELIZABETH BRITZ and Dr. William E. Krewson, 3d, both of Philadelphia.

MISS DOROTHY BOWMAN GLENN, daughter of Dr. and Mrs. Edwin A. Glenn, of Berwick, and Mr. J. Stokes Clement, Jr., of Jenkintown.

MISS MARGARET JANE MEANOR, daughter of Dr. and Mrs. William Craig Meanor, of Sewickley, and Mr. William Gregory Pierce, of Ardmore.

Marriages

MISS ANNA M. FEENEY to Dr. Walter R. Long, both of Philadelphia, Jan. 9.

MISS HELEN SMITH, of Watsontown, to Dr. Walter Kotanchik, of Shamokin, recently.

MISS RUTH ELIZABETH HOLMES, of McKeesport, to Dr. Boyd Harden, of Pittsburgh, Oct. 26.

MISS MARY MEREDITH WHITTAKER, of Memphis, Tenn., to Dr. Nicholas Gotten, of Philadelphia, Nov. 6.

MISS HELEN BUCKLEY BLAND, daughter of Dr. and Mrs. P. Brooke Bland, of Bala, to Mr. John Hamilton Coulter, of Westfield, N. J., Jan. 11.

Deaths

JANE KETCHUM WILDRICK BANES, Damascus (Wayne County); Woman's Medical College of Pennsylvania, 1909; aged 59; died at Warwick, N. Y., Jan. 5. She was a member of the board of the Carbondale (Pa.) General Hospital. She is survived by a daughter, her father, and a sister. She was a member of her county and State medical societies and the A. M. A.

JOHN HAGERTY BISHOP, Carversville (Bucks Co.); Georgia College of Eclectic Medicine and Surgery, 1881; aged 89; died Dec. 25, in the Doylestown Hospital from injuries received from a fall. Dr. Bishop was the last of the members of the General Bodine Post, No. 306, G. A. R. He was buried with military honors under the auspices of the American Legion of Doylestown. Dr. Bishop enlisted at the age of 16 in Company F, 31st Pennsylvania Volunteers, and later reenlisted in 1864 in Company E, 196th Regiment, Pennsylvania Volunteers. He is survived by a daughter.

MR. EDWARD D. BRITT, the father of Dr. Albert J. Britt, Philadelphia; aged 67; died Dec. 27.

WILLIAM BURDICK, Baltimore, Md.; University of Pennsylvania School of Medicine, 1907; aged 65; died in Baltimore, Dec. 22. Upon his graduation in medicine he became engaged in social service work in Philadelphia and in 1911 moved to Baltimore where he was engaged in public health work. He was a Fellow of the American Medical Association. He is survived by his wife and 3 daughters.

NATHAN PORTER COLWELL, Wilmette, Ill.; Rush Medical College, University of Chicago, 1900; aged 65; died Jan. 6 from cerebral hemorrhage. Dr. Colwell was appointed secretary of the Council on Medical Education and Hospitals of the American Medical Association in 1906 and served for 25 years in this capacity. During this time he was responsible to a large extent for the reorganization of the medical schools of the United States and Canada and medical education in general in these 2 countries. He was a Fellow of the A. M. A.

CARM Y. DETAR, Oil City; University of Pittsburgh School of Medicine, 1892; aged 65; died Nov. 28. Dr. Detar was a member of his county and State medical societies and a Fellow of the A. M. A.

JOSEPH CANNON ELLIS, Philadelphia; Jefferson Medical College, 1888; aged 75; died Jan. 4, of pneumonia. Dr. Ellis was born in Virginia and practiced for a time in Philadelphia and Washington. He was also a graduate of Washington Theological Seminary and was recently connected with Trinity Methodist Church, Philadelphia. He is survived by his wife.

ALBERT A. GHRSKEY, Philadelphia; University of Pennsylvania School of Medicine, 1880; aged 76; died Dec. 27. Dr. Ghiskey was born in Philadelphia, served his internship at the Children's Seashore Home at Atlantic City, and later joined the staffs of the bacteriologic departments of the Pennsylvania Hospital and the Episcopal Hospital, Philadelphia. He is survived by 2 brothers and a sister.

JOHN FRANCIS GORMAN, Philadelphia; Jefferson Medical College, 1906; aged 55; died Dec. 26, after an illness of 2 years. Dr. Gorman served his internship at St. Mary's Hospital. He was a member of the American Legion, and a member of his county and State medical societies and the A. M. A. He is survived by 3 children.

THOMAS FISHER HEEBNER, Philadelphia; University of Pennsylvania School of Medicine, 1883; aged 75; died Dec. 26, of chronic nephritis and uremia. Dr. Heebner was consulting physician for the Reading Railway before his retirement 5 years ago. He was in charge of the medical unit of the Reading Railway at Pottsville until he was brought to Philadelphia by the company as a consultant 7 years ago. He is survived by 3 daughters and a son.

DANIEL HIESTAND, Allentown; University of Pennsylvania School of Medicine, 1881; aged 79; died Dec. 30. Dr. Hiestand was a native of Northampton County, and was Allentown's oldest practicing physician. He is survived by his wife and 2 daughters.

MR. EDWARD HOPKINSON, of Merion, father of Dr. Richard Dale Hopkinson, of Jenkintown; aged 85; died Dec. 26.

DANIEL ROBERT HUGHES, Lewistown; Temple University School of Medicine, 1927; aged 35; died Jan. 5.

JAMES ALEXANDER IRWIN, Philadelphia; Jefferson Medical College, 1891; aged 84; died Jan. 6, from prostatic carcinoma. Dr. Irwin was born in Bushmills, Ireland, Mar. 11, 1851, coming to the United States when age 29. For a number of years he was associated on the gynecologic staff of the Jefferson Hospital. He was a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by a brother, Dr. William Irwin, of Philadelphia.

AUGUSTUS BATON KEHRER, Philadelphia; Hahnemann Medical College of Philadelphia, 1880; aged 79; died Oct. 25.

IRWIN Z. KINSEY, Souderton; Jefferson Medical College, 1926; aged 46; died Dec. 10. Dr. Kinsey was a member of his county and State medical societies and a Fellow of the A. M. A.

JOHN KAYSER KNORR, Ventnor, N. J.; Jefferson Medical College, 1867; aged 90; died Dec. 25. Dr. Knorr retired from practice some years ago. He practiced medicine in Philadelphia for about 10 years when he entered the drug business. He is survived by 2 daughters and a son, Dr. John K. Knorr, Jr., of Wayne, Pa.

HARRY E. KOONS, Philadelphia; Southern Homeopathic Medical College, Baltimore, 1897; aged 63; died Oct. 26.

CHARLES G. LOOSE, Reading; University of Pennsylvania School of Medicine, 1868; aged 89; died Dec. 7. Dr. Loose was a member of his county and State medical societies and the A. M. A.

FRANCIS H. MCCASKEY, Rochester; University of Pittsburgh School of Medicine, 1901; aged 64; died Dec. 24. Dr. McCaskey was a member of his county and State medical societies and a Fellow of the A. M. A.

JAMES M. NEALON, Plymouth; College of Physicians and Surgeons of Baltimore, Md., 1902; aged 59; died Jan. 9 at Mercy Hospital, Wilkes-Barre, following an emergency abdominal operation. Dr. Nealon was born in Plymouth, Pa., a son of the last surviving Confederate veteran in that part of the country. He was educated in the Plymouth schools and Wyoming Seminary, and upon graduating in medicine began practice at Plymouth. He became head of the radiologic department of the Mercy Hospital 20 years ago. Dr. Nealon in recent months was serving as registrar of vital statistics in Plymouth. Dr. Nealon was a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by his wife and 2 sons: James R. Nealon, M.D., practicing in Plymouth, and Eugene T. Nealon, D.D.S.

JACOB DARWIN PINES, Philadelphia; Hahnemann Medical College and Hospital, Philadelphia, 1892; aged 75; died Jan. 7, from coronary occlusion. Dr. Pines was born in Perry County, Pa., Dec. 3, 1860, and was graduated from Oberlin College, Oberlin, O. He taught school for 10 years and then began the study of medicine. He has practiced in Philadelphia since graduation. He is survived by his sister.

STUART CALVIN RUNKLE, Philadelphia; Jefferson Medical College, 1888; aged 74; died Dec. 29, after a month's illness. He was a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by 2 sons, one of whom is Dr. Stuart C. Runkle, Jr., of Philadelphia.

JOSEPHINE LINDE SWALM, wife of Dr. William A. Swalm, of Philadelphia; aged 40; died in the Atlantic City (N. J.) Hospital, Dec. 19, from pneumonia.

CRAWFORD LEROI THOMPSON, Pittsburgh; Western Pennsylvania Medical College, Pittsburgh, 1896; aged 60; died Oct. 14.

JOHN LEWIS VAN TINE, Philadelphia; Hahnemann Medical College and Hospital, of Philadelphia, 1893; aged 68; died Jan. 14. Dr. Van Tine was born in Oberlin, O. He was a member of the American Institute of Homeopathy and was associate professor of materia medica in the Hahnemann Medical College of Philadelphia. He is survived by his wife and a son, Edward P. Van Tine, M.D., who is practicing in Philadelphia.

PAUL HARDTMAYER WALTER, Bethlehem; Jefferson Medical College, 1913; aged 48; was killed, Nov. 16, when his automobile collided with a trolley car. Dr.

Walter was a member of his county and State medical societies and the A. M. A.

EMMETT PATRICK WHALEN, Indiana; St. Louis University School of Medicine, 1932; aged 28; died Nov. 8, of peritonitis, following a perforated gastric ulcer. He was on the staff of the Indiana Hospital.

RUTLEDGE THORNTON WILTBANK, Philadelphia; Hahnemann Medical College, Philadelphia, 1891; aged 83; died Dec. 27. Dr. Wiltbank was born in Lewes, Del. He was chief resident physician at the time of the founding of Mt. Sinai Hospital, and for more than 25 years was associated with the Bureau of Health. He is survived by his wife and 3 sons.

Miscellaneous

DR. BENJAMIN F. GRIFFITH, of Kingston, has been elected consultant orthopedic surgeon to the Berwick Hospital.

DRS. OTIS S. BROWN, James R. Durham, LeRoy E. Chapman, Edwin D. McKee, all of Warren, left for Florida in December.

DR. ERWIN S. BRIGGS, of Warren has discontinued his work as physician to the Children's Home, and Dr. Paul B. Stewart was appointed to succeed him.

BRIG. GEN. MATTHEW A. DELANEY, who was assistant surgeon general of the Army, formerly in charge of the Carlisle (Pa.) Barracks, retired Nov. 30, 1935, on his own application.

DR. RUSSELL W. JOHNSTON, Selinsgrove, has been appointed visiting surgeon with a 3 months' service on the staff of the Mary M. Packer Hospital, Sunbury, to succeed the late Dr. Joseph W. Schoffstall.

DR. H. MALCOLM READ who has served so faithfully as reporter for the York County Medical Society has tendered his resignation. The JOURNAL office desires to express grateful appreciation to Dr. Read for the altruistic reportorial work which he has done.

THE PENNSYLVANIA HOSPITAL, Philadelphia, has been awarded the \$54,369 residuary estate of Mrs. Hattie Grace Copp by the Orphans' Court. The fund is to be used for research in memory of Mrs. Copp and her husband, Dr. Owen Copp, who for a number of years was superintendent and medical director of the Pennsylvania Hospital for the Insane.

DR. SAMUEL R. SKILLERN, JR., associate professor of rhinology, Graduate School of the University of Pennsylvania, while hunting in Virginia, received a puncture wound in his left hand from a broken leg bone of a rabbit. He has been confined to bed with tularemia since December 1.

THE ANNUAL BANQUET of the Medical Alumni Association of the Medico-Chirurgical College was held at the Benjamin Franklin Hotel, Philadelphia, Nov. 21, with 202 members in attendance. Dr. Ralph H. Spangler was toastmaster. Dr. Jesse Lynn Mahaffey, commissioner of health of New Jersey, was elected president. Dr. J. Evans Scheehle, Secretary of Welfare of Pennsylvania, was a guest of honor.

A RULING WAS RECENTLY handed down by the Orphans' Court giving to the University of Pennsylvania immediate control of a bequest amounting to about \$2,000,000 from the estate of the late George Leib Harrison, retired chemical manufacturer, who died in March, 1935. The money will be used to endow the "George L. and Emily McMichael Harrison Memorial Fund for General Surgical Research." The bequest is subject to 4 annuities.

PA. OR PENNA.—The following item is culled from the Monthly Bulletin of the Department of Public Instruction of Pennsylvania:

In response to an inquiry concerning the correct ab-

abbreviation for Pennsylvania the following answer was given by Superintendent Ade:

Some time ago the postal authorities urged the use of Penna. because Pa. sometimes is confused with Ia. and Va., and Penn. with Tenn. The Capitol Hill usage is "Pa."

THE TWENTIETH ANNUAL SESSION of the American College of Physicians will be held in Detroit with headquarters at the Book-Cadillac Hotel, March 2-6, 1936. Dr. James Alex. Miller, of New York City, is president of the College. Dr. Walter B. Cannon, professor of physiology at Harvard University Medical School, will deliver the annual Conyocation Oration on "The Role of Emotion in Disease." Dr. Miller's presidential address will be on "The Changing Order in Medicine."

SIXTY BEAVER COUNTY PHYSICIANS paid tribute to Dr. Harry W. Bernhardt, Rochester, on Dec. 16, at a surprise testimonial dinner given at the Beaver Valley Country Club in celebration of Dr. Bernhardt's fiftieth birthday and his completion of 25 years of medical practice in Beaver County.

Dr. Bernhardt is chief of the surgical staff at the Rochester General Hospital and a member of the surgical staffs at the Beaver Valley and Providence hospitals, past president of the Beaver County Medical Society, and past president of the Medical Board of the Rochester hospital.

MEDICAL FILM LIBRARY STARTED IN LONDON.—When English doctors need expert guidance for particular problems they may now consult films to see how specialists treat similar cases. A cine-medical library, recently established in London, has collected camera records made in hospital operating rooms and laboratories during treatment of diseases, and keeps them on file for the use of qualified medical men.

Medical students may now have their lectures illustrated by animated drawings that show how illness affects the human organism and how remedies perform their work. Delicate surgery too rapid to follow in the operating room is shown in slow-motion films.

A MEETING OF THE Pittsburgh Surgical Society was held at the Pittsburgh Hospital, Dec. 13. A clinical program was presented by members of the staff, with presentation of cases of the following subjects: (a) Appendicitis, (b) Chemical Sterilization of Catgut, by John D. Singley; (a) Drainage in Gallbladder Operations, (b) Echinococcus Cysts of Bones, by John W. Dixon; (a) Treatment of Hip Fractures, (b) Uses of Radiolatum, by William B. McKenna; (a) Treatment of Wrist Drop After Irreparable Damage to Radial Nerve, (b) New and Efficient Methods in the Treatment of Indolent Ulcers, Especially the Syphilitic and Varicose, (c) Traumatic Aneurysms of Right Extremity, by John W. Stinson; (a) Cervical Rib and Its Treatment by Anterior Decompression, (b) Thyroglossal Duct Cyst, by Theodore S. Swan; Superior Hypogastric Sympathectomies, by T. Kevin Reeves; and Manipulation of the Knee Joint, by John P. Griffith.

A FEATURE OF THE forty-fourth annual meeting of the Pennsylvania Tuberculosis Society to be held in Allentown at the Americus Hotel, on Feb. 25 and 26, will be a medical session at 4 p. m. on Feb. 25. The subject will be "Surgery in the Treatment of Tuberculosis."

This session for physicians has been arranged in cooperation with the Lehigh County Medical Society, and Dr. Charles R. Fox, president of that society, will preside.

The subject and speakers are arranged as follows:

"Indications for Pneumothorax Treatment," Dr. William Devitt, medical director of Devitt's Camp.

"Pneumolysis," Dr. Jacob W. Cutler, Henry Phipps Institute, Philadelphia.

"Indications for Thoracoplasty," Dr. John B. Flick, Philadelphia.

Other sessions of the tuberculosis conference will be devoted to "Tuberculosis Prevention and Control in In-

dustry," and "Responsibility of School Authorities in Tuberculosis Control"; there will also be a session for nurses.

PHILADELPHIA'S DEPARTMENT OF HEALTH.—The new city administration of Philadelphia was inducted into office Jan. 6. Newly appointed officers include William C. Hunsicker, M.D., as Director of Health. Dr. Hunsicker has served for a number of years as State senator, and has resigned from this position to accept the appointment in the Philadelphia Department of Health. Dr. Hunsicker was graduated from the Hahnemann Medical College of Philadelphia, in 1895, and is associate professor of urology in that institution. The assistant director of health is Dr. Alfred F. Allman, a graduate of Jefferson Medical College, 1895. Dr. Allman was associated for some time in the department of health and at one time served in the old city councils. The following have been appointed members of the board of health to fill the vacancies caused by the death of Dr. Ellwood R. Kirby and the retirement of Dr. James M. Anders: Dr. Joseph C. Doane, medical director of the Jewish Hospital, Philadelphia, and Dr. Martha Tracy, dean of the Woman's Medical College of Pennsylvania. Dr. Hunsicker constitutes the third member of this board.

THE MEETING OF THE State Association of Tumor Clinics was held at the Harrisburg Hospital, Harrisburg, Pa., Nov. 14, under the directorship of Dr. Harvey F. Smith.

The Tumor Clinic group as well as the State Society Cancer Commission members were guests at lunch by invitation of the Harrisburg Hospital. It was decided that the main objective this year was to "Carry the message to Garcia,"—Garcia, the *nom de guerre* of the family and country doctors; that the 9 members of the commission each be responsible for a campaign to carry propaganda to the physicians as well as laymen in the districts assigned to them. The districts are as follows:

William L. Estes, Jr.—Lehigh, Schuylkill, Pike, Wayne, Northampton, Carbon, Monroe, Luzerne, Lackawanna.

George W. Hawk.—Tioga, Bradford, Sullivan, Wyoming, Columbia, Lycoming, Montour, Northumberland, Potter, Union, Snyder, Susquehanna.

Wm. H. Howell.—Blair, Bedford, Huntingdon, Fulton, Mifflin, Franklin, Juniata, Perry, Cumberland, Adams.

Stanley P. Reimann.—Delaware, Chester, Montgomery, Lancaster, Dauphin, Lebanon, Berks, York, Bucks.

Harry W. Bernhardt.—Erie, Crawford, Mercer, Venango, Lawrence, Beaver.

Walter M. Bortz.—Butler, Allegheny, Washington, Greene, Fayette.

Albert J. Bruecken.—Westmoreland, Somerset, Indiana, Cambria.

Samuel J. Waterworth.—Warren, McKean, Forest, Elk, Cameron, Clinton, Jefferson, Center, Clarion, Clearfield.

Book Review

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

THE NATIONAL FORMULARY, Sixth edition. National Formulary VI. N.F. VI. Prepared by the Committee on National Formulary by authority of the American Pharmaceutical Association. Official from June 1, 1936. Published by the American Pharmaceutical Association, Washington, D. C., 1935.

The outstanding features of the sixth edition of the National Formulary may be summarized as follows:

1. The admission of monographs for drugs and chemi-

(Concluded on page xiv.)

CANNED FOODS AND THE PUBLIC HEALTH

I. The "Ptomaines"

• Many requests received for further information on canned foods have inquired as to some of the public health aspects of this class of foods. We appreciate the frank interest of our readers in this subject about which so much misinformation exists. We are glad, therefore, to devote this discussion, as well as subsequent ones, to the most popular of the lay misconceptions concerning the wholesomeness of commercially canned foods.

Some laymen hold the belief that canned foods, in some mysterious manner, develop "deadly ptomaines" within the can and hence the consumer of such foods stands in danger of "ptomaine poisoning". In the light of modern knowledge, this belief is ludicrous; it probably had its origin in the old "ptomaine theory" of food poisoning, now so thoroughly discredited by modern medical authorities (1).

Between the years 1870 and 1880, a large number of substances were obtained from protein material which had undergone bacterial putrefaction. These substances were aptly called "ptomaines", from the Greek "ptoma" or "dead body". Toxicologists of the day ascribed marked toxic properties to the new found ptomaines, chiefly by injection studies rather than by feeding tests.

The science of bacteriology was then in

its infancy—the true causes of food infection or intoxications were not known. Consequently, the discovery of ptomaines, with their alleged toxic properties, permitted the convenient diagnosis of "ptomaine poisoning" for all illnesses following the ingestion of foods. Today, we know that such illnesses usually result from the ingestion of food which had been infected by certain bacterial groups, and not from protein degeneration products such as ptomaines (2, 3).

One authority has stated that "ptomaine poisoning is a good term to forget" (4).

To this we might add that it would also be well to discard the old, unfounded belief that foods in the tin can develop substances hazardous to health.

Canned foods are merely selected foods which, after proper preparation, are sealed in hermetic tin containers and given a heat process calculated to destroy pathogenic and spoilage organisms which might be present on the raw foodstuff. The hermetic seal prevents future infection of the food by such organisms and insures its preservation and wholesomeness.

Such are the simple facts. The cooperation of the medical profession is earnestly solicited in combating the ludicrous, yet widespread, lay prejudice against commercially canned foods.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

(1) Journal American Medical Ass'n. 90,459 and 1573 (1928).

(2) Food-Borne Infections and Intoxications, F. W. Tanner, Twin City Pub. Co., Champaign, Ill., 1933.

(3) Food Poisoning and Food-Borne Infections, E. O. Jordan, University of Chicago Press, 2nd Ed., 1930.

(4) Preventive Medicine and Hygiene, M. J. Rosenau, Appleton-Century, New York, 6th Ed. 1927, p. 668.

This is the ninth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.



The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Committee on Foods of the American Medical Association.

BOOK REVIEW

(Concluded from page 384.)

cals which are not included in the U. S. Pharmacopœia XI or in the formulas of National Formulary VI.

2. The admission of items on the basis of a definite extent of use in medical practice in the United States.

3. The omission of formulas from many monographs of simple preparations, such as the extracts, fluidextracts, ampuls, tablets, etc.

4. The extensive development of ampul and tablet monographs and of the section on "Materials and Preparations for Diagnostic Use."

5. The admission of glandular powders and the development of histologic descriptions of them.

6. The development and use of many additional assays of the chemical type, the proximate type, and the biologic type.

7. The arrangement of all of the monographs alphabetically, thus eliminating Parts I, II, and III. Also the placing of the history of the National Formulary at the rear of the book so that the general notices and monographs follow immediately after a short preface.

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Symposium on Sinuses

TREATMENT OF SINUS DISEASE*†

ARTHUR W. PROETZ, M.D., ST. LOUIS, MO.

In the discussion of the treatment of the nasal sinuses, this extensive subject will be approached through a consideration of the requirements of a normal nose, or at least a comfortable and harmless one, and an evaluation of the various methods of treatment in the light of their effectiveness toward this end.

As the first step, the normal functions of the nose should be considered. As a second, the deviations from the normal should be evaluated in terms of discomfort and injury to the patient, and also in terms of the likelihood of their correction. With this information at hand, it should be possible to select methods which will accomplish most and injure least. In so doing, we shall lean toward no one school of thought, but confine ourselves to facts known and demonstrable.

It is superfluous to enumerate the functions of the nose, but we must look for a moment into the conditions which permit them to operate, and the mechanisms by which they do so.

In the mere passage of air, 3 factors must be considered: (1) The size and shape of the air channels, which determine (2) the air pressures in the various parts of the nose, and (3) the distribution, which is so important in the warming and moistening of the air. Both inspired and expired air pass through the normal nose in a high, vaulted curve, the inspired passing largely through the olfactory fissure, the expired partly through the middle meatus as well. Except for certain eddies which have been described elsewhere, the currents are much the same.

This is not true, however, of the pressures. Owing to the small cross section of the naris compared to that of the choana, the pressures in the nose are relatively those of the pharynx and chest, negative on inspiration and positive on expiration. The extent of the fluctuation between the two is determined largely by the relative size of the naris, and in abnormal noses by the size and location of any obstruction. The greater the obstruction anteriorly, the greater the fluctuation. Naturally posterior obstructions have the opposite effect. Peak pressures in normal sinuses equal those within the nasal chambers, fluctuations lagging behind only long enough to permit equalization through the small ostia.

The other factor, distribution, is extremely important in the maintenance of nasal health. In order properly to temper the inspired air, a large proportion of the mucosa must come into play. Inspired air is not only brought to saturation by the time it reaches the pharynx but its temperature approximates that of the blood. Physiologists point out that nearly one liter of water is secreted by the nasal mucosa in the process and 77,000 calories of heat are dispersed during the 24 hours. If the total volume of air is forced to pass through a restricted channel or channels, these cannot cope with the requirements. The result is overdrying in the exposed areas and overmoistening in the protected ones. Anderson Hilding has shown that the mucosa in each case undergoes changes which interfere vitally with the production and propulsion of the protective mucus blanket.

This blanket is perhaps the most important single factor in the prevention and eradication of nasal infection. It is a thin but tough and viscous secretion coating the surface from the far-

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

† From the Department of Otolaryngology and the Oscar Johnson Institute, Washington University School of Medicine, St. Louis.

the point of the farthest sinus throughout the nose to the pharynx. This entire sheet is ceaselessly propelled toward the pharynx at such a rate that it is entirely renewed once every half hour. It should be borne in mind that this refers to the normal nose; disease conditions impede or even prevent its flow, as will be shown. Anyone who has observed living cilia in action must be impressed with the importance of this mechanism. Investigators are agreed that the maintenance of the proper moisture and viscosity are vital to its effectiveness.

Cilia are, biologically, very old structures. They are vigorous and resistant, and extremely powerful in proportion to their size. Their activity is surprisingly difficult to suppress; even severe cold (5° C.) only suspends their activity, and they revive on rewarming; they live for hours after the death of the individual, even though the body is kept in a refrigerator; they persist for days in Locke's solution under the microscope. They are regenerated, together with the epithelium, after complete stripping of a sinus wall; they commonly persist within sinuses in the presence of old and extensive purulent infections.

The one requisite to their existence throughout the animal world is adequate moisture. In the marine forms of life this is supplied by the surrounding medium. Air-breathing species supply their own moisture in the form of mucus. In the planning of nasal surgery, therefore, nothing is so important for drainage as an avoidance of dry areas.

Ventilation and drainage have always been pointed out to the student as the *sine qua non* of sinus health. Much stress is laid upon sinus openings and much too little, if any, upon the maintenance of moisture and the contours and condition of the chamber to be drained.

The air exchange in a sinus is extremely small—it requires more than an hour for a complete exchange to be effected through respiratory fluctuations—so that little evaporation occurs there, and relatively few glands are required to maintain the required moisture. Cut a large opening into the sinus, however, or remove 1 or 2 sides of it, thus throwing the sinus wall into the channel of nasal respiration, and drying occurs with injury or destruction of the cilia. Only an inadequate compensation is effected by an increase in goblet cells, as described by Hilding. Hopeless crusting occurs when the narrow nasal channels are converted into wide chambers by exenterating nasal operations. Infectious material continues to be thrown from the remaining walls and the means of expelling it have been removed.

Before methods of treatment are discussed in the light of the foregoing, the distribution of infection within the sinus structures themselves should be considered.

Contrary to a long-accepted view that nasal infection speedily incapacitates the epithelium and its cilia, these structures are found working vigorously in the presence of pus, even in advanced cases. In acute infections with ulceration, areas are, of course, temporarily disabled; this has been observed in rabbits and other animals. Although it very possibly exists, I have never found ulceration in the sinuses themselves. The inference is that, entrance having been effected at some point or points, the infection spreads in the reticular layers of the tunica propria. Mucous membrane removed from badly infected polypoid frontal sinuses has shown practically every kind of inflammation, recent and protracted, but with the epithelium relatively intact. The periosteum is not infrequently involved and sometimes the bone.

It should be remembered that the cavity proper of the sinus is not even within the body confines and that its contents in themselves are relatively unimportant except when abnormally retained. It seems to me that the high percentage of failure of radical exenterating, so-called obliterating, operations lies in a fundamental misconception of what is to be accomplished and how the remaining structure is to function. The infected sinus has often been approached as though it were an abscess cavity, which it is not. The sinus, unlike the abscess, is lined with a functional organ, the ciliated epithelium, at least potentially capable of emptying it. The fact that pus appears in the nose at all is generally proof that cilia are passing it out of the sinus. When a sinus cavity is exenterated, a new mucosa, springing from that of the nose, soon lines it. This occurs whether half the sinus walls are removed or only a reasonable opening communicates with the nose.

Not so with the ventilation. The wide-open or half-obiterated cavity receives the impact of inspired air, dries, and is unable to cope with its viscous or crusted secretions. The moderately opened one, on the contrary, retains its moisture and encourages its cilia to keep it clean. The various flaps, which are sometimes retained at great pains, do little to remedy this situation in the presence of wide openings and at the same time retain much of the infection which lies in their mucosa and might better be eradicated. At least at the present writing, I believe that obliterating operations which throw a sinus into the general nasal cavity are to be avoided.

Where an actual obliteration can be accomplished *with the destruction of all walls*, as in the frontal sinus, the operation is more likely to be successful. Extensive radical sinus surgery should be regarded as similar to an amputation. There is certainly justification at times in removing a leg, and the operation may be executed with finesse, but the result is a one-legged individual from that time on.

Many persistent headaches follow a wide opening of the face of the sphenoid, which can be temporarily controlled by blocking the affected side of the nose. For this reason, in draining these cells, make a long narrow opening close to the intercellular septum, biting the edges cleanly so as to prevent undue cicatrization and shrinking of the opening. This permits adequate ventilation and drainage without subjecting the lining membrane of the sphenoid to the direct impact of inspired air. In other words, perform a window operation instead of an obliteration. The ethmoid should be treated in much the same way. A patient with a purulent secretion plus moisture and posterior drainage is quite as healthy as the one with purulent secretion which dries, crusts, smells, and which he cannot expel, and certainly much more comfortable.

Neither method is the solution of the sinus problem. I sympathize with operators trying hopelessly to remove the last vestige of infection in a patient with retinitis, arthritis, or some other terrifying condition. I have little sympathy with the operator who continues to remove tissues and partitions one after another in the hope of stopping a nasal secretion.

In regard to the abnormal conditions which exist during an acute infection and the best means of rectifying them, it is necessary for practically the entire nasal mucosa to take part in humidifying the air to keep the mucus blanket intact and moving. In the earliest stages of a cold, practically before the patient is aware of it, some vasomotor disturbance occurs which upsets this balance. There is a transient ischemia, followed quickly by an active and then a passive hyperemia. Parts of the nose become obstructed; the remainder bear the brunt of moistening the inspired air, and are soon dried. These dry spots usually occur in the nasopharynx, which becomes swollen, burning, and painful. Many patients recognize this symptom as a constant signal of an approaching cold.

These spots are soon infected and the disease spreads via the retropharyngeal lymphatics. After it has been allowed to proceed this far, there is little to be done to shorten the course of the illness. If, however, a gentle shrinking with

a mild ephedrine solution in normal sodium chloride is instituted at the onset, before the dry spots are hopelessly established, the attack may be aborted. The ephedrine is particularly well chosen for this purpose as it produces a mild vasoconstriction without impairing the activity of the cilia. Packs, pledgets, and other mechanical applications should be avoided at this stage, as the irritation produced by them increases the congestion. Sprays are not overeffective, as they reach only those parts already exposed and fail to insinuate the fluid between the swollen walls.

The best procedure is to instill 2 or 3 drops of the fluid into each nostril with the patient in the exaggerated supine position, where they may advance into the fissures and meatuses as the constriction proceeds. Plain steam inhalations should follow to supply the moisture until the membrane can do so. In the meantime, there should be a correction of the condition which brought about the initial vasodilatation, namely, the chilling, constipation, or fatigue.

If the cold is not controlled and the infectious process extends into the sinuses, the problem does not change but the means of meeting it are somewhat different. The ostium must be considered, which in health is no more than adequate and in the presence of congestion is soon blocked. Naturally the first emergency is the re-establishment of drainage. Since this depends, however, not upon a mere opening but upon an opening with a functioning ciliated epithelium, the means employed must not be destructive to the surface. It follows that mechanical dilatation, packs, and unnecessary manipulation in the applying of astringents are undesirable. For this reason, ephedrine, introduced by the drop method, is still the treatment of choice.

In those instances in which such an instillation fails to effect an opening, the addition of a small amount of 1:10,000 epinephrine is permissible, as in this dilution the drug effects only temporary restraint on the cilia. As a last resort, applicators with this mixture are used. They should be applied with some patience, tipped with only enough cotton to carry the necessary medication, and advanced gradually as the shrinking proceeds.

Rough handling with strong astringents may effect an opening for a short time but the emptying mechanism will be so demoralized that the end result is a protracted retention.

Many an acute ethmoiditis, especially the type seen in infants and young children, accompanied by edema and discoloration of the eyelids, will recover more quickly under this treat-

CILARY ACTIVITY UNDER VARIOUS DRUGS

<i>Drug</i>		<i>Relative duration of ciliary activity</i>	<i>Resuscitation with Locke's solution</i>
Special culture media .....	.....	3 weeks	—
Sodium chloride solution	.9%	41 hours	—
	4.0%	3 minutes	Yes
	.2%	2 minutes	No
Ephedrine sulphate	3%	Indefinitely	—
	2%	Indefinitely	—
	.5%	Indefinitely	—
Cocaine hydrochloride	10%	1 second to 2 minutes	No
	5%	3 minutes	Usually
	2.5%	1 hour	Usually
Epinephrine	1:1000	1 second	Occasionally
	1:5000	Immediate slowing.	
		Stopped in 25 minutes	Occasionally
	1:10,000	25 minutes	Yes
Camphor (1% liquid petrolatum) .....	.....	Indefinitely	—
Menthol (1% liquid petrolatum) .....	.....	Indefinitely	—
Thymol (1% liquid petrolatum) .....	.....	6 minutes	Scattered
Mild silver protein	10%	1 hour	Yes
Dibrom-oxymercuri fluorescein	(2% aqueous)	15 minutes	No
Sodium ethyl mercurithiosalicylate	1:1000	2 minutes	No
	1:10,000	4 minutes	No

NOTE: This table deals entirely with the reaction of the drugs upon cilia and does not include their good and bad qualities in other respects.

ment than under the apparently more direct surgical opening. In these cases it is preferable to have the intern administer the drops at intervals of 2 hours rather than to leave it to the floor nurse. The result is worth the extra effort. In stubborn cases a drop of 1:1000 epinephrine may be used alone. Local external heat and warm baths are beneficial.

In acute frontal sinusitis in adults the entire course of the disease may be dependent upon the gentleness with which the initial applications are made to the nasofrontal duct.

Displacement should never be used in the earlier stages of an acute sinusitis (1) because in this hypersensitive stage the negative pressure may add to the congestion, and (2) because the fluid penetrates indiscriminately to the sinuses and not only may carry infectious material about but also may hamper the function of uninvolved ostia, which are exceedingly important in defending their respective sinuses against invasion. After the first reaction has subsided, however, and some immunity against the invader has been established, it is the best method of treatment simply for the reason that it reaches the otherwise inaccessible interiors of even the most remote cells without upsetting their function by any mechanical disturbance. Other than this, I should not generalize in its favor, for the result obtained, as in any other method, depends largely upon the discretion of the rhinologist in the choice of fluids, intervals of treatment, and supportive management.

Oils.—Since the nasal mucus is roughly 95 per cent water, common sense suggests that aqueous solutions will mix with them while oils will not. Quite aside from this, many of the drugs usually dissolved in oils have so much greater affinity for them than they have for the nasal mucus that only extremely small amounts are liberated and have any effect. The defense usually made for oils is that they supply a protective coating. This is probably true in permanently dry areas, bare of cilia and mucus (rhinitis and pharyngitis sicca; atrophic rhinitis). Where cilia and the mucus blanket function, which includes the interiors of most sinuses, clean or infected, the oil has no place, as it impedes evacuation.

Distilled water is a definite irritant to the epithelium. It soon produces cloudy swelling of the epithelium and an engorgement of the cilia which, if it endures even for a relatively short period, permanently disables them. For this reason *isotonic preparations* (solutions of normal sodium chloride, or Ringer's or Locke's solution) are indicated. So far as the cilia are concerned, hypertonic solutions are less harmful than hypotonic, as the incapacity is only transient, activity recovering with the re-establishment of balance.

Cocaine solutions over 5 per cent and *epinephrine* over 1:10,000 stop ciliary activity immediately. In our own experiments it has been impossible to re-establish this activity within the period of the experiment (up to 41 hours).

Neosynephrin hydrochloride (0.25 per cent) also stops the activity at once, resuscitation depending upon prompt removal by washing with normal sodium chloride solution.

Ephedrine has much less effect upon the cilia, 2 to 3 per cent solutions slowing them only temporarily, 0.5 per cent producing scarcely any effect.

Other Drugs.—For the sake of convenience and brevity, the results of my own experiments with ciliary activity under various drugs is summarized in the accompanying table.

Unfortunately, whatever philosophy one may

adopt in regard to the sinuses and whatever course of treatment he may pursue, the disturbing percentage of infections which persist emphasizes the weakness of his position. The means suggested in this discussion have proven more responsive in my hands than any others which I have thus far attempted. They have the advantage of furthering the natural functions of the nose and do not attempt to set up any new systems of mechanics. I believe that within the present limitations of our knowledge they are the most logical and effective.

1010 Beaumont Building.

ETIOLOGY AND DIAGNOSIS OF SINUSITIS*

WALTER D. CHASE, M.D., BETHLEHEM, PA.

Sinusitis is increasing. It is well known that small isolated communities have fewer infections, that contact with outsiders brings in infection, that congested cities contain great excess dust, relative lack of sunlight, fewer demands for self-locomotion in getting to and from places (exercise), and great exposure to infections during epidemics. It is during these very active outbreaks of acute infections that sinusitis complicates many of them. The modern air-conditioning of trains, theaters, hotels, stores, *etc.*, certainly turns many ordinary colds into sinus involvement. Compulsory use of swimming pools by pupils is another modern financial aid to the rhinologist.

In 1931, I read before this section a paper entitled "Undiagnosed Sinusitis." Sinusitis is less often undiagnosed now. However, the obscure case is still all too frequently undiscovered. Today, besides discovering the sinuses which have unhealthy linings, we must separate those which are infected from those which have allergic changes and edema from such general states as nephritis.

ETIOLOGY OF SINUSITIS

P. Watson-Williams, one of the great English authors, whose book entitled *Chronic Nasal Sinusitis* should be read by every rhinologist, shows that there is undoubtedly a familial tendency for sinusitis. It is now being mentioned by American authors also.

Inherited hypopituitarism, -thyroidism, -parathyroidism, -gonadism, and other endocrine deficiencies are important causally.

Climates with abrupt changes in moisture and temperature predispose, as well as those with constantly high humidity. Seasonal influences are definite, as the greatest number of cases of acute sinusitis, as well as the acute exacerbations of chronic sinusitis, occur in the late winter, early spring, and fall in this part of America.

Environment containing excess dust, constant exposure to damp and wet, lack of adequate sunlight in the home or shop, poor ventilation, overheated houses without proper humidifying apparatus, sleeping rooms which are too cold in winter, all these contribute. Modern fads of improper dress have a bearing on this disease.

Swimming damages sinuses as well as middle ears, though not every swim necessarily does this. Pools, especially school and college pools, are unnecessary; they should be abolished. The antiseptic in the water cannot kill the germs emitted by one swimmer before the next one leaves the springboard.

Going from the street or other hot place into air-conditioned buildings, trains, *etc.*, causes a rapid lowering of body temperature, colds resulting. One large store in Philadelphia removed this modern convenience after the management became convinced that it was causing the great excess of colds among its employees.

Both insufficient food and overeating predispose to this disease. Food not containing the necessary vitamins and minerals is well established as a definite cause. Hetler reports suppurative sinusitis and otitis media in animals supplied with food containing vitamins but lacking in proteins. Calcium stimulates ciliary activity and cell permeability, and this is of the greatest importance in the sinus mucosa. Para-

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

thyroid preparations stimulate calcium supply to the tissue cells.

Sleeping rooms are frequently too cold in winter. For children and also for adults with any trace of chronic nasal disease (and vast numbers of our population are of this class), overcold bedchambers cause harm. In acute rhinitis, the room should be warm. In the inert state, during sleep, the circulation is at low tide and cold air greatly irritates acutely inflamed respiratory mucosa. However, pure air, properly controlled, is necessary. Dean recounts that animals in quarters having purified air bore more and reared a greater number of young than controls in ordinary air. Doubtless humans are similarly influenced.

Sick children are not required to remain long enough in bed. The overaccommodating doctor too readily yields to the request from the parent that the patient be allowed out of bed. They should be allowed up and about less early. They should not be allowed at parties or in school during any acute stage of upper respiratory infection. The first normal temperature at the close of the illness occurs usually in the forenoon. Have them wait until 1 or 2 normal *afternoon* temperatures have been recorded before leaving the bed.

Dean states that even nutritional edema causes sufficient stasis to hamper ciliary activity and so causes sinusitis. A patient wearing a tracheotomy tube develops sinusitis, because the air currents due to normal respirations are lacking in the nose, stagnation resulting. Large adenoids act similarly. Nasal packs cause stagnation. Plugging the anterior nares, as after nose operations, stagnates, as do postnasal packs. Cotton at the entrance to the nose, after 2 or 3 hours from time of operation, needs to be only thick enough to filter out dust, being changed more often and used for fewer days.

The acute infectious diseases are of the greatest importance in the more immediate etiology. Influenza, ordinary coryzas, measles, scarlet fever, diphtheria, *etc.*, cause most cases. Erysipelas should always make physicians alert, as it frequently occurs in maxillary sinus infections. Hajek mentions this particularly.

Antral cysts and tumors become complicated with infection of the encroached-upon lining. Dental caries causes many maxillary sinus infections, the exact percentage being a vehemently debated subject by dentists and rhinologists. It has been established by some of the best oral surgeons that much less severe dental infection than is realized can produce antral infection. Physicians should be more critical about expert

dental investigation before dismissing teeth as possible causes.

The invasion of the sinus occurs usually by one of the following 3 routes: Transosteal, extramucosal, or intramucosal.

The first is illustrated in cases arising from diving, douching, and nasal packs as are used in epistaxis.

Extramucosal approach occurs in fractures of the frontal and antral walls and of the ethmoid roof, and the penetration of a sinus by a foreign body.

Intramucosal arrival of the infecting organism can be likened to the graphic description by McMahon; he shows that "particulate matter (carbon particles) spreads through the subepithelial tissues of the turbinates and antra in 4 ways: (1) Through the tissue spaces; (2) through the capillary lymphatics of the stroma; (3) through the perivascular lymphatics; (4) through the main lymphatics." Incidentally, the direction traveled is "from before backward." Until proof to the contrary is furnished, it may be assumed that bacteria travel along the same routes.

An allergic condition is now believed to be associated often with infection of the sinus mucosa. Since stagnation of a sinus cavity invites infection, surely the swollen lining in allergic states is often also an infected lining. Inheritance must be considered again in connection with allergy. Vaughan found, in a survey of a community of 508 persons, 60 per cent of them showing personal allergy. Rowe, studying 2000 students in the University of California, found a personal history of allergy in 33 per cent and a familial allergic history in 35 per cent. However, Dean stated that he *now* believes that the allergists are 20 per cent in error by exaggeration. Therefore, we rhinologists must also be allergists.

DIAGNOSIS

Every physician in general practice should recognize acute sinusitis as well as the acute exacerbations of chronic cases. A nose cold lasting longer than 7 to 10 days suggests sinusitis. More than 2 colds a year, as an average, also suggests it. When not during or within 2 weeks of an attack of acute rhinitis, accumulations of nasal material requiring hawking, as in the morning, suggest sinusitis. Opaque nasal discharge and, especially, yellowish or greenish nasal discharge, either anteriorly or seen on the pharyngeal wall, suggests sinus involvement. Sewall has convincingly shown the value of such observations. He suggests that the patient bring samples on heavy white cloth, one piece for the right naris, one for the left naris, and one for the

hawked down (not coughed up) material. Those specimens showing anything with color are not from normal noses and they suggest sinusitis. Even when dry, the telltale yellow color is significant. Dry samples one or more days old give as much information as fresh and moist specimens. Stuffiness of the nose offers a clue. Blocking of the nose is sometimes very marked in cases with polyps, and the family physician should remember that hyperplastic sinusitis is more often the case than merely the oft-mentioned enlarged turbinate. Headaches always occurring in the same place characterize sinusitis. Some rhinologists lay great stress on the location and time of day of the pain, frontal pain in the morning suggesting frontal sinusitis, and maxillary (sometimes coupled with frontal) afternoon pain suggesting antral involvement. Tight discomfort over bridge of nose suggests ethmoiditis, and pain behind the eyes suggests sphenoiditis. Pain in parietal and temporal regions can occur in sphenoiditis. Pressure over involved frontal or maxillary sinuses produces discomfort when the condition is acute, not often in chronic involvement.

Swelling and redness in the occasional acute state makes the differentiation between frontal, ethmoidal, and maxillary sinusitis, or their combinations, necessary. Many a swollen eyelid during these stormy courses is due more to a badly involved antrum than to the ethmoid cells. Ethmoid cells overlie the antrum (the infra-orbital cells), and both empty into the infundibulum, the swollen, infected lining of which blocks the drainage outlet of all cells of the anterior series. I recall very vividly 2 cases in which swollen lids with some forehead edema made me think that they were frontal-ethmoid infections. Both had much ethmoid inflammation, but the intense involvement of the antrum was of most importance and in both the frontal sinuses were clear. They were both cases of staphylococcal infection. If ample drainage of the antrum had not been promptly made, a very serious outcome would have probably resulted in each. In antral cases with bone involvement, only the lower lid is apt to be swollen and red. Antrum malignancy also causes swelling in the facial region. Moderate but continuing pain in the maxillary region is an exceedingly important symptom. Barnes states that, in primary malignancy of the antrum, pain in the alveolus is the first symptom and is invariably attributed to the teeth, one or more of which may have been extracted. With largely frontal involvement, only the upper lid shows great swelling and redness in acute sinusitis.

Swelling of the nasal wall, sometimes of the palatal surface, occurs in some maxillary empyemas. Never does protrusion of the facial wall occur, the bone in empyema being too rigid. Only in cases of cysts and other tumors of the antrum does the wall bulge. Crepitation will be found in the latter case. Tumefaction but not protrusion of the facial wall is due to swelling of the periosteum and the soft parts. Tumefaction with redness is due to subperiosteal abscess, the infection having traveled along the perforating veins from the inner side and not from the rupture of the bony wall, virulence of the organism and antrum blocking being the explanation—facts mentioned by Hajek.

A swelling over the frontal sinus, not of an acute inflammatory nature, results from a mucocele. Here the resorption of the bony wall from the pressure thins the bone and it protrudes. In contrast to the facial wall of the maxillary sinus in empyema, Hajek states that there is protrusion in frontal empyema. Some of these, he states, are suppurative mucocoeles. Swelling and redness of inflammatory nature occur when the anterior wall ruptures, pus accumulating subperiosteally.

Pneumatocoele accounts for rare cases of swelling in the frontal region. Congenital fault in the anterior wall or traumatic cleft would admit the air. Usually, however, perforation of the anterior wall from frontal empyema is the source of the passageway for the air, which enters on blowing the nose.

In the matter of frontal swelling, Mosher and associates demonstrated that the extent of the edematous swelling corresponds to the extent of the underlying osteomyelitis of the frontal bone. This disease, while advancing, cannot be accurately localized by roentgen-ray examination, as only late changes cast the shadow, whereas the early accompanying edematous swelling accurately marks the area of bone involvement. Ignorance of this fact probably accounts for most failures in treating frontal osteomyelitis.

Fractures of the frontal sinus wall, as well as those involving maxillary and ethmoid structures, should not be referred to the general surgeon but to the rhinologist. Penetration of the antral floor by the dentist in extracting teeth and sometimes in drilling roots causes many antrum infections. When extraction penetrates the antrum and the dentist immediately refers the case, we should not immediately irrigate by puncture or natural ostium; we should wait until such conditions as warrant irrigation develop, since a bleeding antrum does not necessarily become infected. Likewise, the fractured antrum, bleed-

ing, perhaps filled with clots, should not be irrigated routinely unless signs of infection develop. Excessive bleeding may necessitate opening through the canine fossa and packing, with the establishment of a window into the inferior meatus. Similar surgical wisdom, only much more of it, applies to frontal fractures.

In acute nose infection which does not disappear within 7 to 10 days, sinusitis is probable. It is often necessary to determine which sinus or which group is involved, particularly when direct measures such as lavage or drainage procedures are necessary. Transillumination in a really dark room, localizing the actual source of the pus in the middle or superior meatus by Hajek's technic, antrum or sphenoid lavage, and skilled posterior rhinoscopy, supplemented by roentgen-ray findings when required, enable us to direct the attack to specific regions of the infection.

It is in the chronic case, however, that the greatest skill in localizing sinus disease is required, for more obscure cases are undiagnosed than diagnosed. In the obscure case, there is not often the pain symptom or tenderness and sometimes no *apparent* discharge. However, if examined carefully and repeatedly, these low-grade but important cases can be discovered. The rhinologist must be willing to spend weary hours toiling on some of his cases. In the obscure case, a rigid routine of history-taking and examination must be followed. The exceedingly clever Reaves chart portrays every necessary aspect of the sinus region of the head. This graphically records most of the findings.

The following routine is necessary after the history has been taken:

1. Transilluminate the frontals and the antrums in an actually dark room. On the side of a septum deviation, the antrum appears darker than its fellow; in some cases, antral walls are actually thinned by the disease, as in some polyp cases. Transillumination shows whether the antra and frontal sinuses are normal, plus 1, plus 2, plus 3, or plus 4 in density. It also shows the size of the frontal sinuses.

2. Rhinoscopy, anterior and posterior. Examine first anteriorly without any shrinking application. Note any swelling from inflammation, hypertrophy, hyperplasia, or allergy (mucous polyps), and signs of atrophy; amount and kind of discharge, and where located. Next, do posterior rhinoscopy, because after shrinking applications the mucosa does not look as it did before. The light, which is to be reflected from a head mirror, is higher for anterior rhinoscopy than for posterior. Use a 60-watt blue Mazda lamp,

unfrosted. The 100-watt frosted lamp furnishes a poorer light than the 60-watt unfrosted globe, because the brilliant filament area is the reflected portion in the former globe. Use a perfect mirror. Some cases require a No. O, and others admit larger sizes. Boiling mirrors ruins them. Unless the case is an acute virulent infection, tuberculosis, or syphilis, thorough washing of the mirror and briefly dipping it in an antiseptic solution is sufficient protection against transmitting infections. Poor findings are often due to dull mirrors. Gently introduced, after the tongue has been gently depressed by a depressor placed not too far back, the skillfully used mirror shows almost the entire intranasal areas of importance from the sinus standpoint. With it, the operator can see under the turbinates, looking into the sinus openings or their immediate neighborhood. The shank of the mirror should be bent to an angle of 80° for postpalatine rhinoscopy. In addition to that bend, Harry C. Pohl suggested bending the shaft in its opposite direction 4 cm. from the mirror, thus making the opposite rim of the mirror in line with the rest of the shaft. This removes the hand holding the mirror farther from the line of vision. Binocular vision is frequently possible, especially if the head can be tilted. The larger the mirror the more easy is binocular observation. Replacing the head mirror with a good form of head light adds to the brilliance of the field and often brings out finer threads of discharge than were seen before. Any localized venule dilatation, swelling of mucosa, or obscuring of olfactory fissure is thus plainly seen. Very many previously overlooked sphenoid cases are now discovered by posterior rhinoscopy, which shows fine threads of discharge beneath the ostium. Similarly, threads or larger streams of discharge in the middle meatus are seen. Swelling of the posterior end of the inferior turbinate sometimes extends to its top, making the posterior part of the middle meatus a cleft, out of sight, in the lowest portion. The use of cocaine and adrenalin shrinks this interfering swelling, bringing into view the whole meatus. One examination is absolutely insufficient. Repeated examinations with the mirror reward the willing searcher, both at the first and at repeated sittings.

Personal observation and inquiry convince me that posterior rhinoscopy is not taught as a routine, necessary feature of nose examinations, either in medical schools or graduate medical courses.

Hajek mentions atypical hypertrophy of the middle meatus and shows its important signifi-

cance, in that it is associated with abnormalities of the anterior series of sinuses.

If in aspirating sinus contents no pus is produced, injecting sterile saline and churning it in and out will often exhibit flakes of discharge. This can be cultured for organisms, and a cytologic study should be made according to the technic of Sewall. Distinct thickening of the lining can be felt with the probe, but many a sphenoid is infected though its lining appears at first to be thin. Examination of its contents and the employment of the most advantageous roentgenologic examination bring out the elusive case. The same steps apply to the antrum and also to some frontal sinuses. The patient should lie on a table while the procedure is being followed, as the operator can then best control the cannula or antrum needle. Steadying the elbow against the side and supporting the third and fourth fingers against the patient's chin or cheek makes for the least traumatism of the opposite wall. Sphenoid cannulae should be short and flexible, and they should fit a Luer syringe tip. Watson-Williams' sphenoid cannulae are blunt and stiff for puncture. His technic for detecting abnormal sphenoids and posterior ethmoids should be studied by every rhinologist. Lavage of the antrum affords, besides the evidence of macroscopic discharge, information as to the capacity of the sinus and whether or not pathologic involvement of its lining obstructs the outlet. In the case of mastoiditis, Carmack taught the importance of having warm receptacles for specimens taken for culture. This suggests the value of warming thin culture media, especially bouillon, injecting and then withdrawing it through the needle or cannula in the sinus under examination.

I seldom employ a roentgen-ray study without injecting 1, 2, or more of the sinuses with lipiodol directly into the sinus, frontal, maxillary, or sphenoid. This completely fills the space, avoids obscuring overlapping, and adds to the definiteness of separate sinus pathology. The exceedingly clever technic of Proetz' displacement filling has many advocates and certain distinct advantages. A normal sinus should expel the lipiodol within 72 hours. A second roentgen-ray study determines this point. We can get the most out of roentgen-ray studies if we interest the roentgenologist in the individual case, have him present at the operation, and show him the pathologist's reports. He then sees his mistakes, studies details more carefully, and steadily grows in skill and assiduity. It was by this method that MacMillan earned the high regard of the exacting Mosher, of Boston.

It is important to speak against the use of the

nasopharyngoscope except in the case of infants and young children. With them, of course, mirrors cannot be used in the retropalatal position. In larger children and adults, however, the nasopharyngoscope should not as a rule be used. It always is somewhat clouded with moisture. There is no way of avoiding this moisture fault. There is unnecessary magnification and the overhanging turbinates prevent a view of all in comparison to that which the mirror affords. If the patient is very difficult to examine, cocaineize the soft palate and anterior upper alveolus and use the Hasslinger palate retractor. The amazing view thus obtained is reward for the extra time and trouble. Of all the examining facilities, posterior rhinoscopy has given the greatest satisfaction. To find, after repeated negative examinations, a small rope of pus below an unsuspected sphenoid gives a real feeling of accomplishment.

If repeated employment of anterior and posterior rhinoscopy fails to show pathologic involvement, go through a rigid routine of washing out the antrums and sphenoids and sometimes also the frontal sinuses. If no macroscopic findings result, send the washings to the laboratory for microscopic and culture study.

Roentgen-ray study follows when indicated. After blowing out all traces of the lavage fluid, fill the individual cell with lipiodol and have the films made immediately. Many sinuses considered normal will be shown to have thickened linings. Abscesses between the layers of a moderately thickened lining cannot be detected by washing or roentgenoscopy. Therefore, exploration is often justified. An antrum washing which shows no pus in the pus basin is not necessarily a negative finding. After washing, a mass of pus is frequently found near the outlet of the lavaged sinus. If the patient has blown his nose before the lavage, blowing out pus or mucus or even opaque material after the sinus lavage indicates a diseased sinus. An apparently negative washing is not actually negative until proven so by these more refined procedures.

As to differential diagnosis between an infected sinus and a sinus with a lining thickened by allergy or general edema, the examination must include the findings of the internist, the pediatricist, and the pathologist. In a condition of general edema both antra may show thickening, whereas in the allergic states only one antrum may be thickened. A very important contribution was made by Dean when he stated that what was heretofore considered sudden swelling of the lining of the antrum, as evidenced by roentgenograms and believed to be due to allergic edema, is in fact an accumulation of tenacious discharge

plastered over the whole surface of the sinus, casting the same sort of shadow as would an edematous lining. The presence of large numbers of eosinophils indicates allergy, and repeated examinations are sometimes required to show this. If, instead, a preponderance of polymorphonuclear neutrophils is found, that indicates infection. The pale edematous nasal mucosa with mucoid secretion indicates allergy, whereas "hyperemic mucosa with mucopurulent secretion, malaise, and fever are invariably due to infection" (Rowe). Family history may indicate allergy. Since a child who is allergic is, as Rowe states, "prone to repeated attacks of otitis media, tonsillitis, pharyngitis, bronchitis, sinusitis, and even pneumonia," rhinologists have the responsibility of becoming expert on the condition. Bronchial asthma beginning before age 2 is usually due to food allergy; after age 2, to inhalants. Rowe states that itching of the nose is usually absent in food allergy but present in that due to inhalants. It is very important to know that some expert allergists believe skin tests often fail to detect food allergy. It is of greater importance to employ the elimination diets. Milk, eggs, and wheat are the most common foods causing allergy. The elimination diet is not so difficult as it sounds. Animal emanation should be easy to exclude. Incidentally, one witty allergist has paraphrased an old saying into "the hair off a dog is more dangerous than his bite." Calling in an expert allergist should never be neglected when the efforts of the rhinologist fail. Schenck and Kern have shown that mucous polyps mean allergy.

The greatest satisfaction in the practice of rhinology is in making a diagnosis in obscure cases, the cases which others have not discovered and which require the most searching examination. This means very hard work and the use of routine procedures which are not usually followed by rhinologists. Most rhinologists depend upon ordinary sinus washings and roentgen-ray examinations without injecting the sinus with opaque solutions. I employ Sewall's cytology technic, and I always inject the obscure sinus with lipiodol for the roentgen-ray study. Without these measures, elusive cases will not usually be detected.

CASE REPORTS

CASE 1.—Dr. C. R. R., age 55, college president, complained of joint pains, hawking, no nose discharge, no headache. Would get about 3 nose colds a year, lasting 4 days to 3 weeks. Painstaking anterior and posterior rhinoscopy disclosed no discharge. Antrum lavage negative, but after the washing the patient hawked down some yellow material. He subsequently

brought for inspection on heavy white cloths some yellowish-green material which he had hawked down. Right sphenoid washings showed lymphocytes. No cells in the antrum and left sphenoid washings. Injected right antrum with lipiodol and had roentgen-ray examination made. This showed the entire lining thickened. The ethmoids also showed thickening. Six months later the patient developed severe cardiac disease and had to resign his position. This patient had been examined at one of the most famous clinics in the country, where his sinuses were declared to be negative.

CASE 2.—Mrs. M. Mc., age 42, complained of headaches all her life—in childhood when under strain; later, every month or two, accompanied by vomiting and usually on the left side but sometimes on the right. These headaches had made her a semi-invalid. There was migraine in her family, she being so diagnosed in the above-mentioned famous clinic. Subject to 1 or 2 nose colds per year, lasting a few days. No nose discharge but dripping into the throat all the time. Careful anterior and posterior rhinoscopy showed no nose abnormality. Antrum and sphenoid lavage negative, but after the sphenoid washing the patient blew a little mucus from right naris. A second sphenoid washing showed a little flakey material from the right. Cytology test showed lymphocytes in right sphenoid washings. Injected right sphenoid and antrum, this showing on roentgen-ray examination some thickening of all walls of the antrum and thickening of superior and anterior walls of the sphenoid. At operation this finding was verified, and the patient has been cured of her headaches. She is the most grateful patient I have ever had.

CASE 3.—Mrs. R. B., age 30, was seen during lobar pneumonia because of left earache, O. M. A. P. Pus seen in left naris during the acute ear condition. Ear discharge ceased but left frontal, temporal, and occipital headache continued after patient left hospital. There being no mastoid tenderness and landmarks returning, nose was carefully examined. Antra and frontals transilluminated normally, and no discharge was seen by anterior and posterior rhinoscopy. Antrum washings clean. Petrositis was feared, and a roentgen-ray examination of the mastoid (and teeth) was made. Spinal fluid was examined, with negative findings. Sphenoids were washed and pus was found in the left, though repeated rhinoscopy had shown none. Sphenoid operation cured the case.

Case 3 taught me the importance of going through the sometimes hard task of washing of sphenoids. If this had been done early, I should have diagnosed her case early and saved her considerable money and worry. I now go through the toilsome routine of all the tests mentioned, and this has brought me more solutions of difficult and obscure cases than could possibly be obtained without these exacting procedures. Engineers are taught exactness. Without absolutely exact figures, they could not build bridges. Rhinologists have too much liberty of action. If we were held down to an obligatory routine of examination details, we should miss fewer diagnoses. I am pleading for a consciousness of our obligation as specialists; we are supposed to

possess peculiar skill. If we employ all the measures at our command, we can exhibit such skill. The good sinus diagnostician is not the

one who is brilliant but the one who likes hard work and possesses good judgment.

—230 East Broad Street.

THE CLINICAL ANATOMY AND DEVELOPMENT OF THE PARANASAL SINUSES*†

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This paper will be limited to a consideration of some of the developmental, morphologic, and relational aspects of the subject which would appear to have a bearing on diagnosis, treatment, and prognosis.

Although differing widely in morphologic details in different individuals, the paranasal or accessory nasal sinuses are a series of remarkable cavities which arise from and, under normal conditions, communicate with fairly constant subdivisions of the nasal fossae. They include the maxillary, frontal, and sphenoidal sinuses and the ethmoidal cells with their extramural extensions—the ethmomaxillary, ethmofrontal, ethmopalatine, ethmosphenoidal, and conchal (turbinal) sinuses. They are variously contained within the maxillary, frontal, ethmoid, sphenoid, and palatine bones, which bound and form the major portion of the osseous skeleton of the nose.

RUDIMENTS AND EARLY GROWTH

The protons and rudiments of the paranasal sinuses are demonstrable as slight areas and evaginations in more or less specific regions of the nasal mucous membrane during the latter part of the third month of fetal life, a time much earlier than was formerly believed. The utterly misleading statements that the paranasal sinuses in man do not appear until some years after birth, even some as late as puberty, did much harm in the past. And, unfortunately, even today there are those who erroneously look upon these chambers as of little significance from morphologic and anatomic aspects and without clinical values before age 5 or 6. It is, however, gratifying to note that the older and erroneous concepts have largely become outmoded by a more or less general acceptance of the conclusions of modern investigations and clinical experiences in this field.

The maxillary sinuses and the ethmoidal cells appear to be sufficiently advanced in their de-

velopment at birth to be of clinical importance. Although there may be differences of opinion, anyone who has given the problems of the genesis and early growth of the paranasal sinuses serious thought no longer questions the relatively advanced stage of the maxillary sinuses and the ethmoidal cells at birth and early infancy.

The sphenoidal sinuses may have acquired the size of small peas by the end of the gestation period; however, in the majority of cases they are probably not sufficiently advanced at birth to be of clinical importance. Indeed, the sphenoidal sinuses may remain extremely small and limited permanently to the fields early occupied by the sphenoidal conchae or turbinates (small bones in which the sphenoidal sinuses are lodged during the early years of infancy), and really never invade the sphenoidal bone proper.

The frontal sinuses are not, as a rule, clearly differentiated *as such* at birth, but are in juxtaposition to or still in reality a part of the frontal groups of anterior ethmoidal cells, the cells from which the frontal sinuses arise in the majority of instances. Usually, it is not until age 1 or 2 that the frontal sinuses frankly invade the frontal bone. When opportunity affords a careful dissection of the region of the frontal recess in the early infant, the frontal sinus rudiment can often be identified before it expands into the frontal bone. On the other hand, the roentgenologist and the rhinologist would doubtless have difficulty, if it were possible at all, to differentiate the frontal sinuses from the anterior group of ethmoidal cells in the newborn and the infant during the first year. This appears to matter little, for the rudimentary and early frontal sinuses doubtless behave like the frontal anterior ethmoidal cells and can be so treated.

CERTAIN GENETIC AND DEVELOPMENTAL PROBLEMS

It is important to remember that the nasal capsule and the ethmoidal field are the last portions of the chondrocranium to become cartilaginous. These parts are membranous as late as the eighth week of embryonal life; however, the

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lateral wall of the nasal capsule and the nasal septum are definitely in the precartilage stage. By the latter half of the third month of the embryonic period, the nasal capsule is well advanced as a cartilaginous structure, the cartilage having formed not only in the lateral walls of the nasal cavity and meatuses but in the primary and secondary nasal conchae as well. Thus, the early mucous membrane sacs—the rudiments of the paranasal sinuses—have first to do with membranous (undifferentiated mesenchyme) and cartilaginous relationships. Only later in fetal life and always afterward, when the cartilage has become replaced with bone and the latter grows to larger dimensions, does the problem of bone invasion and pneumatization become a factor in the secondary phase of the development of the sinuses. The invasion of related bones continues actively until after the second dentition is completed (the third molars excepted), then much more slowly during the third decade, and it appears that the process continues to a slight degree throughout life.

In this invasion and pneumatization of the bones bounding the nasal fossae, it is obvious that normally growth hormones have to do with the paranasal sinuses just as they have with other parts. Then, too, conditions which affect the growth, histologic structure, and health of the cranial and facial bones, for example, abnormal hypophysial function and certain intercurrent diseases, can and in all likelihood do greatly influence the growth and general morphologic development of these chambers. It would, however, appear baseless to assume that hormonal action can have anything to do with the number of sinus potentials; the precise rudiment from which a given sinus forms; the number of ethmoidal cells, which varies from 4 to more than 20; the fairly constant general location of the protons from which the rudiments of the paranasal sinuses are derived; the formation of the supplementary frontal and maxillary sinuses; the very common and marked asymmetry in the size of paired sinuses, strikingly illustrated in the frontal and sphenoidal sinuses; *etc.*

The occasion is not appropriate for a general discussion of the relationship between the endocrine glands and the paranasal sinuses. Suffice it to say that certain morphologic conditions, such as hypoplasia and hyperplasia of the sinuses, and some of the irregularities of contour of the sinus walls and cavities, the result of stops and starts or spurts in growth, in all likelihood are frequently associated with dyshypophysism (dyspituitarism), that is, perverted action of the anterior lobe of the hypophysis cerebri.

The concept that growth hormones have to do with growth and repair processes and are involved in some of the morphologic and histologic problems of the paranasal sinuses in health and disease merits attention and further study. It is in consonance with other established facts in the endocrine field. We must, however, proceed with caution and not make premature and too sweeping claims in this field. The problems of heredity, developmental potentials, and other growth factors cannot be lightly set aside. There are doubtless some aspects of sinus differentiation and growth which cannot be attributed to hormonal activity.

THE CONCEPT OF AN ETHMOIDAL FIELD

The morphologic and clinical problems of the paranasal sinuses are better comprehended or, at least, are less obscure if one bears in mind that all of these cavities have their origin in the ethmoidal field; that the genetic area of an individual sinus or cell always locates the ostium or aperture of the particular sinus or cell at all subsequent periods; and that the apertures of all the paranasal sinuses are located strictly within the confines of the ethmoidal portion of the lateral nasal wall. (The sphenoidal sinuses may in a sense be excepted.) Ultimately the outlying portions of the sinuses variously pneumatize large portions of the ethmoid, frontal, maxillary, and sphenoid bones in the formation of the ethmoidal cells with their extra-ethmoidal expansions and the frontal, maxillary, and sphenoidal sinuses. Their drainage, however, regardless of size and complexity must needs be in the ethmoidal field of the nasal fossae.

THE MAXILLARY SINUS

This is the most precocious of the paranasal chambers. It grows from the deeper portion of the ethmoidal infundibulum—a secondary furrow or meatus contained in the primary middle nasal meatus under cover of the overhanging middle nasal concha and differentiated before the anlage of the maxillary sinus appears. Table I indicates the growth of the maxillary sinus from birth to age 18.

It is interesting and important to note that the maxillary sinus reaches approximately adult measurements at a relatively early age. From birth to puberty the anteroposterior measurement (length) of the sinus is always the greatest, the height and width following in order. In operative procedures on the early maxillary sinus it is essential that one should have a knowledge of the peculiarities in shape and the important relations of the chamber. For some time after birth

TABLE I
GROWTH OF MAXILLARY SINUS

Age	Length (millimeters)	Height (millimeters)	Width (millimeters)
Newborn .	7.0 to 8.0	4.0 to 6.0	3.0 to 4.0
9 months .	11.0 to 14.0	5.0 to 5.0	5.0 to 5.5
1	14.0 to 16.0	6.0 to 6.5	5.0 to 6.0
2	21.0 to 22.0	10.0 to 11.0	8.0 to 9.0
3	22.0 to 23.0	11.0 to 12.0	9.0 to 10.0
6	27.0 to 28.0	16.0 to 17.0	16.0 to 17.0
10	30.0 to 31.0	17.5 to 18.0	19.0 to 20.0
15	31.0 to 32.0	18.0 to 20.0	19.0 to 20.0
18	31.0 to 33.0	20.0 to 21.0	19.0 to 21.0

the sinus is not developed sufficiently in width to reach beneath the orbit. By age 1 the sinus has grown laterally so as to come into relationship with the infra-orbital canal; before age 2 it has elongated anteroposteriorly so as to extend above the rudimentary and unerupted first permanent molar tooth; and from ages 2 to 4 it makes conspicuous growth in width. Although the age of the child, the stage of dentition, and the size of the maxillary sinus progress *para passu*, it is obvious that there is limited room for its further growth until the alveolar process of the maxilla is more fully developed and the teeth have erupted.

In endonasal procedures on the maxillary sinus during the early childhood period, consideration must be given to the narrowness or cleft-like character of the sinus in its mediolateral dimension. The orbit is readily entered by passing entirely through the sinus when using instruments by way of the middle or inferior nasal meatus. The want of expansion into the alveolar process at this early time limits the relationship to the inferior nasal meatus as compared with later periods. The relations of the early sinus to the rudiments of the deciduous and permanent teeth and the juxtaposition of the sinus to the nasolacrimal duct are likewise important. Since there is no constancy in development, it is essential to know the degree of expansion of the alveolar recess of the maxillary sinus in a particular case when operative measures are attempted by way of the inferior nasal meatus. Although the age of the child is a valuable guide, the skiagram must give the rhinologist the definite and precise information concerning the degree of pneumatization of the alveolar process in the particular case.

The maxillary sinus relatively early takes on adult proportions and relations. The final alveolar expansion, of course, cannot occur until the permanent teeth have erupted. Despite the fact that the teeth do get out of the way, the maxillary sinus frequently fails to develop in the direction of the alveolus; especially is it apt to be

absent in the region of the canine fossa. This is an important point in operative procedures by way of the inferior nasal meatus, because the soft structures of the cheek are readily punctured and the sinus missed entirely. The rule that the shape and size of the maxillary sinus in the main follows the shape and size of the body of the maxilla does not always hold in the region of the canine fossa, that is, the field over the canine and premolar teeth.

Supernumerary and Complex Sinuses.—Often the maxillary sinus is not a simple chamber, but is incompletely divided into subcompartments and recesses by osseous and membranous septa. Sometimes these are of sufficient size to isolate to a considerable degree portions of the sinus from the main chamber. A very common condition is the extension of a posterior ethmoidal cell into the maxilla, thereby forming an ethmomaxillary sinus at the expense of the maxillary sinus, the condition simulating a division of the maxillary sinus into 2 complete and separate compartments. True duplication of the maxillary sinus, that is, the formation of a supernumerary maxillary sinus, is only of occasional occurrence and it must not be confused with an ethmomaxillary sinus. In a true supernumerary maxillary sinus, its ostium communicates with the infundibulum ethmoidale of the middle nasal meatus, whereas in an ethmomaxillary sinus the ostium or aperture usually opens into the superior nasal meatus, as becomes a posterior ethmoidal cell, which the ethmomaxillary cell really is. It is important clinically to have in mind these important morphologic variations when the maxillary sinus does not readily yield to orthodox treatment. The failure may be due to the type of sinus encountered rather than a defect in the treatment. In a strict sense, however, orthodox treatment is faulty treatment in some of these cases because it leaves a completely isolated chamber or a partially isolated recess or subcompartment untreated. Some of the newer diagnostic methods should prove helpful in determining some of these morphologic conditions.

The Teeth and the Maxillary Sinus.—The number of permanent teeth that bears direct relations to the floor of the maxillary sinus of course varies with the degree of excavation of the alveolar process. The teeth most constantly in intimate relationship to the floor of the maxillary sinus are the 3 molars. Very commonly the roots of these teeth crowd the mucous membrane of the floor of the sinus into mound-like relief. These intimate relations exist alike in male and female, young and old. In 1928 a member proposed to the American Laryngological Associa-

tion that 60 per cent and conceivably 80 per cent of paranasal sinus cases should show some form of dental caries in the antral bony floor. In the discussion which followed, other members of the association considered the percentage much too high. Whatever the outcome of the controversy will be, it appears certain that the teeth have something to do with maxillary sinus infection directly and that indirectly the infection may extend to the ethmoids and the frontal sinuses.

Maxillary Ostia.—The maxillary sinus communicates with the deep part of the posterior half of the ethmoidal infundibulum by means of a round, oval, or narrow elongated aperture—the ostium maxillare. Occasionally the ostium replaces the entire floor of the ethmoidal infundibulum. It is extremely variable in shape and size and at best very disadvantageously placed as a drainage opening, being located at the highest point of the maxillary sinus and primarily in communication with the restricted ethmoidal infundibulum. The variations of the maxillary ostium are in accord with the genetic potentials.

In approximately one-third of the cases there is an accessory maxillary ostium (ostium maxillare accessorium) which connects the maxillary sinus directly with the middle nasal meatus. It is variously located: (1) Just outside of the dorsal extremity of the infundibulum ethmoidale; (2) within the dorsal extremity of the latter in very intimate relationship to the ostium of the maxillary sinus; or (3) farther forward immediately below the miduncinate region. The accessory ostium forms in the undefended or nonosseous area of the middle nasal meatus.

Reasons favoring the maxillary ostium as an approach to the maxillary sinus when sounding or lavage are deemed necessary are as follows: (1) It is the natural and physiologic aperture of the maxillary sinus; (2) it is always present in some form; and (3) its major relations are fairly constant, e.g., the ethmoidal bulla, the uncinate process, and the ethmoidal infundibulum, directing the way. In my earlier studies, now dating back more than 25 years, I was of the opinion that in the majority of cases it was impossible to sound the maxillary sinus through its natural aperture without some injury resulting to the margin of the ostium and the undefended floor of the ethmoidal infundibulum, and that free passage of a cannula or sound was possible only in those cases where the ethmoidal bulla and the uncinate process were of such size and shape as to result in a shallow and wide-mouthed ethmoidal infundibulum. The size, shape, direction, and exact location of the maxillary ostium also were noted as important fac-

tors in successful and free sounding and perfusion of the sinus.

The anatomy has not changed since my earlier observations, but instruments of precision and a more highly refined technic have come into being, and there are now a few operators who report more than 80 per cent of successful soundings and perfusions of the maxillary sinus by way of its natural aperture. Although in favor of using the maxillary ostium when it can be readily entered, I am of the opinion, since so large a percentage of successful soundings of the maxillary sinus by way of the maxillary ostium is reported, that, unknown to the operator, the accessory maxillary ostium, often located within the posterior end of the infundibulum ethmoidale near the maxillary ostium proper, was utilized in a goodly number of instances or, in lieu of this, that the maxillary ostium was not freely entered in many cases, probably resulting in injuries to the ostium and floor of the ethmoidal infundibulum. It must always be remembered that there is no constancy in the form, direction, size, and precise relational anatomy of the maxillary ostium, and that many ostia are impossible to enter without a greater or lesser injury to their walls and related parts because of the peculiar morphologic development of the aperture and its relational anatomy.

There is probably some danger in urging the use of the ostium maxillare generally for clinical purposes. It has never been definitely determined that injuries to the walls of the ostium maxillare will not lead to scarring, contractions, and adhesions. Is it not possible that even slight damage may bring about closure of certain types of maxillary ostia? There is no way of determining the degree of injury, if any, nor the end result of such injury. If the ostium is to be used, the rhinologist must have a clear understanding of its variational and relational anatomy. After this, properly designed instruments and a refined technic must be employed to fit the individual case. Unfortunately, there is no way of predetermining the anatomic conformation and precise relationships of the particular ostium to be used, but the operator who has painstakingly studied all aspects of the problem will undoubtedly have the highest percentage of successful cases.

THE FRONTAL SINUS

The frontal sinus has as potential rudiments (1) 3 or 4 frontal anterior ethmoidal cells located in the frontal recess; (2) the frontal recess as a whole; (3) the ventral extremity of

the ethmoidal infundibulum; and (4) the suprabullar recess. Most frequently the sinus arises from the potential rudiments located in the frontal recess, and for this reason the adult frontal sinus communicates so frequently with the frontal recess extension of the middle nasal meatus. The adult frontal sinus may, of course, be continuous with the ethmoidal infundibulum or with the suprabullar recess. These observations are in accord with the rudiment potentials. Occasionally other arrangements are encountered.

Table II indicates in a very general way the growth of the frontal sinus. From the outset the frontal sinuses vary greatly in size and shape, and are usually asymmetrical in the invasion of the frontal bone. In this sense any growth table is misleading. At a given age the measurements may be reversed, or no growth whatsoever may have taken place in a given plane.

TABLE II
GROWTH OF FRONTAL SINUSES

Age	Distance of cupola of sinus above nasion (millimeters)	Height (milli- meters)	Width (milli- meters)	Length (milli- meters)
6-12 months.	2.0 (below)	2.0	2.0	3.5
1-2	1.8	5.0	2.5	4.5
3-4	2.5	7.0	4.0	5.5
7-8	9.5	13.0	10.0	8.5
10-11	12.5	16.0	10.0	9.0
13-14	12.0	16.0	9.5	10.0
17-18	15.0	18.0	20.0	16.0
19-20	28.0	26.0	26.0	17.0

As stated previously, we cannot be certain in many instances in the newborn child which of the potential rudiments is destined to develop into the definitive frontal sinus. The frontal rudiment does not become clearly defined until the latter half of the first year and frequently not until the latter portion of the second year. There is usually a gradual increase in the size of the sinus in one or all diameters as age advances. Complete agenesis in certain directions may occur, however, thereby leading to great variations in the shape and size of the chambers.

In the majority of cases the frontal sinuses are asymmetrical, often to a marked degree, one encroaching upon the confines of the other and leading to a displacement of the intervening septum, save just over the root of the nose where the septum is usually medianly placed. Commonly the frontal sinuses are more or less divided into subcompartments and recesses by incomplete bony partitions.

Supernumerary Frontal Sinuses.—As would be expected from the rudiment potentials, super-

numerary frontal sinuses are commonplace. As many as 6 frontal sinuses have been observed in the same cadaver each with an independent connection with some portion of the frontal region of one or the other middle nasal meatus. Supernumerary frontal sinuses are variously arranged, being placed tier-like, one over the other, in the vertical plane; side by side in the sagittal plane; one behind the other in the coronal plane, some of which are always supra-orbital in position, shallow, and frequently extensive from side to side. Crista galli cells or sinuses arise as diverticula or recess-like extensions from the frontal sinuses. The pneumatization is usually a single cell, arising from either the right or the left frontal sinus.

Agenesis of the Frontal Sinus.—Rarely one or both frontal sinuses are wholly wanting. When missing in the vertical portion of the frontal bone, the frontal sinuses are frequently erroneously considered as totally absent. Careful examination, however, of these cases usually reveals a frontal sinus in the superior and medial part of the orbit, occupying the horizontal part of the frontal bone. Such frontal sinuses are often mistaken for anterior ethmoidal cells. In cadaveric material there is, of course, a great advantage in making a detailed analysis of the general sinus field and identifying variants of the frontal sinus which are located outside of the more usual geographic positions.

Nasofrontal Connections.—The frontal sinus variously communicates with (1) the pouch-like frontal recess of the middle nasal meatus, either by means of a constricted canal, the nasofrontal duct, or by a direct frontal ostium; (2) a frontal extension of the ethmoidal infundibulum; or (3) rarely the suprabullar recess. The precise nasofrontal connections vary enormously. Passing an instrument into the frontal sinus by way of natural openings without serious injury to the related parts is utterly impossible in some cases. This is due to the restricted and serpentine arrangement of the nasofrontal passage-way and the encroachment of certain frontal anterior ethmoidal cells. In other instances the connection between the nose and the frontal sinus is more direct and freer, admitting readily of an exploratory probe. In many cases the approach of the frontal sinus when blocked by tortuous and inadequate natural connections may be accomplished without great difficulty by way of an agger nasi cell (usually an infundibular cell). In passing a frontal probe we must be careful in many cases to avoid the ethmoidal infundibulum and certain of the frontal anterior ethmoidal cells. On the contrary, should the

frontal sinus have arisen from the ethmoidal infundibulum, entrance to the frontal sinus by way of this channel would be required. This approach also may fail, owing to inadequate size and irregularities. There are many and important variations in the regional anatomy of the nasofrontal connections. Careful dissection of a considerable number of nasofrontal regions is required to point out the dangers of instrumentation in the field without a proper conception of the anatomy of the part.

THE SPHENOIDAL SINUS

The posterior cupolae or recesses of the early nasal cavity are in a sense the rudiments of the sphenoidal sinuses and are demonstrable as early as the fourth month of fetal life. It is not until after the sphenoidal conchae or ossicles of Bertin fuse with the sphenoid bone at age 4 that the sphenoidal sinuses begin to pneumatize the body of the sphenoid bone proper. Despite this the sinuses of the term fetus have a capacity of 6 to 8 cubic mm.

Once the sphenoidal sinuses begin to pneumatize the body of the sphenoid, they expand most rapidly in the dorsolateral aspect and early come into moderately intimate relationship with the ophthalmic and maxillary nerves, thus probably becoming a factor in childhood neuralgia of the trigeminal nerve, even as early as age 4 or 5. The floor of the early sinus likewise is active in expansion, coming into close relationship with the vidian nerve and vessels located in the vidian canal. The optic nerve does not gain an intimate relationship with the sphenoidal sinus until much later.

Table III indicates in a very general way the growth of the sphenoidal sinuses from birth to puberty. Early there is a symmetry in the right and left sinuses; at puberty inequality of growth begins to make its appearance.

TABLE III
GROWTH OF THE SPHENOIDAL SINUSES

Age	Side	Height (millimeters)	Width (millimeters)	Length (millimeters)
1	R	2.5	2.5	1.5
	L	2.5	2.5	1.5
2	R	4.0	3.5	2.2
	L	4.0	3.5	2.2
5	R	7.0	6.5	4.5
	L	6.5	6.8	4.7
9	R	15.0	12.0	10.0
	L	14.5	11.5	11.0
14	R	14.0	9.0	12.0
	L	15.0	14.0	7.0

Certain Adult Morphologic Features.—The paired sphenoidal sinuses not only pneumatize the body of the sphenoid bone but frequently

extend into the great wings, the pterygoid processes, and the rostrum of the sphenoid. The basilar process of the occipital bone likewise is invaded when the sphenoidal sinus extends its growth dorsalward to a marked degree. Occasionally the sphenoidal sinuses extend forward into the posterior ethmoidal field and replace certain posterior ethmoidal cells. Less frequently a forward and downward recess extension of the sphenoidal sinus establishes an intimate relationship with the maxillary sinus, a very thin lamella of bone and the mucous membranes alone intervening. Rarely there is a direct communication between the 2 chambers. The approach of the sphenoidal sinus by way of the maxillary sinus would appear simple in many cases.

Although the sphenoidal sinuses may be more or less equal in size and shape, in the majority of cases they are asymmetrical and frequently the asymmetry is carried to an extreme degree. In the latter instances the sinus of the one side may be pea-like in size and shape whereas the opposite sinus is of enormous capacity, not only establishing relationships with important structures of the same side but with the same structures of the opposite side as well. This factor must be borne in mind in symptomatology, diagnosis, and treatment.

In a study of more than 3000 sphenoidal regions, the writer never found even the slightest evidence of true supernumerary sphenoidal sinuses. Sphenoidal extensions of posterior ethmoidal cells above the sphenoidal sinuses are extremely commonplace, but this does not mean that there is a doubling of a sphenoidal sinus. It appears that never does more than one rudiment potential come into being for each sinus; hence, no duplications can occur.

The entire sphenoidal body may be pneumatized, in which case the sinuses extend beneath the hypophysial fossa, even invading the basilar process of the occiput. Occasionally the sinuses are extremely diminutive bilaterally, sometimes mere dimples in the region of the sphenoid-ethmoidal recesses. In such cases posterior ethmoidal cells are apt to grow backward beyond the confines of the ethmoidal field and extensively pneumatize the body of the sphenoid bone. The latter cases prove puzzling when an attempt is made to pass an instrument, because the usual ostium of the sphenoidal sinus merely leads into an extremely shallow depression. The skiagram interpretation would, in all likelihood, list such ethmoidal cells as true sphenoidal sinuses. From a topographic point of view this would, in essence, be correct, but from a genetic

aspect it would be incorrect. Then, too, these ethmoidal extensions into the body of the sphenoid have their communication with either the superior or the supreme nasal meatuses, which, of course, stamps them as true ethmoidal cells. The very common ethmosphenoidal sinuses should not be confused with the large posterior ethmoidal cells, which totally replace the sphenoidal sinuses. Sometimes the body of the sphenoid bone is but slightly, if at all, invaded by diminutive sphenoidal sinuses; moreover, posterior ethmoidal cells fail to effect pneumatization of the body of the sphenoid. Thus, the latter remains a solid mass of bone.

Under typical conditions each sphenoidal sinus communicates with the corresponding ethmosphenoidal recess, located above the highest and most dorsal of the ethmoidal conchae, by means of a small aperture, the sphenoidal ostium. This aperture is located in the anterior wall of the sphenoidal sinus and in the dorsal wall of the sphenoid-ethmoidal recess from 3 to 20 mm. above the sinus floor. Occasionally the ostium of the sinus is located in the angle formed by the posterior and lateral walls of the sphenoid-ethmoidal recess. An ostium in this position is difficult to locate, and passing the exploratory probe is much more of a problem than when the aperture is located in the more usual position directly on the dorsal wall of the sphenoid-ethmoidal recess.

Important Relationships of the Sphenoidal Sinus.—The relationships of the sphenoidal sinus are extremely important. These are variable because the sphenoidal sinuses are not constant in size and shape. Frequently a marked asymmetry of the chambers complicates the relational anatomy. Generally speaking, the hypophysis cerebri is located above the sinuses and the optic chiasm rests upon the hypophysis, the diaphragma sellae alone intervening. Above and lateral to the sinuses are the optic nerves, often separated from the sinus mucous membrane by mere paper-like bone, or the bone may be entirely wanting, in which case the meninges alone separate the nerves from the sinus mucous membrane. Lateral to the sphenoidal sinuses are the dural cavernous sinuses with the related oculomotor, trochlear, ophthalmic, maxillary, and abducens nerves and the internal carotid artery in intimate relationship. The internal carotid artery very commonly throws the sinus wall into a bold serpentine relief, and there may be dehiscences in the bony wall, leading to a direct contact between the artery and the mucous membrane of the sinus. In the floor of the sphenoidal sinus is the pterygoid canal with the contained vidian vessels and nerve, often with

osseous dehiscences. The relationship of the vidian nerve to Meckel's ganglion should be recalled in this connection.

Owing to the many variations in the anatomy of the sphenoidal sinuses, the relational anatomy cannot be constant. This, of course, affects the precise symptomatology when the sinuses are diseased. So far as the optic pathway is concerned, it is the optic nerve in front of the chiasm that is apt to be involved rather than the chiasm. The latter is located over the hypophysis and is generally involved in hypophysial tumors and hydrops of the third ventricle. The typical visual field manifestation, if any, in sphenoidal sinus and posterior ethmoidal cell involvement is an ipsilateral temporal hemianopsia, whereas a chiasmal lesion typically gives a bitemporal hemianopsia. When, however, a sphenoidal sinus of one side is so large as to make prechiasmal contacts with both optic nerves, a bitemporal visual field defect may likewise result. This would also be possible should both the right and left sphenoidal sinuses be simultaneously involved. All of these factors come to be important in differential diagnosis.

Osseous Septa and Recesses.—The frequent osseous septa, which isolate recesses and partially divide the cavities of the sphenoidal sinuses into subcompartments, are confusing and make satisfactory drainage of the sinuses extremely difficult in some cases even though the anterior wall of the sinuses be freely opened. One merely needs recall the important structures in intimate relationship with the sphenoidal sinuses to appreciate the hazards of curetting the sinus walls. Also, the extreme irregularities of some sinus walls, the recesses, and partial septa add to the difficulties. One especially thinks of the nearness of the internal carotid artery, the cavernous sinus, the maxillary and optic nerves, all of which are at times directly exposed to the mucous membrane of the sphenoidal sinus save for the intervention of the meninges.

ETHMOIDAL CELLS

The pre-existing secondary furrows and recesses of the middle nasal meatus from which proper ethmoidal cells develop are the ethmoidal infundibulum, the suprabullar recess, the bullar furrow, the infrabullar furrow, the frontal recess, and the frontal furrows. In the superior nasal meatus they are the ventral and superior extremity of the meatus proper, the superior recess, and the inferior recess. There is also the supreme nasal meatus.

The ethmoidal cells from their beginning in the fetus are divisible into 2 primary groups,

the anterior and posterior. The anterior group varies in number from 2 to 10 and communicates with various parts of the middle nasal meatus. This group is further subdivided into 3 secondary groups, a grouping maintained from infancy. Those cells which have their outlet in the frontal recess are the frontal anterior ethmoidal cells; those communicating with the ethmoidal infundibulum, the infundibular anterior ethmoidal cells; and those related to the ethmoidal bulla, the bullar anterior ethmoidal cells (the middle anterior ethmoidal cells of another terminology).

In accordance with its origin, the posterior group of ethmoidal cells communicates with the superior and the supreme nasal meatuses and varies in number from 1 to 11 cells. The superior meatus is differentiated in about 60 per cent of cases, and in 75 per cent of these posterior ethmoidal cells are in communication with it. The superior meatus practically always contains ostia of posterior ethmoidal cells; only rarely are they missing.

In a large number of observations it was found that the simplest ethmoidal labyrinth consisted of but 3 cells; the most complex labyrinth, of 20 cells. The ethmoidal field is fairly constant in size, and regardless of the number of cells, the entire field is more or less occupied. When few constitute the group, the individual cells are large, but when many cells compose the labyrinth, the individual cells must be much smaller, making for a honey-combed appearance. The term labyrinth applies well when 18 to 20 cells are massed together in the ethmoidal field, each cell jockeying with another for a place. This crowding leads to irregularly formed cells and frequently to growth away from the field primarily intended. Unusual relationships are thus established; moreover, the ostia or apertures come to be encroached upon or badly placed for effective drainage.

THE EXTRAMURAL EXPANSION OF THE ETHMOIDAL LABYRINTH

The extramural expansion has to do with the growth of ethmoidal cells into (1) the body of the maxilla, at the expense of the maxillary sinus; (2) the frontal bone, with encroachment on the frontal sinus or sinuses; (3) the sphenoidal bone, where partial or complete replacement of the sphenoidal sinuses may occur; (4) the ethmoidal conchae or turbinates, frequently resulting in bullous-like enlargements. These expansions of the ethmoidal labyrinth may be designated ethmomaxillary, ethmofrontal, ethmosphenoidal, and conchal.

Ethmomaxillary Sinuses.—True supernumerary maxillary sinuses and ethmomaxillary sinuses are not the same. Only in the sense that all of the paranasal sinuses have their beginning in the ethmoidal field is the grouping together permissible. True supernumerary maxillary sinuses are rare; ethmomaxillary cells, common. Developmentally, the ethmomaxillary cells are, as a rule, derived from the superior nasal meatus, usually from its inferior recess, rarely from the supreme meatus. A true supernumerary maxillary sinus develops from the depth of the ethmoidal infundibulum and in the adult always communicates with it, points in accord with the origin and adult anatomy of the maxillary sinus proper.

Clinically, a supernumerary maxillary sinus and an ethmomaxillary cell have much in common and their importance in practical work cannot be overstated. All degrees of development of ethmomaxillary cells are encountered. They usually encroach upon the maxillary sinus proper at its upper and dorsal angle. At times an ethmomaxillary cell occupies fully half of the body of the maxilla and extends well into the alveolar process. The ethmomaxillary cell may be missed altogether in practical work, especially when it is of the lesser size, because the operator is not likely to look for an ethmoidal cell in the maxillary area; moreover, it is almost wholly without the ethmoid field. The writer once saw this cell missed in Yankauer's extremely radical operation for the total extirpation of the ethmoidal labyrinth. The operator was the brilliant Yankauer, himself. The outlet of these cells is always located at the uppermost part of the chamber and badly located for drainage, and in this respect closely simulates the maxillary sinus proper.

Ethmofrontal Sinuses.—The ethmofrontal group of ethmoidal cells is the most complicated of this series. There are a number of genetic potentials for the formation of the early frontal sinus proper. Often the frontal sinus is first an ethmoidal cell, later becoming frontal in a topographic sense. Frequently 2 or more potential frontal rudiments develop into frontal sinuses. In addition, the frontal group of ethmoidal cells variously impinges upon the frontal sinus or sinuses. Sometimes there is a series of anterior ethmoidal cells which extend for a greater or less distance into the frontal bone and nest beneath and in front of the frontal sinus. Such cells variously communicate with the frontal recess, the ethmoidal infundibulum, and the neighborhood of the ethmoidal bulla. Less frequently does a posterior ethmoidal cell encroach upon

the frontal region. Ethmofrontal expansions into the supra-orbital plate of the frontal bone are extremely common. They may be small and hug the cribriform plate of the ethmoid. Again, they expand widely over the orbit.

It is largely an academic question whether some of these larger expansions over the orbit should be considered true frontal sinuses or ethmosphenoidal cells. It matters very little clinically what name is applied to these cells. The important thing is to know that such anatomy often exists. Regardless of the number of frontal sinuses and the more anterior of the ethmoidal cells, all commonly have their apertures in the frontal recess; therefore, operative procedures in this region probably would lead to drainage of most of them. The ethmofrontal expansions from the ethmoidal infundibulum, the suprabullar furrow, and the superior and supreme meatuses would not be reached by way of the frontal recess. It must always be borne in mind that frequently these cells have variously sized membranous and osseous septa which lead to the formation of recesses and pockets. Operative procedures by way of the nasal cavity probably would fail to effect drainage in some of them.

Ethmosphenoidal Sinuses.—The ethmosphenoidal group of sinuses, although not constantly present, are of very frequent occurrence. They are in reality posterior ethmoidal cells which develop from the superior and the supreme nasal meatuses and expand backward into the body of the sphenoid bone, usually over and lateral to the sphenoidal sinuses proper and less frequently beneath them. The sphenoidal sinuses are often markedly encroached upon, and some of their important anatomic relationships are lost because of these extra-ethmoidal extensions. In turn, the ethmosphenoidal sinuses gain these anatomic relationships. For example, the optic nerve, although usually considered as related to the upper and outer angle of the sphenoidal sinus, comes to bear an intimate relationship to the ethmosphenoidal sinus or sinuses.

Sometimes large recesses formed in the posterior portions of the sphenoidal sinuses by tall partial osseous septa are apt to be mistaken in roentgen studies for ethmosphenoidal cells. Ethmosphenoidal cells are never seen dorsal to the sphenoidal sinus. This observation should prove helpful, because it is in the most dorsal and inferior portion of the sphenoidal sinus that we are apt to find the largest and deepest of the sphenoidal recesses and pockets, the result of osseous septa. That the ethmosphenoidal cells are not true sphenoidal sinuses, despite the fact

that they are often largely sphenoidal in topography, is proved by the fact that they communicate with the superior and the supreme meatuses or are mere extensions of posterior ethmoidal cells.

Conchal Cells.—The conchal cells, found so frequently in the middle nasal concha, the agger nasi, and the uncinat process, are in the majority of cases ethmoconchal cells. Those in the middle concha are usually mere expansions of posterior ethmoidal cells whereas the agger and uncinat cells nearly always grow from the ethmoidal infundibulum. These ethmoconchal cells at times become very large and obstructive in character, and may become the seat of a mucocele or abscess. In no sense, however, do conchal cells owe their genesis to such pathologic conditions, as is so frequently stated. It is a simple matter to follow the development of the conchal cells from their genetic areas to the adult anatomy provided that suitable material is at hand. The mucous membrane of the cells is like that of the regular ethmoidal cells, and some conchal cells contain a sparse number of glands. Rarely conchal cells develop from and into the deep surface of the middle nasal concha directly and communicate with the middle nasal meatus.

THE MUCOUS MEMBRANE

Typically, the epithelium of the human paranasal sinuses is either simple or pseudostratified, composed of a surface layer of ciliated cells, among which are an inconstant number of goblet cells and more deeply a variable number of important basal cells. The epithelial elements rest upon a basement membrane, beneath which is the subepithelial connective tissue stroma. The latter is more or less divided into 3 layers: (1) The superficial stroma, containing the blood and lymph capillaries; (2) the loose middle stroma, containing a sparse number of glands; (3) the deep stroma, in which are contained the larger blood and lymphatic vessels. The mucous membrane as a whole rests upon the periosteum, which is either strong and well formed or extremely rudimentary. Together the parts may be called a mucoperiosteum.

The sphenoidal and frontal sinuses contain very few glands in the mucous membrane, and these are rudimentary and located principally in the neighborhood of the drainage apertures. The ethmoidal cells likewise contain but few glands. On the lateral wall of the maxillary sinus there is a paucity of glands, whereas on the medial wall many glands are found, especially near the ostium.

The mass action of the cilia is ultimately to-

ward the ostia of the several sinuses, and the lymphatic capillaries unite into larger channels which follow the mucous membrane through the ostia and connect with the lymph vessels of the nasal fossae.

The normal mucous membrane varies much in thickness in the several sinuses and in different parts of the same sinus: Maxillary sinus—medial wall, 0.2—1.2 mm., lateral wall, 0.1—0.5 mm.; frontal sinus, 0.06—0.5 mm.; ethmoidal cells, 0.08—0.45 mm.; sphenoidal sinus, 0.07—0.6 mm. The average thickness in health varies from 0.6 mm. for the medial wall of the maxillary sinus to 0.1 mm. for the ethmoidal, sphenoidal, and frontal sinuses. A comparison of these normal averages with the thicknesses, varying from 2.0 to 6.0 mm., that occur in pathologic states makes one curious regarding the causative factors.

Broadly speaking, the increase in thickness of the mucous membrane in pathologic states is variously due to exudative, proliferative, and degenerative changes. Normally there are very few goblet cells, but slight irritation of the proper sort produces a rapid increase in these cells. If the irritation is severe or prolonged, both the goblet cells and the ciliated epithelium suffer mucoid degeneration.

Some of the increase in thickness is due to turgescence of the vascular channels and stasis of fluids and juices in the tissue spaces and the lymphatic capillary beds. There is also a cellular infiltration of the connective tissue stroma and an increase in the fibrous tissue elements themselves.

The epithelium, too, may undergo a marked thickening, due to rapid increase in the number of undifferentiated basal cells, which undoubtedly have the capacity to differentiate into both goblet and ciliated cells, depending apparently

upon the specific irritant. Important, then, in a practical sense is the fact that the multiplication or hyperplasia of the undifferentiated basal cells must be looked upon as a good omen, for they become replacement cells for destroyed and shed ciliated epithelium. The increase in thickness of the mucous membrane due to the proliferation of the basal cells must be thought of as a defense reaction or repair mechanism. In some of these cases at least, perhaps in many, conservative measures should be adopted, for once the irritation subsides the number of basal cells becomes reduced and the mucous membrane correspondingly lessened in thickness. To curette the mucous membrane when perhaps conservative measures would effect a cure seems a faulty procedure, because the real defensive and repair and replacement elements of the mucosa would be destroyed. Mere thickening of the mucous membrane does not necessarily justify such radical measures.

In the degenerative types of sinus disease there is desquamation of the epithelium, ulceration, and necrosis. The connective tissue stroma may show polypoid and degenerative cystic changes of the tissue spaces and glands. In this case the patient obviously has no longer an adequate defense reaction, and the treatment required needs to be more radical.

It appears not only that the ciliated epithelium and the basal cells, from which the former are derived, are important in a return of the mucous membrane to moderately normal conditions, but also that the connective tissue stroma likewise is of value, having a rôle in the rebuilding of a diseased mucous membrane, perhaps greatly modified but nevertheless fairly healthy and serviceable.

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ROENTGEN-RAY DIAGNOSIS OF ACCESSORY SINUS DISEASE*

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The roentgenologist does not need to know the minute details of the development and anatomy of the accessory sinuses necessary for the rhinologist, but it is most important for him to know the distribution of the various groups, their relation to each other, and the common variations in numbers and size. Roentgenographic technic is based on these relations and those of

the base of the skull. It is probably the most exacting of all roentgenographic work.

ANATOMY

During the first year of life the maxillary antra and ethmoids are subject to roentgen-ray diagnosis. The sphenoids usually become evident in the second or third year although at this time they can scarcely be distinguished, and the frontal sinuses, seen first as projections upwards

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

into the frontal bone, become apparent from the third year.

There is appreciable variation in the development of the several groups of sinuses in different persons as well as in the same individual. The frontal sinuses show the widest variation from entire absence to large size on one or both sides of the median line. They may have single or multiple cells on one or both sides. They vary in depth as well as in width and in the thickness of their bony walls. These variations are responsible for inconstancy in the roentgenographic appearances and are frequently responsible for misinterpretation. Their anatomic characteristics become a matter of the first importance to the surgeon when they are definitely diseased.

The ethmoid cells also vary greatly in number and size, as well as extent of distribution, and often require special roentgenographic attention. The anterior group cannot always be distinguished from the posterior group by means of roentgenograms, but usually the gross distribution can be determined.

The variation is much more evident in different persons than in the 2 sides of the individual. Of particular importance are the occasional large supra-orbital cells of the anterior group and the large cells of the posterior group that are frequently seen in close relation to the upper posterior walls of the maxillary antra.

The maxillary antra are the most nearly constant and uniform in the individual, but differ materially as to size in different persons. When they differ as to size in the individual, the bony walls of the smaller are definitely thicker than those of the larger and this becomes evident in the roentgenogram.

The variation in the sphenoids is seen in the same individual and in different persons. In addition, the distribution of the bony septum dividing the right from the left varies so that the right cannot always be definitely distinguished from the left.

RADIOGRAPHIC TECHNIC

Angles of exposure for isolating the shadows of the individual groups of sinuses have been described by various authors. All of them have definite merit providing the adjustments of the patient, tube, and film are accurate.

When an exposed film is intended to show a comparison between any group or all of the sinuses of the right and left sides, it is absolutely essential that the central beam of roentgen ray pass through the sagittal plane of the head; that is, it must enter the median line posteriorly and

exit anteriorly in the same line. Any variation from this may lead to an error in diagnosis, especially in the case of the ethmoids and maxillary antra.

Median line exposures are made at various angles to the base line of the skull. Eugene W. Caldwell was the first to determine the angle that would give the best result for all of the sinuses in a single exposure. He determined this to be from 23° to 28° from a plane passing through the glabella and the external auditory meatus, which he called the base line, the central ray emerging through the median line at the glabella in contact with the plate or film. This is still the most important single exposure and should always be used, because it is the best position for a comparison of the 2 frontal sinuses and the anterior group of ethmoid cells.

Frederick M. Law prefers the 23° rather than the 28° angle for adults but points out that in the case of children this angle should be diminished in inverse proportion to the age of the child, because the petrous portion of the temporal bone obscures the maxillary antra at 23° in young children.

In view of the fact that the petrous portion of the temporal bone varies in size and density, it frequently happens that even in adults the maxillary antra are obscured in this exposure. To overcome this, Charles A. Waters described a position of the patient with relation to the tube and film that freed the antra from the shadows of the petrous portion of the temporal bone. He placed the chin of the patient in contact with the film holder, the nose being from 1 to 1.5 cm. from the plate holder, and had the central ray pass through the median line parallel with the floor of the antra and perpendicular to the surface of the film. This arrangement shows the antra and the posterior ethmoids to the best advantage. However, when the antra are filled with exudate or diseased tissue, the posterior ethmoids are so obscured that still other exposures are necessary. The best adjustment for this is to place the patient so that the central ray will emerge through the outer third of the orbit. The supra-orbital ridge, the side of the nose, and the malar bone must be in contact with the film holder, the central beam passing through the head at from 10° to 15° above the perpendicular line to the film. This is an oblique view and shows to advantage only one side at a time. It is necessary, therefore, to make similar adjustments for the posterior ethmoids of the opposite side.

The sphenoid sinuses are more difficult to radiograph than the others, because they are so

deeply situated and, therefore, rather far from the film. To determine the size and relations, and perhaps to determine the presence or absence of disease, stereoscopic films in the lateral position furnish the best view. But it cannot be determined in this way whether one or both are involved. Median line exposures are necessary. George E. Pfahler devised a small cassette with screens which can be put in the patient's mouth after a local anesthetic has been applied to the mouth and pharynx. The cassette, covered with thin rubber, can then be brought into firm contact with the pharynx and held there by the teeth. In this manner it is possible to bring the films into close relation to the sphenoids. The exposure is through the median line at an angle necessary to project these sinuses onto the film. This method deserves more attention than it has received.

David R. Bowen isolated the sphenoids with a median line exposure by having the patient in the supine posture, with his head hanging down over the end of the table resting on a suitably placed film holder, and having the central ray enter back of the chin and emerge on the center of the film after passing through these sinuses. The results under favorable conditions are satisfactory, and the exposure has the added value that it is the best position for obtaining views of the inner ends of the petrous portions of the temporal bones. Probably the most popular position is to have the patient's chin rest on the film, and the central ray pass in such a way as to permit the shadows of the sphenoids to fall between the 2 halves of the mandible back of the chin.

Lateral views are of extreme importance. It is best to include the entire head for the reason that occasionally evidence of an unsuspected lesion is found. The adjustments must be such that the resulting radiograph will show the anteroposterior depth of the frontal sinuses and as much as possible isolate the ethmoid shadows from those of the orbital rims. The central ray should be parallel with the floor of the anterior fossa of the skull at about the anterior clinoids. This view presents to the best advantage the fine detail, which is so important to determine whether or not the thin cell walls of the ethmoids are normal, and furnishes important information with regard to the sphenoids, the sella turcica, and the remainder of the head.

Regardless of the position or the group of sinuses under consideration, stereoscopic views are vastly more valuable than single projections. In the median line exposures the stereoscopic view will compensate for any small deviation

from the proper angle of exposure. In any position it provides a means of localization of extra sinus shadows, and brings to normal size the shadows that are exaggerated because of the distance of the parts from the films.

There are many advantages in having the patient in a sitting rather than a prone posture. The patient is far more comfortable; children co-operate much more readily; fluid levels can be seen only in this posture; with the head resting against transparent celluloid we can readily see exactly where the central ray will emerge; with a head band controlled by ratchets on either side, fixation is accomplished to the best advantage.

In my apparatus the focal spot of the tube bears a fixed relation to the center of the film. The distance, 36 inches, is constant and the central ray always strikes the center of the exposure area. I prefer to displace the tube in the sagittal plane for the anteroposterior views and in the coronal plane for the lateral views. The resulting anteroposterior films can be viewed separately or stereoscopically, each one permitting comparison between the 2 sides. The lateral films made with the tube shift in the coronal plane give a better idea of the distribution of the sphenoids than if the tube is shifted parallel with the base of the skull.

Fine detail in the shadows is essential for accurate interpretation; hence, small focal spot tubes are necessary. The films should show a definite degree of contrast and this is controlled by selection of the proper voltage. I prefer the use of intensifying screens, and control the amount of scattered radiation by means of cones limiting the area of exposure. Films made with the Potter-Bucky diaphragm have too much contrast. If the bone structures are sufficiently penetrated to give good density, the delicate soft tissue shadows are too dark for easy interpretation. Then, too, the exposures without the Potter-Bucky diaphragm are so much shorter that a larger number of films can be exposed without danger to the patient.

The actual exposure factors cannot readily be prescribed for all patients. They vary with the age of the patient, the size of the head, and the actual thickness of the bones of the vault as well as the base of the skull. The roentgenologist should determine that the exposures are satisfactory before discharging the patient or have him return for re-examination before undertaking to interpret them.

INTERPRETATION OF FILMS

Interpretation is not difficult within certain limits if the films are properly exposed from a

sufficient number of suitable angles, providing the roentgenologist has a definite knowledge of the anatomy and pathology involved, and good roentgenologic judgment. At least this is true when dealing with older children and adults. In the case of infants and young children, the technical results are not uniformly good because it is hard to get the patients to co-operate, although if we have enough patience, perseverance, and ingenuity, it is usually possible to obtain diagnostic films.

In the infant the bones are not fully developed. They lack the sharp, dense cortical surfaces seen in the adult. Also the mucous membrane is relatively thick; the cavities are small and contain only small amounts of air. Skill must be acquired by experience. If one antrum contains air and the other does not, the problem is easy. If neither of them contains air, we must depend upon the evidence of bone development to decide whether or not they should contain air. The question of organized disease tissue is not to be considered. At this age exudate or retained secretions are almost invariably responsible for the absence of air. These remarks apply also to the ethmoids, but it is much more difficult to determine the degree of development.

As the sinuses develop, the inner bony walls become more sharply defined in the roentgenograms; the air column becomes deeper so that a definite degree of contrast appears in the shadows. The presence or absence of air is more confidently recognized.

In children we must be content to say that there is or is not evidence of disease, or that there is or is not a normal amount of air present. When the bones are fully developed, the outlines of the various sinuses become quite distinct, the thin cell walls of the ethmoids show delicate but sharp detail in the films, the contained air brings definite contrast, and the anatomic characteristics are readily recognized. If air is displaced partly or entirely by exudate or diseased tissue, the detail, contrast, or both vary from the normal. The extent and character of variation lead to a report of the findings in terms of either shadow variation or pathologic condition. There may be slight, moderate, or marked cloudiness in the shadows, or there may be some degree of thickening of the lining membrane, exudate, polyp, cyst, or bone changes present.

There is justification, too, for these various terms. Congestion or edema of the mucous membrane does change the density of the shadows or produce a certain degree of cloudiness. The air column is not sharply defined because the surface of the membrane is not firm enough.

If the films are exposed with the patient in the prone posture, any amount of exudate will produce a certain degree of cloudiness without giving the definite information that exudate is present in the maxillary antra or frontal sinuses. With the patient in the erect posture, if both exudate and air are present, the exudate goes to the dependent portion and a more or less distinct fluid level becomes apparent. If the exudate is thick or tenacious, its surface will be somewhat irregular or concave. Under these conditions the report indicates the amount of exudate instead of degree of cloudiness. Fluid levels are not seen in the ethmoid cells or sphenoids; consequently, the term cloudiness or degree of density prevails regardless of the posture. The extent of thickened membrane or granulation tissue, in the absence of exudate, can frequently be recognized in the maxillary antra, but rarely in the other sinuses. The older the lesion, the more definite is this sign. The bone outline remains distinct until the density of the membrane approaches that of bone, or until bone changes develop. In this stage the lesion is a chronic process.

The variation in size and depth of the frontal sinuses causes variation in the density and contrast of their shadows. When they are of average normal size and depth on the 2 sides, the density of their shadows should be approximately like that of the orbits. When one frontal is diseased and the other normal, the difference in density of the 2 sides enables an experienced roentgenologist to judge rather accurately the type of lesion and often its extent. If the sinus is so dense as to indicate purulent exudate, special effort should be made to determine its anteroposterior diameter at the floor of the sinus, because this is a point of importance to the surgeon.

The thin cell walls of the ethmoids do not retain their crisp, sharp definition very long in the presence of infection. Either they become thickened and cast blurred, dense shadows, or they are absorbed and cast pale, indistinguishable shadows. Law uses the term fuzzy to describe their appearance when thickened, and it is an excellent term. In atrophic lesions these delicate bone shadows sometimes disappear, and when associated with atrophy of the turbinates their absence is diagnostic.

One of the more common results of inflammation in the sinuses is the formation of polyps. They cast distinguishable shadows in the antra providing they do not completely fill the cavity. Polyps are occasionally recognized in the frontal sinuses, and rarely in the sphenoids, but not as

such in the ethmoids. The rounded surface of the polyp projecting into the air-filled cavity casts a characteristic shadow, the density of which depends upon the age of the polyp. In some cases all of the sinuses as well as the nares are completely filled with polypoid tissue. The outline of the sinuses can be recognized in the films. The density of the sinus shadows is strikingly uniform throughout so that the roentgenologist can be certain there is no air present.

Cysts are occasionally seen in the antra, usually in the floor. They are distinguished from polyps by a dense shell and less dense center whereas the polyp is of uniform density.

A mucocele, found most commonly in the frontal sinuses, produces a characteristic appearance because it enlarges the sinus, displacing adjacent structures. It does not cast a dense shadow because it contains only mucus.

Other growths, such as carcinoma or sarcoma, are recognized by marked density, evidence of bone destruction, and the invasion of the orbit or nasal cavities. They are found in the antra more often than in the other sinuses.

Either the referring physician should give the important clinical data, or the roentgenologist should take at least a brief history. It is especially important to know whether any operative work has been done, and the extent of it.

The roentgenologist should learn whether or not the patient has just had the sinuses aspirated or irrigated, because if all the exudate has been removed the sinuses may give a relatively normal appearance. Also, if they have been irrigated and fluid remains, this fluid may be mistaken for exudate.

It is probable that roentgenologists sometimes try to differentiate too finely, or report changes that are difficult for the rhinologist to substantiate by his methods of investigation. Contrariwise, the rhinologist may actually see pus at the ostium of a sinus that may give a normal roentgenographic appearance. Too often under such conditions criticism takes the place of co-operation.

When doubt arises or there is a difference of opinion as to whether or not a sinus is diseased, it should be injected with iodized oil and then roentgenographed in the anteroposterior and lateral positions. The injection should be made by the rhinologist.

There should be very close co-operation between the rhinologist and roentgenologist in all phases of the study, and it ought not to be a difficult matter for the 2 to agree in each instance.

It is probable that in infancy, before the sinuses contain much air, a direct and thorough

nasal examination by a skilled rhinologist is more reliable than the roentgen method.

CLINICAL CONSIDERATIONS

A very large proportion of all cases of chronic sinus infection begins in infancy or early childhood, but generally speaking this condition receives no consideration on the part of the parents or the physician. Recurrent attacks gradually change the normal into chronically infected membranes, and eventually complications arise that are taken to be disease entities without being recognized as the direct result of sinus lesions. It is unfortunate that the local evidence of sinus disease is not more striking or impressive.

Edward H. Campbell found that practically 100 per cent of 150 consecutive patients with ear infection had sinus infection, which he looked upon as an etiologic factor. In another group he reported the study of 130 patients with lobar or bronchopneumonia. The ages varied from 3 months to 90 years, but only 7 were adults. Evidence of sinus disease was found in 100 per cent, and in this group 80 per cent had ear involvement.

M. M. Cullom found that 85 per cent of more than 100 consecutive cases of mastoiditis had an accompanying sinus condition, and in all of them there was a diseased sinus on the same side as the infected mastoid.

In a study of 200 cases of bilateral bronchiectasis Louis H. Clerf found that 82.4 per cent had sinus disease.

The literature contains many articles of this character by men who have looked to the sinuses as the source of infection. Most of them note the lack of symptoms of sinus disease.

Chronic bronchitis, bronchiectasis, asthma, recurrent pneumonia, and middle ear disease in children are almost invariably associated with sinus infection. In many of the instances this has been substantiated, the sinus study having been made without the request of the referring physician, because of the roentgenographic appearance of the mastoids or lungs. The same is true of adults except that there is some variation in percentages.

Any definite evidence of sinus disease is of real clinical importance. Frank B. Kistner makes the observation that the chronic, nonsuppurative, thickened membrane may be the more dangerous because it usually harbors streptococci, whereas the active, suppurative type most frequently has staphylococci.

If every parent and every physician were to look upon the recurrent common head cold, cough, repeated attacks of pneumonia, asthma,

earache, *etc.*, as evidence of sinus disease, much ill health could be avoided.

In former papers I have described lung changes that are more or less characteristic of sinus infection from the roentgenographic point of view. They are, briefly, thickening at the roots of the lungs, general peribronchial thickening (common in asthmatics), and bilateral lower lobe changes suggesting bronchiectasis.

Every roentgenologist should make roentgenograms of the sinuses when he finds these changes in the lungs. It will often prove to be a real service if the patient gets adequate treatment as a result of his findings.

Finally, it is a fact that infection in the accessory sinuses is frequently responsible for arthritis, cardiac disease, nephritis, meningitis, and all the other ailments traceable to focal infection.

SUMMARY

1. The roentgenologist should have a practical knowledge of the development, the anatomic variations, and the distribution of the accessory sinuses and adjacent bony structures.

2. Roentgenographic exposures must be made at a sufficient number of suitable angles so as to give unobstructed views of all the various groups. Stereoscopic views are much superior to single views at a given angle of exposure. The tube should be displaced in the sagittal plane for anteroposterior exposures and in the coronal plane for lateral exposures. Oblique views require special consideration. There is advantage in having the patient in the upright rather than prone posture.

3. Interpretation must be based on history, accurate technic, and good roentgenologic judgment. Re-examination should be made if doubt exists, and for the purpose of determining the result of treatment.

4. There should be close co-operation between the rhinologist and roentgenologist.

5. More serious consideration should be given by the attending physician to the sinuses as an etiologic factor in acute and chronic infections of the ears and lungs and any other disease capable of resulting from focal infection.

235 South Fifteenth Street.

GROUP HOSPITALIZATION FROM THE MEDICAL STANDPOINT*

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This report is based upon information obtained during a recent visit to the executive offices of the hospital service corporations in Cleveland, New York, and Washington, D. C., and upon calls made on prominent physicians who have had experience with these respective plans. In this discussion unnecessary details will be omitted. Only those characteristics common to all of the plans which have given rise to doubts and questions on the part of the medical profession will be presented.

Each plan proposes in one way or another to purchase hospital care in semiprivate rooms costing from \$5 to \$6 per day, for moderate wage earners, through periodic payments of about 3 cents per day. Cleveland also has a ward plan at a cheaper rate.

The plan is safe only when applied to groups who are in average health and who have steady incomes. One of our hosts during the trip said, "The group is the unit of the plan. No one gets anything for nothing, so in this instance it is a case of you scratch my back and I'll scratch yours."

Average health is necessary as it is at once ob-

vious that only a small percentage of the total subscribers can derive hospital benefits during any one year without wrecking the plan. Employed groups are preferred because they can continue to keep up their payments. Where pay roll deductions are possible, the problem is greatly simplified.

In the plans studied by our committee the smallest group accepted consisted of 10 persons. In Cleveland groups of 10 and multiples of 10 employed persons are accepted, and collections are all in the nature of pay roll deductions or group payments through organization officials. In New York the smallest group permitted is 10, but once the first 10 are in, there is no limit to the additional number. In Washington an employed group of 10 is taken only when the 10 makes up at least 40 per cent of the total group in the department or organization of one employer.

The only other qualifications for membership are that the subscribers must be under age 65 and must sign application blanks certifying that to the best of their knowledge and belief they are in sound health. No physical examinations are required.

* Read before the Conference of County Society Secretaries and Editors, Harrisburg, Dec. 10, 1935.

The benefits to the subscribers are in hospital service only, and *hospital service is the capital behind the plan*. Service associations do not come directly under the insurance laws of the state and no large funded reserve is required. If they paid monetary indemnities they would have to provide a sinking fund of \$150,000 or more before they could begin to operate. Everyone connected with the plans feels that there should be a reserve fund to meet possible disasters such as a great epidemic or some widespread catastrophe.

The rate of \$9 per year was determined upon as the amount which would provide 10 per cent of subscribers with hospital service annually. Actually the number has been in the neighborhood of 8 per cent. The difference between this actuarial amount and the calculated amounts is being used to build up the reserve funds.

In a letter, under the date of Oct. 31, 1935, Dr. Walter F. Donaldson, secretary of The Medical Society of the State of Pennsylvania, raised a question as to what would become of any funds which might accumulate in excess of an adequate reserve.

In the first place all of the plans studied by us are operated by nonprofit sharing corporations so that no dividends are possible, no presents to participating hospitals can be made, no indemnities can be paid to subscribers, and no refunds are permitted under the agreements. Two possibilities of disposing of the excess remain: (1) A decrease in the rate, which is advisable only after the accumulation of a satisfactory reserve, and (2) an increase in the amount of hospital service.

Undesirable changes in service can be controlled readily by the medical members on the board of directors, since the promoters of the plans already have learned that the co-operation of the medical profession is essential to their success.

Changes already have been made which include increasing the number of hospital days and permission for discounts when a stay beyond the 21-day period is required. Cleveland has provided for members of the employed member's family to enter the plan by paying one-half the full rate and by being allowed a 50 per cent discount on a hospital stay of 21 days or less during any year. New York has admitted members of the subscriber's family at the full rate and for full privileges, but are finding that unemployed members of the family are bad risks, because every family picks its most unhealthy member for insurance.

In the communication from Dr. Donaldson,

previously referred to, he called attention to the plan in Easton, Pa., which proposes to include a family consisting of a man, his wife, and 2 or more children at the rate of \$24 per year. The Easton Hospital Plan is unfortunate, because it is built about a single hospital. This makes it less open to control by conservative groups and lays it wide open to destruction the moment the requirements for hospitalization exceed its capacity.

Nonetheless, family plans are under discussion elsewhere. Under proper control there is no particular menace to the practice of medicine by a family hospital service plan.

The following quotation from the Bulletin of the Associated Hospital Service of New York, May 20, 1935, which formed a part of an article signed by 91 of New York's prominent physicians, bears directly on the point. "Since the contract leaves undisturbed the financial relationship of doctor and patient, the physician's relationship here is the same as it would be with any other private patient."

Where the plan has been adopted it has grown rapidly. The Washington plan went into effect in July, 1934. It now has 9 out of 10 general hospitals as participants and more than 18,000 subscribers. The hospitals are paid twice monthly and one hospital has received as much as \$1400 at a single payment. The total number of subscribers hospitalized in Washington has exceeded 1000; the total hospital days, 9000.

The Cleveland plan went into operation in September, 1934. There are now nearly 18,000 subscribers. All of the hospitals except a small municipal hospital at Lakewood and the Cleveland Clinic, the majority of the patients of which come from outside the city, are participants. More than 850 patients have been hospitalized, but the amount paid hospitals was not stated.

In New York the plan was opened to subscribers in May, 1935. It now has over 35,000 members; 158 hospitals participate in the plan, including 25 qualified proprietary hospitals. Eight hundred patients have been hospitalized and \$45,000 has been paid out to more than 100 hospitals which have had patients. In all these 3 cities the subscribers are now increasing rapidly.

In all 3 places group hospitalization has been endorsed by the medical societies. In Cleveland the members of the Academy of Medicine are on the Board of Trustees, and a considerable number of physician members have formed groups of 10 and have become subscribers for the benefits. Dr. George Follansbee, chairman of the Judicial Council of the American Med-

ical Association, is a member of the Board of Directors. He stated that he approves the plan as it is carried on in Cleveland.

In New York the physicians banded together and studied the plan. They issued a bulletin to the medical profession citing 7 reasons why the plan is desirable, concluding as follows: "We bespeak the interest of all practicing physicians of Greater New York in this hospital service plan. We consider that it has been organized as a public service, which is beneficial to all concerned."

In each of the cities, however, there have been moot questions. One of these has been with reference to obstetrics. Cleveland makes no provision whatever for obstetric service and is not considering it seriously.

New York provides a maternity service after a wait of 10 months but will care for illnesses incidental to pregnancy before the full time provided the physician in charge certifies that the date of expectancy is beyond the 10-month period. The first full-term infant has yet to be born under the plan.

In Washington we were advised that obstetrics is highly expensive and were warned against considering it for full benefits. It was suggested that obstetrics might be included after 10 months by providing a 50 per cent discount to the subscriber. Under such an arrangement all illnesses incidental to pregnancy should be hospitalized.

In none of the cities are any physicians' obstetric fees included.

In each of the cities problems have arisen in connection with roentgen-ray and laboratory services and with reference to the administration of anesthetics. Both in Cleveland and New York anesthesia is included when the anesthetic is given by a technical employee of the hospital. A bill is rendered directly to the patient by the doctor if an anesthetic is given by him. In Washington anesthetics are all given by physicians and billed by them to the patients. No anesthesia is included in the benefits.

In Cleveland technical roentgen-ray service is included, but if the radiologist sees the patient or is called upon to interpret a radiogram, a bill is sent by him directly to the patient. In New York necessary technical roentgen-ray service is included, but bills are sent if unnecessary radiograms are made or if the radiologist is called as a consultant in the case. In Washington no roentgen-ray service of any kind is included.

In Cleveland and New York, blood, urine, and simple routine tests are provided but the more

complex tests are billed to the patient. In Washington the examinations are limited to blood, urine, and Wassermann tests. As a matter of fact surgical specimens also should be examined, not necessarily for the good of the patient but for the protection of the hospital as well as for research and teaching purposes.

The roentgen-ray and laboratory difficulties arose in the different cities because different practices had already existed in the way roentgen-ray and laboratory services were supplied to patients. Some hospitals owned and operated their roentgen-ray departments and procured the services of the radiologist on a full-time salary basis. Other hospitals simply furnished the space, the radiologist owning the equipment and operating on a percentage basis determined from the amounts of free and paid-for work. Still others were entirely independent. At the present time almost all hospitals employ a full-time salaried pathologist. The opportunities for the pathologist to derive income directly from paid-for work are very meager. The laboratory equipment is expensive and the tests are so numerous and varied that a corps of technical employees is necessary. This makes the overhead too great to be carried unless a considerable volume of work is assured. It is unusual for a hospital laboratory to earn its own way even if the assured volume of work is derived from a fairly constant number of hospital patients.

The acceptance of insured patients under a group hospitalization plan does not alter any of the above conditions, yet it has precipitated a great deal of discussion. From an entirely unofficial source I found that the arguments became so acute in one of the cities that hospital pathologists on a salary were accused of contract practice and threatened with expulsion from the county medical society. My informant said that the matter was referred to the American Medical Association for settlement, and that the decision was in favor of the pathologists. During my interview with Dr. Follansbee I inquired of him concerning the status of the physician who worked for a hospital on a full-time basis. He replied by reading the following paragraph from the Revised Code of Ethics of the American Medical Association (*J. A. M. A.* 102:2118. Amendments to the Code of Ethics, Chap. II, Art. VI, Section 4).

"It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, *etc.*, *etc.*, under terms or conditions which permit a *direct* profit from the fees, salary, or compensation received,

to accrue to the lay body or individual employing him."

The logical solution of all of these problems seems to be to extend to persons paying for hospital service under a group plan exactly the same privileges allowed to other private-room patients—no more and no less.

At every interview we asked what was thought of group hospitalization as an entering wedge for health insurance and socialized medicine. Almost everyone admitted that there was a possibility of confusing the 2 lines of endeavor. Several stated that as long as hospitals do not furnish medical services the 2 issues are unrelated. One emphasized the fact that all publicity and educational pamphlets must be very clear in explaining the differences and in drawing sharp lines between hospital service and medical service as rendered by the physician.

The dean of a medical school, whose name I neglected to get permission to quote, expressed the opinion that health insurance eventually would have to be faced by the medical profession and settled on its own merits, or the lack of them, regardless of whether group hospitalization was approved or not. He favored group hospitalization because it is a boon to a large number of worthy citizens, because it does not decrease standards of service, and because it does not disturb the relations between the physician and the patient. He hoped that, by conceding a prepayment plan for hospital service, the medical profession's position against health insurance, which unquestionably does lessen standards of service and which does disturb the relationship between the physician and the patient, might be strengthened with the public.

Parkway and Sandusky Street.

PEDIATRIC THERAPEUTICS*

WILLIAM N. BRADLEY, M.D., PHILADELPHIA

The chairman of the section has requested a report upon the progress made by the Philadelphia Pediatric Society in securing pediatric representation on the committee having in charge revision of the United States Pharmacopœia and the National Formulary. A brief consideration of the processes leading up to the question may be of interest.

We have viewed with concern the lack of information possessed by recent graduates in medicine upon the subject of pediatric therapeutics. There is some justification in placing the responsibility in a measure upon our medical schools.

The physician just starting in practice with an insufficient knowledge of therapeutics either becomes a drug nihilist fostered by his ignorance, or else falls an easy prey to the high pressure salesmanship of the detail man, who delights in advising him how to treat his patient. He faces a vicious circle, knowing less and less of the value of drugs and depending more and more upon the samples with meaningless names supplied by the various drug manufacturers. Many examples could be cited to illustrate this deplorable situation. It is not our purpose at this time to discuss the matter but simply to call attention to it and to the desirability of remedying it.

Many interns are completely satisfied when a more or less definite diagnosis has been made, but are all at sea when the subject of doing something for the patient is proposed.

Pediatric therapeutics deserves more consideration at the hands of professors of pediatrics in medical schools, as it is to them that we must look for the proper instruction of the student in this branch of medicine.

In January, 1933, by action of the Board of Directors of the Philadelphia Pediatric Society, a committee was appointed to consider procedures for securing pediatric representation on the group having in charge revision of the United States Pharmacopœia and the National Formulary.

As a preliminary step, the committee contacted pediatric societies (both national and local) as well as pediatricists throughout the United States. The sentiment from all these sources was overwhelmingly in favor of making efforts to secure such representation. A resolution requesting such representation was unanimously adopted in 1934 by the American Pediatric Society, the American Academy of Pediatrics, and the Section on Pediatrics of the American Medical Association. Such a resolution was approved also by the House of Delegates of the American Medical Association.

Following this action, due largely to the fine work of Dr. Isaac Abt, of Chicago, Dr. Arthur

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

C. Morgan, of Philadelphia, and Dr. William H. Mayer, of Pittsburgh, the American Academy of Pediatrics contacted the proper officers of the Pharmacopœia Revision Committee and advised them of its action requesting membership in that body.

Believing that the Pharmacopœia Revision Convention of 1940 will accede to this request, the Academy of Pediatrics appointed a small group to study the forthcoming Pharmacopœia and National Formulary for the purpose of making recommendations from the standpoint of pediatrics.

The Pharmacopœia and National Formulary for 1930 are in course of publication. The committee appointed by the American Academy of Pediatrics consisted of Dr. Isaac Abt, Chicago, chairman, Dr. John Ruhruh, Baltimore, Dr. Louis Sauer, Evanston, and Dr. William N. Bradley, Philadelphia. Dr. Abt has been requested to suggest to the academy a new member for this committee to fill the vacancy caused by the death of Dr. Ruhruh.

It is Dr. Abt's intention to call a meeting of the committee as soon as practicable after the appearance of the new Pharmacopœia. He purposes first to study preparations, both official and nonofficial, which might prove harmful to the health of infants and children.

The next step will probably be the apportionment of the needed studies between the members of the committee with definite responsibilities for each as follows: (1) A review of current papers and literature as regards therapeutic importance and usefulness; (2) a study of the nongalenicals; (3) a study of vaccines, sera, antitoxins, and other biologic products. These conclusions will become a matter of record and be submitted to the chairman semiannually to be used as material for recommendation at the next Pharmacopœia Revision Convention.

As these conventions are of decennial occurrence it will naturally follow that constant changes in the personnel of the committee will occur. If definite and complete records are compiled, however, the study should proceed easily and become of distinct value in keeping preparations of known pediatric importance before the profession, backed by the authority of the Pharmacopœia.

Pediatric representation should accomplish the following purposes:

1. Serve to rid therapeutics of nihilism by bringing before the profession those remedial agents which are of pediatric importance and necessity.

2. Serve to eliminate posologic chaos by adopting standards for age periods.

3. Create a greater interest in the use of therapeutic remedies of reputed scientific and pediatric value.

4. Restore confidence in the use of Pharmacopœia and National Formulary remedies by bringing such constantly to the attention of practitioners who treat infants and children.

5. Promote adequate instruction in the science of pediatric therapeutics as a part of the pediatric curriculum of medical colleges, thereby furthering the use of official instead of proprietary drugs and curtailing the commercial exploitation so much in vogue to-day.

6. Recommend for adoption newer measures and drugs of scientific value and importance in pediatric therapeutics, as well as advise concerning the retention of worth-while remedies and the deletion of those which may prove harmful.

We desire to take this opportunity of expressing our appreciation for the helpful cooperation of Dr. Isaac Abt, Dr. Arthur C. Morgan, and Dr. William H. Mayer in the accomplishment of this progressive step.

1725 Pine Street

THE MORE COMMON OBSTETRIC COMPLICATIONS*†

JOSIAH R. EISAMAN, M.D., PITTSBURGH

More than 200 years ago, Mauriceau called pregnancy a disease of 9 months' duration. In more recent years, eminent workers in the field of obstetrics have decried the assumption that pregnancy and parturition were but physiologic phenomena. Dr. Franklin S. Newell states that "something has gone wrong with the physiologic

process." Natural labor seems to be becoming impossible, regardless of our increased knowledge of obstetric physiology. At any time during gestation mother and fetus may be threatened by numerous hazards affecting the life and health of both beings.

Morbidity and mortality rates may be registered by elaborate graphs and imposing columns of figures, but it is impossible even to estimate the remote effects and future impairment of

* Read before the General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

† From the Department of Obstetrics, Elizabeth Steel Magee Hospital, Pittsburgh, Pa.

health directly or indirectly attributable to complications arising during pregnancy and labor.

Because mere enumeration of these conditions would be lengthy and trying, mention will be made of only a few of the more frequent and troublesome complications encountered during the past 3 years in approximately 1500 hospital deliveries, taken largely from the combined services of Dr. Charles E. Ziegler and myself, in the Department of Obstetrics, at the Elizabeth Steel Magee Hospital, Pittsburgh.

In obstetrics the word "prophylaxis" is sentinel, and the practice of this is the chief hope in materially reducing the most frequent causes of maternal death—toxemia, hemorrhage, and infection.

As prophylaxis against infection the vagina and adjacent parts of all patients admitted to the hospital for delivery are routinely prepared. This is accomplished by spraying 1:2500 aqueous dilution of tincture of merthiolate into the vaginal canal by means of a vaginal atomizer designed for that purpose, repeated at 8-hour intervals during labor. The same technic is used on all patients who are examined vaginally. No preparation should be used so frequently or in such strength as to cause irritation of the vaginal or cervical epithelium.

LOSS OF AMNIOTIC FLUID

Antenatal or premature rupture of the amniotic sac is a definite complication of labor. Spontaneous loss of amniotic fluid occurs frequently in cases of disproportion and malpresentation, and in these cases operative interference is often imperative. Because of impending operation, labor should be induced by medical means as soon after the rupture of membranes as possible. Routine induction of labor by artificial rupture of the membranes cannot be condoned, for the most difficult vaginal deliveries and serious maternal injuries, as well as the large proportion of fetal injuries and deaths, have occurred in cases associated with premature loss of amniotic fluid. Needless to say, this complication infinitely augments the hazard of infection following any type of operation in case labor is not promptly instituted and progress rapid. Even the most careful study of the maternal pelvis and the fetal position does not guarantee a safe vaginal delivery after the loss of amniotic fluid.

PERSISTENT OCCIPUT POSTERIOR AND TRANSVERSE ARREST

Operative delivery in such cases ranks next in proportion of injured mothers and marred

babies. Because progress is slow, labor trying, and relatives harassed, the physician must be endowed with fortitude and patience. Sedatives, particularly morphine, barbiturates, and rectal ether, should be used freely and are of inestimable value. The majority of these cases will be corrected spontaneously in normal pelvis with adequate uterine contractions, but owing to numerous causes to which this position may be attributed, it is hard to adhere to any standard of treatment if the occiput fails to rotate anteriorly.

In conducting such a labor, accurate diagnosis and conservatism are essential. When the head is engaged and dilatation of the cervix is complete, rotation may at times be aided with forward rectal pressure over the posterior aspect of the occiput during a pain. If this maneuver fails, manual rotation and overcorrection (for example, rotation of the occiput from right posterior to left anterior) under anesthesia will be successful in the majority of cases not caused by pelvic deformity.

Instrumental rotation of the presenting part is to be viewed with considerable alarm and should not be undertaken by the occasional operator.

Internal podalic version is preferable to a forceful instrumental rotation, as the injuries incidental to the use of forceps may be so extensive as to be irreparable. Needless to say, version is facilitated by an abundance of amniotic fluid, and lack of same with a tetanic uterus is a serious obstacle.

FAILURE OF THE HEAD TO ENGAGE

Trial of labor has become a recognized and justifiable procedure in patients with questionable or moderate cephalo-pelvic disproportion.

As it is impossible to measure the strength of the uterine contractions, estimate the moldability of the fetal head, or specify the time a given patient should be allowed to labor before operative interference is warranted, the attendant must be guided by something more tangible than mere "hopeful procrastination."

Before being justified in permitting a trial of labor certain fundamentals should be recognized, namely:

1. The patient is in good physical health.
2. Disproportion at the inlet is slight and the pelvic outlet must be adequate.
3. Uterine contractions are of sufficient frequency and strength to propel the head through a more normal pelvis.
4. Careless rectal and vaginal examinations are to be avoided.

5. Patients with a history of previous cesarean section or myomectomy are bad risks.

In addition to these criteria trial labor is allowed only after the patient has been carefully prepared as for immediate delivery and examined under full anesthesia. With the whole hand in the vagina the pelvis is carefully explored and remeasured. If with the aid of firm and sustained suprapubic pressure the head can be fitted into the pelvis in one or more diameters, labor is allowed to continue. Inability to fit the head into the brim under complete anesthesia is indicative that delivery by vagina is impossible or too hazardous to consider further.

PREMATURE SEPARATION OF THE NORMALLY IMPLANTED PLACENTA

This is one of the most serious and tragic accidents of pregnancy. In the analysis of our cases this condition was found and verified in 12 instances, being more common than placenta previa.

The patient is almost invariably a multigravida. In our series, but one patient was in her first pregnancy. Shock and violent uterine contractions are pathognomonic. Owing to this combination of factors, vaginal delivery is preferred. All our cases were delivered in this manner without maternal mortality. As the patient is severely shocked almost from the beginning she is a poor surgical risk, and for this reason extreme caution must be used.

Suitable donors for transfusion must be sought without delay, and sufficient blood should be given to revive the patient from shock before operation of any nature is attempted. Morphine should be used freely to quiet the patient.

Due to the force of the uterine contractions, 9 of the patients were delivered precipitately or by forceps soon after the membranes were artificially ruptured. It is a constant source of delight to some of my confreres to recall that one of these cases was delivered unaided while hasty preparation for cesarean section was under way.

In but 1 case, that of a badly exsanguinated primigravida with a 7 months' fetus, was a Braxton Hicks version performed. This was followed by severe bleeding, not from the fundus of the uterus but from a deep laceration of the cervix.

On several occasions, delivery was rapidly and safely accomplished by the use of a tight cervical pack and a tight abdominal binder or Spanish windlass, with 2 minims of pituitrin hypodermically, repeated at half-hour intervals. This technic was originally used at the Rotunda

Hospital in Dublin, and later described by Dr. Frederick C. Irving.

I do not arbitrarily advise vaginal delivery in all cases of placenta ablatio. Due regard must be taken of fetal viability and proportion, rigidity of the cervix, and ability of the patient to withstand surgical shock.

NEGLECTED MALPOSITION AND DISPROPORTION

In instances of neglected shoulder or face presentations and disproportion, with fetal death or monstrosity, our treatment approaches the radical but in the end is the more conservative. In a study of 16 cases of ruptured uterus it was noted that 75 per cent of these serious accidents occurred during forceful attempts at delivery by vagina, the fetus being dead invariably or incurring some fatal injury.

In cases of this type, decapitation or craniotomy permits easy extraction of the fetus without undue injury to the mother.

Because of more timely interference, these operations are infrequently necessary but are invaluable in selected cases and deserve more emphasis in our teaching.

CONCLUSIONS

The careful preparation of the vaginal tract in every parturient is advisable.

Premature loss of amniotic fluid is a definite obstetric complication, and is indirectly responsible for severe maternal and fetal injury.

More conservative treatment of occiput posterior and transverse positions will likewise reduce obstetric injuries.

Trial of labor should be permitted only after careful consideration of the forces of labor and examination of the anesthetized patient.

Conservative vaginal delivery in many instances is safer for the severely shocked patient suffering from premature separation of the normally implanted placenta.

Craniotomy and decapitation in cases of neglected dystocia is preferable to forceful attempts to deliver the intact fetus by vagina.

Medical Arts Building.

ABSTRACT OF DISCUSSION

CLIFFORD B. LULL (Philadelphia): Dr. Eisaman has selected from his series of cases those complications which appear to be most important to the obstetric surgeon.

He has alluded to the fact that many authorities question whether or not the physiologic process of labor is still a physiologic process, and we have been asked many times why women cannot have their babies as easily as formerly. Is this statement true, or are some of these complications of labor caused by the family harassing the obstetrician, or are they the brain child

of the obstetrician himself? One of the most important rules in the Lying-In Hospital in Philadelphia is that no visitor of any kind is allowed on the delivery room floor.

I have for some time ceased to inject the vaginal canal in preparation of patients before delivery. I do not condemn the procedure, but we found after trial that it did not reduce the mortality.

Premature rupture of the membranes need give no concern if the patient has a normal pelvis and the presenting part is lying in a favorable position. In these cases do not hesitate to rupture the membranes to induce labor. The impression that premature rupture of the membranes leads to difficult deliveries is because we have lost sight of the fact that some abnormality in presentation or in pelvic development is the causative factor involved and the membranes rupture because of these abnormalities. Therefore, with a normal presentation, I should not condemn the procedure of inducing labor by the rupture of the amniotic sac.

The most important point in the treatment of posterior rotations of the occiput is unquestionably waiting for spontaneous rotation to occur. Since sedation is being accomplished with better analgesia, patients may be allowed to proceed longer in labor and, therefore, it will not be necessary to do as many instrumental or manual rotations in this complication. A very large proportion under analgesia will rotate of their own accord.

As to the treatment of premature separation of the normally implanted placenta, Dr. Eisaman has not said quite as much as he should about more radical treatment, because a large proportion of cases are far better off delivered by abdominal section. Blood transfusion is very important.

It is very difficult for the clinician to say which woman should have the test of labor. The only procedure on which we disagree is that I do not believe it is necessary to insert the whole hand into the vagina. It is in some cases good technic, but not as a routine.

THE COMPLEMENT FIXATION TEST IN GONORRHEAL INFECTION*

HAROLD HIRSHLAND, M.D., AND HELEN C. HIRSHLAND, A.B., READING, PA.

This is a study of 545 gonococcus complement fixation tests performed upon the serum of 227 female patients detained in an institution and treated in a clinic established there by the Pennsylvania State Department of Health. Most of the patients were sent to the institution with the diagnosis of syphilis or gonorrhea and were supposed to be kept there until "cured." We therefore had the opportunity of estimating the value of the complement fixation test as performed upon *controlled* cases held in a quarantine station.

Since most of the gonorrheal patients had the chronic type of the disease, little assistance in determining just when a patient should be discharged could be obtained from repeated negative and suspicious smears. Complement fixation tests were performed upon all these cases to learn if they were of practical value in answering these questions: (1) Has this patient gonorrhea? (2) Is she improving? (3) When is she cured?

This study is concerned principally with the answer to the first question. The second and third questions will be considered in another paper along with the report of cervical cauterizations. This work was begun in June, 1932, and included in this report are all the tests performed from that time until December, 1934. We are continuing the work and hope to have additional information on the subject. These cases are not selected; complement fixation tests

were performed upon *all* admissions. Wassermann and Kahn tests and vaginal smears were likewise performed routinely.

TECHNIC

The complement fixation test employed is the standard technic of Drs. William H. Park and Anna W. Williams with the checked standardization of complement. The antigen employed in the gonococcus complement fixation test is the purified protein antigen of 5 Torrey strains prepared by Dr. Archibald McNeil. In the effort to obtain the best possible results, Dr. McNeil's technic was closely followed. This report contributes no modification or variation of a technic already proven satisfactory, and we are content if these results parallel the excellent results obtained by Drs. Barringer, Strauss, Crowley, and McNeil.

INTERPRETATION OF RESULTS

In interpreting the reports of the complement fixation tests in the following tables, a test is considered positive if it shows slight inhibition of hemolysis (plus-minus) to complete inhibition of hemolysis (plus 4). A repeated weakly positive reaction is regarded as specific as a strongly positive reaction. Many cases in the series proved this. The degree of positivity varied with the clinical picture, a plus-minus often occurring in the early stages of a severe infection, at the height of a mild infection, or just before the complement fixation test became negative.

Vaginal smears were obtained for examination

* We wish to acknowledge our indebtedness to Dr. Archibald McNeil, without whose aid and advice this work would have been impossible.

from the urethra and cervix. Material was secured from a clean cervix, but it was found that severe cleansing of the layer close to the cervical gland outlets resulted in poor spreads due to the breaking down of cells. Mild cleansing of the cervix and fornices is much to be preferred, yielding better preparations and a higher percentage of positive findings.

All smears were stained with Löffler's methylene blue, Gram's technic of staining, and Wright's stains. In interpreting the report of the vaginal smears, a positive smear is one on which characteristic groups of gram-negative intracellular biscuit-shaped diplococci are demonstrated. A suspicious smear is one which shows gram-negative diplococci resembling the gonococci within the pus cells. A negative smear is one on which no suspicious intracellular cocci are observed.

SERIES OF CASES

On the total number of 227 cases, there were performed 545 complement fixation tests for gonorrhea, 335 tests for syphilis, and 268 vaginal smears.

All the laboratory procedures reported here refer to work done in our own laboratory. The State Department of Health routinely performs Wassermann tests and vaginal smears on all admissions.

These cases are divided into 2 series: Series I, in which 161 cases are studied with repeated complement fixation tests and vaginal smears, a comparison being made between clinical diagnosis and laboratory diagnosis; series II, in which the remaining 66 cases are studied by com-

paring the clinical diagnosis and the complement fixation tests, no vaginal smear reports being considered in this series.

SERIES I

This series divides the 161 cases studied into the groups as shown in Table I.

The total figures at the bottom of Table I show that 115 of the 161 cases were diagnosed clinically as gonorrhea, 36 as negative, and 10 as doubtful; 93 cases had positive complement fixation tests, and 63 had positive smears. In other words, the complement fixation test established the diagnosis in 30 more cases than did the vaginal smear.

A glance at the total smear figures of Table I shows that 63 cases had positive smears, 54 negative, and 44 suspicious. It is likely that a number of these suspicious diplococci were gonococci, but the verdict "suspicious" was not lightly given. The decision often was not made on a suspicious smear until after one-half to one hour of careful search.

A review of the suspicious smears listed in Table I shows that in 18 cases (Groups V and IX) the diplococci were probably not gonococci, whereas in 26 cases (Groups III and X) they probably were gonococci. Although this can be estimated only from the results of the complement fixation tests, it seems that about 40 per cent of the suspicious smears were negative and 60 per cent positive.

The main subdivisions of Table I are as follows:

Group A.—Cases showing agreement between

TABLE I
COMPARISON BETWEEN CLINICAL AND LABORATORY DIAGNOSES OF SERIES I

Group	Laboratory diagnosis								Cases	Per cent	Group per cent
	Clinical diagnosis			Complement fixation test		Smear					
A											
I	+	..	..	+	..	+	..	..	47	29.2	44.1
II	..	—	..	..	—	..	—	..	24	14.9	
B											
III	+	..	..	+	..	..	..	±	25	15.5	32.3
IV	+	..	..	+	..	..	—	..	16	9.9	
V	..	—	..	..	—	..	..	±	9	5.6	
VI	..	—	..	..	—	+	..	..	2	1.2	
C											
VII	+	..	..	..	—	+	..	..	11	6.8	9.9
VIII	..	—	..	+	..	..	—	..	1	0.6	
IX	..	..	±	..	—	..	..	±	3	1.9	
X	..	..	±	+	..	..	..	±	1	0.6	
D											
XI	+	..	..	..	—	..	—	..	10	6.2	9.9
XII	..	..	±	..	—	..	—	..	3	1.9	
E											
XIII	..	..	±	+	..	+	..	..	3	1.9	3.7
XIV	+	..	..	..	—	..	..	±	6	3.7	
Total	115	36	10	93	68	63	54	44	161	100.0	100.0

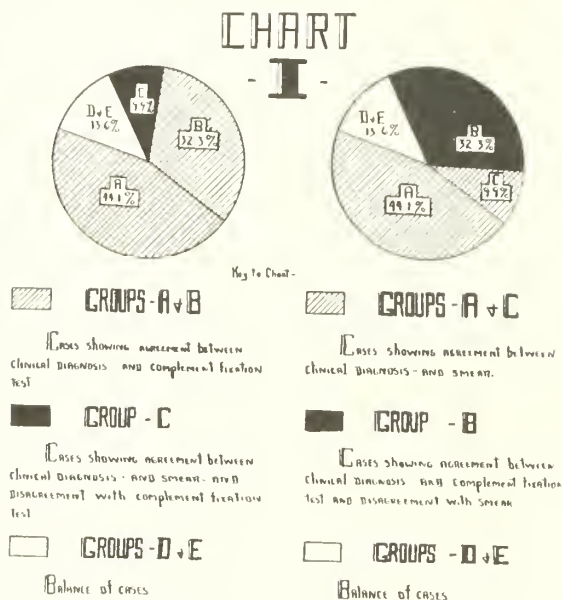
clinical diagnosis, complement fixation test, and vaginal smear—71 (44.1%).

Group B.—Cases showing agreement between clinical diagnosis and complement fixation test and disagreement with smear—52 (32.3%).

Group C.—Cases showing agreement between clinical diagnosis and smear and disagreement with complement fixation test—16 (9.9%).

Group D.—Cases showing agreement between complement fixation test and smear and disagreement with clinical diagnosis—16 (9.9%).

Group E.—Cases showing disagreement between all 3—6 (3.7%).



It can be seen from Chart I that the complement fixation test confirmed the clinical diagnosis in 76.4 per cent of the cases, whereas the vaginal smear report confirmed the clinical diagnosis in 54 per cent of the cases.

DISCUSSION OF CASES IN SERIES I (TABLE I)

Groups I and II represent the cases in total agreement, the largest number, comprising 44.1 per cent of the total.

Group III represents the second largest group, in which the clinical diagnosis is gonorrhea, the complement fixation test positive, and the smear suspicious. Of these 25 cases, 16 had strongly positive complement fixation tests, 10 had 2 strongly positive tests, 4 had 4 strongly positive tests, 2 had 3 strongly positive tests, 6 had definite clinical pictures of salpingitis, and 3 had weakly positive complement fixation tests and slight clinical symptoms.

This group is of interest because the doubt cast by a suspicious smear can be dispelled by a positive complement fixation test in 15.5 per cent of the cases.

Group IV represents the fourth largest group, in which the clinical diagnosis is gonorrhea, the complement fixation test positive, and the smear negative. Of these 16 cases, 11 were of the chronic type, all having had 2 or more positive complement fixation tests, 3 had an exacerbation of tubal disease, and 2 had been treated for gonorrhea before admission.

This group illustrates the importance of a complement fixation test in chronic cases, or to indicate the cause of an exacerbation of an apparently quiescent focus.

Group V comprises 9 cases, which are considered nongonorrheal in spite of suspicious smears after repeated negative complement fixation tests.

Group VI consists of 2 cases, both with negative clinical diagnosis, negative complement fixation tests, and positive smears. One patient acknowledged treatment before admission; the other is unexplained.

Group VII represents 11 cases with clinical diagnosis of gonorrhea, negative complement fixation tests, and positive smears. Five of these were diagnosed as acute gonorrhea, and 2 as subacute gonorrhea. Five of these 11 cases were cured in a short time.

This group of cases, comprising 6.8 per cent of the total number, illustrates 2 important points: (1) The necessity of a smear report in acute and subacute cases; (2) when the complement fixation test remains negative throughout the acute, subacute, and convalescent stages of the disease, the patient has the best prognosis of recovery without complications.

Group VIII consists of 1 case with a diagnosis of normal cervix with no pathologic involvement. This patient had been treated for gonorrhea 4 months before admission.

Group IX represents 3 cases of interest because the clinical diagnosis is doubtful and the smear suspicious. The definiteness in these cases of a negative complement fixation test is of practical value. One case was clinically diagnosed as subacute gonorrheal (?) endocervicitis. Two vaginal smears from this case showed numbers of encapsulated pneumococcus-like diplococci, probably the cause of the infection. Two cases, both diagnosed as gonorrhea (?), were found to have a staphylococcus-like diplococcus on the smears, which was believed causative.

Group X, consisting of one case diagnosed as salpingitis (?) on admission, had 7 positive complement fixation tests, 2 suspicious smears, and 1 negative smear.

Group XI shows 10 cases of interest. In all these cases, the diagnosis on admission was gonorrhea. Complement fixation test, smears, the Wassermann and Kahn tests are all negative. Of these, 3 were diagnosed as chronic gonorrheal endocervicitis. Two negative complement fixation tests were obtained on each. On repeated smears a fungus was seen in the one case, a coccobacillus in the other. Three cases were diagnosed as acute gonorrheal endocervicitis. One case showed on vaginal smears and moist drops great numbers of *Trichomonas vaginalis*, another a slender gram-negative bacillus, the third a pneumococcus-like diplococcus. Since these cases are acute, they might be gonorrhea and still have negative complement fixation tests, but it is unlikely that repeated examination of smears would not show at least suspicious diplococci, if not gonococci. One case of bartholinitis had 2 negative complement fixation tests and smears showing a fungus predominating. Two cases were diagnosed clinically as slight gonorrheal endocervicitis. One case was diagnosed as bilateral salpingitis.

It is likely that the diagnosis of gonorrhea, made on admission, is incorrect in these cases. In the 5 acute cases the smear reports of negative for gonococci and positive for other predominating organisms are the best aids for diagnosis. In the 5 chronic cases, the negative complement fixation tests offer the greater assistance.

Group XII consists of 3 cases of questionable diagnosis with both complement fixation tests and smears negative. The Wassermann and Kahn tests are also negative. Case 1, diagnosed as acute gonorrhea (?), showed enormous numbers of *Trichomonas*. Cases 2 and 3, diagnosed as bleeding cervix—gonorrheal (?) were believed after laboratory tests were performed to be other than gonorrheal in origin.

Group XIII consists of 3 cases with doubtful clinical diagnosis, positive complement fixation tests and smears. Case 1 was diagnosed as slight erosion and endocervicitis—gonorrheal (?) syphilitic (?). This patient had positive Wassermann and Kahn tests, 3 positive complement fixation tests for gonococci, and 1 positive smear. Case 2 had a questionable clinical diagnosis of acute gonorrhea that was confirmed by 2 positive complement fixation tests and 2 positive smears.

In these 3 cases the diagnosis could have been established by the vaginal smears without the complement fixation tests.

Group XII' consists of 6 cases with a clinical diagnosis of gonorrhea, a negative complement fixation test, and a suspicious smear. Case 1, diagnosed as endocervicitis, right salpingitic abscess, and left salpingitis, would have been left with the diagnosis of gonorrhea, the suspicious smear believed positive, were it not for 3 sharply negative complement fixation tests. Case 2, with a clinical diagnosis of syphilis, endocervicitis, and thickening in the region of both tubes, was thought to be gonorrheal until 3 gonococcus complement fixation tests were sharp negatives. Three vaginal smears showed diphtheroid-like bacilli on all the smears. Case 3, diagnosed on admission as cervical erosion, chronic endocervicitis, probably pelvic involvement, shows 3 negative complement fixation tests, 1 negative, and 1 suspicious smear. This patient was cured in 3 weeks on douches alone. Cases 4 and 5 were both diagnosed as slight endocervicitis. Case 4 had a positive Wassermann and 2 sharply negative gonococcus complement fixation tests. Case 5 had 2 delayed negative complement fixation tests. This patient may have had gonorrhea and been almost cured on admission. Case 6, with a normal appearing cervix and a normal pelvis but with a profuse discharge diagnosed as gonorrheal, had 2 sharp negative complement fixation tests and a pyocyanus-like bacillus on the smears.

Five of these 6 cases appear to be diagnosed incorrectly as gonorrhea. This group and Group XI comprise 15 cases (9.3 per cent) which would have been unfairly branded as gonorrheal without the aid of the complement fixation test.

SERIES II

This series consists of the remaining 66 patients on whom complement fixation tests were performed but with no vaginal smears. The reasons for this are various. This series contains the highest percentage of syphilitics; 31 of the 66 (46.9 per cent) had positive Wassermann or Kahn tests, 18 of which were negative for evidence of gonorrhea. These patients reappeared in the clinic for serologic tests only. Fourteen of the 66 patients were discharged from the clinic after the initial physical examination and serologic tests, for the following reasons. Four were sent to hospitals for operation; 8 were not clinic cases, being considered normal; and 2 were mental cases.

Although this series is incomplete, it was decided to include these cases in this report to estimate what value the complement fixation test alone would have in making a diagnosis.

TABLE II
COMPARISON BETWEEN CLINICAL DIAGNOSES AND
COMPLEMENT FIXATION TESTS FOR SERIES II

Group	Clinical diagnosis		Complement fixation test		Cases	Per cent	Group per cent
A							
I	+	..	..	+	23	34.8	63.6
II	..	—	..	..	19	28.8	
B							
III	+	..	..	..	15	22.7	24.2
IV	..	—	..	+	1	1.5	
C							
V	..	..	±	..	4	6.1	6.1
D							
VI	..	..	±	+	4	6.1	6.1
Total ..	38	20	8	28	38	66	100.0

In referring to the totals of Table II it can be seen that of the 66 cases in Series II, 38 are diagnosed clinically as gonorrhea, 20 as negative, and 8 doubtful; 28 cases have positive complement fixation tests, and 38 are negative.

The main groups of Table II are as follows:

Group A, consisting of Groups I and II, a total of 42 cases or 63.6 per cent, shows agreement between the clinical diagnosis and the complement fixation test.

Group B, consisting of Groups III and IV, a total of 16 cases or 24.2 per cent, shows disagreement between the clinical diagnosis and the complement fixation test.

Groups C and D with doubtful diagnoses, the former with negative complement fixation tests, the latter positive.

DISCUSSION OF CASES OF SERIES II (TABLE II)

Group III consists of 15 patients, 9 of whom were also syphilitic, in whom the diagnosis was gonorrhea, the complement fixation test for gonococcus negative. This group shows the importance of a vaginal smear report, as 10 of these cases were diagnosed clinically as acute or subacute. A positive smear might have been obtained in many of these cases.

Four of the remaining 5 cases had chronic lesions. In these the negative complement fixation test has significance, indicating the cause to be other than gonorrheal. One patient had a very severe endocervicitis which, after the repeated negative complement fixation test for gonococcus was believed syphilitic. Another patient had a very severe laceration, which might have accounted for her symptoms. Another patient had been admitted to the institution a year before, when she had a strongly positive complement fixation test.

Group IV consists of 1 case with a negative

diagnosis and a positive complement fixation test. This is a girl, age 14, with hymen partially intact, in whom no pathologic involvement could be noted.

Group V consists of 4 cases with a questionable diagnosis of gonorrhea and negative complement fixation tests. The first 3 cases had syphilis also. Two cases of salpingitis were believed nongonorrheal after 3 negative complement fixation tests in each case. One case of chronic endocervicitis of doubtful origin, with 4 sharply negative complement fixation tests, was clinically normal in 2 weeks. One case diagnosed as chronic gonorrheal (?) endocervicitis was cured after one cauterization.

Group VI consists of 4 cases of doubtful clinical diagnosis which are believed gonorrheal because of positive complement fixation tests. In one case a pelvic examination was impossible because of an intact hymen. In another case, diagnosed as gonorrhea (?) with a very bad old cervical scar which seems to have been repaired, 3 positive complement fixation tests were performed during detention. One patient who had been operated upon before admission and diagnosed as having pelvic trouble (?) on arrival was shown still to be harboring a focus of gonococcal infection. One case of gonorrheal (?) endocervicitis had both complement fixation tests positive for gonorrhea and syphilis.

REMARKS ON SERIES II (TABLE II)

Group A, representing the cases in agreement, is high. The inclusion of smear reports probably would have lowered this percentage. In addition, the number of nongonorrheal cases is slightly higher in this series.

Group III consists of 15 cases, 11 of which need a smear report to confirm the diagnosis of gonorrhea.

Groups I, IV, and VI show 28 cases, or 42.4 per cent, that can be diagnosed as gonorrhea without the vaginal smear.

Groups III and V show 19 cases, or 28.8 per cent, in which a smear report is necessary for diagnosis.

Twenty-three cases, or 34.9 per cent, show evidence of gonorrhea; 43 cases, or 65.1 per cent, show no evidence of gonorrhea.

Although it can in no sense be recommended as an exclusive procedure, a test which can diagnose 42.4 per cent of these cases as gonorrhea without the assistance of a vaginal smear should have a good chance of being included among the routine tests requested in similar cases.

Table III summarizes the statistical results of Tables I and II.

TABLE III

COMPARISON OF STATISTICS OF SERIES I AND SERIES II

	Series I		Series II		Total	
	Cases	Per cent	Cases	Per cent	Cases	Per cent
Evidence of gonorrhea	112	69.5	43	65.1	155	68.3
No evidence of gonorrhea...	49	30.5	23	34.9	72	31.7
Total	161	100.0	66	100.0	227	100.0
Syphilis	51	31.6	31	46.9	82	36.1
Syphilis and gonorrhea ...	39	24.2	15	22.7	54	23.8
Complement fixation test alone, established diagnosis	93	57.7	28	42.4	121	53.3
Vaginal smear alone, established diagnosis	63	39.0	.....	.....	.....	.....

A glance at the totals of Table III shows that, of the 227 cases, 155 have evidence of gonorrhea and 72 show no evidence of gonorrhea. Eighty-two cases are syphilitic, 54 having both syphilis and gonorrhea. In 121 cases, the complement fixation test alone established the diagnosis.

CONCLUSIONS

1. In the satisfactory performance of the complement fixation test for gonococci, just as for

any serologic test, a good technic must be strictly adhered to by a responsible technician.

2. A first-class antigen must be employed.

3. The complement fixation test is of great value in cases of chronic gonorrhea in confirming the clinical diagnosis of gonorrhea or in eliminating its presence.

4. The complement fixation test for gonococci is of little value in the diagnosis of acute or subacute gonorrhea, with these exceptions: A persistent negative reaction throughout the convalescence indicates a good prognosis, often a cure; on the contrary, a positive test indicates complications and trouble ahead.

5. The complement fixation test for gonococci is valuable in distinguishing between gonorrheal and syphilitic lesions.

6. The complement fixation test for gonococci is of valuable aid in doubtful diagnoses of chronic lesions, especially when, as in this series, little honest information can be obtained from the patient.

230 North Fifth Street.

DIFFERENTIAL DIAGNOSIS IN ABDOMINAL TRAGEDIES*

MAXWELL LICK, M.D., ERIE, PA.

There is nothing in medicine or surgery more dramatic than acute conditions within the abdomen. No drama moves more swiftly; no drama excites emotions to a higher pitch; no drama reaches its climax with greater speed than this calamitous and frequently cataclysmic event. No greater responsibility is ever borne than that by the chief actor in the piece, the physician.

The sufferer is frequently first seen under conditions unsatisfactory to the examiner. The light is poor, the bed is low, the room is small and is crowded with tearful, anxious relatives, among whom there is always one, with stern unfriendliness, who does not believe in hospitals or operations. All this often creates an atmosphere unconducive to calm, logical thinking and clear judgment.

Amid these conditions or even among those advantageous ones of the hospital, the surgeon is confronted with a problem of diagnosis. It is usually fascinating, but all too often blurred and confusing. Is the condition surgical, or are the abdominal signs and symptoms but a red herring drawn across the trail to confuse the examiner and conceal the true condition? The experienced and cautious surgeon recalls to mind his scars as

mementos to gastric crises and ureteral calculi. He remembers a professor who opened an abdomen for a ruptured ulcer, only to find nothing; but frank pneumonia was present the next day. Remembering these things, the intellect is thus sharpened and the mental acumen brought to a finer focus. But the surgeon is also cognizant that to overlook an abdominal condition carries as great a responsibility as to mistake it for something else. Acute conditions within the abdomen usually require prompt and immediate action. Conditions amenable to treatment and a resulting cure, if attacked at the proper time, are often converted by inaction and indecision into hopeless tragedies, thereby making the surgeon as impotent as though he were a little child.

In most cases a diagnosis can be made by the history and clinical examination alone. In this mechanical age physicians have learned to depend too much on instruments of precision. We are likely to subjugate our God-given senses of sight, touch, smell, and hearing, which were developed to a high art by such men as Osler, Holmes, Agnew, and Murphy, to instruments of precision and laboratory findings.

Observation of the patient may speak volumes. At a single glance one may get the impression of

* Read before the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

a peritoneal disease. The knees may be drawn up, the tongue coated, and the basin close by for vomitus; the facies may present an expression of anxiety, suffering, and a sense of impending disaster. It is difficult to describe this expression, but it can be recognized by the experienced. It is never absent in acute peritoneal conditions. If one does not see this, he should be exceedingly wary in diagnosing an acute condition within the abdomen even though other signs seem conclusive. At times I have offended my confreres by refusing to open an abdomen which was rigid and painful because the patient looked too comfortable. He was out of balance with the abdominal signs. These cases almost invariably turn out to involve referred symptoms from the chest or diaphragm. Physicians are all familiar with the flushed cheek, the slight increase of respiration, the slight cough heard occasionally during the conversation, which should immediately excite the suspicion of a chest lesion regardless of the abdominal signs.

Perhaps all these things and more are caught in one glance before any story of the disease is elicited. The story is so important. Murphy said that if it were told correctly the diagnosis would stand out as though written in large letters. The fault often lies with the physician who is hurried or impatient with a loquacious patient or his relatives. It takes skillful cross-examination at times to get at the truth, to separate the inconsequential from that which is relevant. It can and should be done. The ruptured ulcer should give a history of previous digestive disorders quite different from that of the acute gallbladder with its usual story of flatulent indigestion. In cases in which the picture is either that of subacute perforation or acute cholecystic disease, the ratio of ulcer is 3 to 1 for men whereas that of gallbladder disease is just the reverse, being 3 to 1 for women.

Carcinoma of the large bowel with obstruction or perforation would be suspected in an elderly patient with an acute abdominal crisis, whose history related blood in the stools and a disturbance of bowel habit. A history of functional disturbance of the pelvic organs must not be dismissed as irrelevant merely because the abdominal signs do not conform to the textbook pattern. Physicians miss more things from not thinking than from not knowing. It is almost a truism that, if a diagnosis does not ring true, something unthought of will be found at operation.

Pain is probably the most constant and outstanding symptom of the acute abdomen. Pain is a clarion cry. It is nature's flashing signal that

harm or injury is being done. It sends the mother, white-faced, to call the doctor when she hears the shrill cry of her sick child. A proper interpretation of pain alone may make a diagnosis certain.

It should be emphasized strongly that continued abdominal pain usually indicates a surgical condition. It must be asserted just as earnestly, however, that not all abdominal pain indicates abdominal disease. Those overflow pain impulses from the chest and diaphragm are not so severe. They disappear or are modified in a few hours. The corresponding signs and symptoms of acute abdominal disease are lacking or are not parallel. Tenderness is not commensurate with rigidity. The pulse rate is too slow. It does not have the quick, discourteous slap. The facies are more comfortable. This discrepancy and contradiction should be a warning, and observation should be practiced for a few hours. This can be carried too far in children. Late cases of appendicitis with local or spreading peritonitis usually show moisture in the lungs or other signs which blur the picture to one who is called to see the case late. The trajectory of the pain in coronary disease and angina pectoris is frequently to the gallbladder. Nausea, vomiting, and local spasm of the recti muscles sometimes occur. The old, old story of "acute indigestion!" The cue here, of course, is the accompanying substernal pain, the dyspnea, the tone of the heart, the history of circulatory derangements, the absence of digestive disturbances in the foreground.

Everyone is familiar with those overflow pain impulses from the ureter or kidney which may simulate the most violent abdominal disease. The condition is well illustrated by a patient who was brought to the hospital in the night with poignant, colicky pain, nausea, vomiting, and distention. To make the diagnosis plain, there was an appendix scar. Obstruction, of course! This man was fortunate in having a painstaking, thorough, meticulous analytic surgeon. Why should this pain be felt, even though slightly, in the testicle or over the hip? Abdominal pain is never referred here. A urinalysis disclosed a few red blood cells; cystoscopy, a horseshoe kidney and a blocked right ureter. The point to be emphasized is that the cues are usually present. They are the red entries in the ledger. They may be upstage in the shadows. We miss them from not thinking, or we fail to be impressed because they seem to be so trivial compared with other signs. It cannot be emphasized too strongly that a single urologic cue should be given the greatest consideration even though the abdominal picture

stands out in strong light. Recourse to the cystoscope, the microscope, and roentgen ray is indicated and causes little delay.

Little need be said about the pain of ruptured ulcer. This is one disease, with its sudden agonizing, brutal attack, its rigid muscles, and its capacity to absorb morphine without relenting, that runs true to the textbook picture. Several things have impressed me. There are silent ulcers, the first sign of which is that of rupture. The history fails in these cases. Shock is not always marked, and the pulse is not always as rapid as one would suppose. The facies are never forgotten. The anxiety, the suffering, the sense of disaster and dissolution are all mirrored. When this picture is present, the diagnosis cannot be denied even though the history for ulcer is absent.

However, if this picture is so modified that all symptoms and signs are softened, if the knees are not drawn up, if the muscles are not hard enough, if the patient looks more comfortable than he should, that is, if his general appearance is disproportionate to the abdominal pain, caution is advised.

In acute abdominal disease with general pain and tenderness there is always one spot more tender than the rest, and it hurts when the patient moves in bed. This observation has been of inestimable value and bears repetition. In acute abdominal disease with general pain and tenderness there is always one spot more tender than the rest, and it hurts when the patient moves in bed. The ruptured ulcer is exquisitely tender over its area. You know that this is true of appendicitis, because the only constant sign is that of focal tenderness. There may be spreading or general peritonitis present, but the appendix region is still the most tender. It is deplorable that more attention is not given in the teaching of medical students to this point of focal tenderness in the diagnosis of appendicitis. Most of our interns are looking for rigidity, leukocytosis, fever, and pain in the epigastrium, which moves down to the right side. Violent forms of the disease exist with some of the signs absent or so modified that only the experienced can interpret them correctly. But focal tenderness of the diseased organ is always present.

I recently saw a case with mild upper abdominal distress, without definite pain, without definite digestive disturbances, but with a rapid pulse, chills, high fever, and facies suggesting peritoneal disease. The diaphragm on the right side was slightly fixed. Respiration was normal. Palpation of the gallbladder region showed marked tenderness, which was a great surprise

to the patient. All the usual signs of an acute inflammatory gallbladder with stones were so softened and modified that they were in the background, except this one. The patient did not have the acute pain referred to the epigastrium and right shoulder, so typical of calculous disease. But he did have focal soreness. Operation revealed empyema with stones. This same principle, if taken in conjunction with other pertinent data, can be applied to the diagnosis of pelvic lesions, whether they be twisted ovarian cyst, ruptured ectopic pregnancy, or inflammatory disease.

The pain of intestinal obstruction is striking. It is colicky and usually felt first in the upper abdomen. It comes and goes. The patient looks sick. There is nausea and later vomiting. Peristalsis is usually heard. And yet with this characteristic and usually unvarying picture, it is often missed. If you do not think that this is so, recall to mind the late and hopeless cases operated upon in your hospitals. Why should this be so? Some still forget that gas or feces will be passed from below the obstruction. Some still fail to look at the hernial orifices, or for abdominal scars. Some still wait for fecal vomiting and terrifying distention. It is a disgrace for any of our profession to wait for these premortal changes. Operation at this time is hopeless and only gives occasion for the usual headlines in the next day's paper, "Patient Dies of Operation." It should read, "Patient Dies of Delay." There is no disease that has a narrower threshold of safety. There is no disease that needs more prompt action. It takes courage in the postoperative cases to tell the sick and discouraged patient and his anxious and often unfriendly and doubtful relatives that another operation is necessary. Delay in the presence of these faithful symptoms only makes matters worse, whereas prompt and courageous action will save most of these unfortunate cases.

These foregoing principles are elementary but certainly fundamental. It should be remembered that disease of any system or organ results in a disturbance of function of that organ. The signs and symptoms are always present to some degree. Confusion and mistakes occur by reason of our own inattention and prejudices. It is helpful to remember that after age 40 practically no new abdominal diseases exist except neoplasm and inflammations, all others being complications of pre-existing conditions. It is pertinent to remember, as DaCosta said, that an absent sign should be given grave consideration. Finally, it is invaluable to remember the tendencies, the

conventionalism, if you please, the relation of acute disease to age and sex.

If all available data, for and against, were put down in parallel columns, as in a ledger, and a balance struck off, the diagnosis would rarely be wrong.

At times I admire a snap diagnosis, because I have learned that it is not snap at all but represents the epitome of experience acquired by virtue of eyes that see, ears that hear, delicate fingers that touch, and a mind that correlates. Not all the tragedy is in the abdomen of the patient. There will be less in our own hearts as we become better clinicians.

149 West Eighth Street.

ABSTRACT OF DISCUSSION

DONALD GUTHRIE (Sayre): I am very glad that Dr. Lick emphasized the importance of studying the patient as a whole unit and that he stressed the importance of a correctly developed history as well as a careful physical examination.

I quite agree with him that in the majority of cases acute conditions within the abdomen may be diagnosed or strongly suspected by the clinician, the physician in general practice, or the surgeon if he will study and sift all of the evidence at hand. It was by the use of their God-given senses, backed by clinical experience and that intuitive sense which good diagnosticians possess, that the older clinicians were so uncanny in their ability to diagnose these acute abdominal conditions without the aid of the laboratory. To rely too much upon laboratory examinations is often fraught with a great deal of danger and uncertainty.

I agree with Dr. Lick in his statement that we suffer more from sins of omission than from sins of commission. Very early in my work I developed a high regard and a wonderful appreciation for the skill and the diagnostic ability of many of the men in general practice up in the hills of Pennsylvania, for I noticed that they were keen observers of facial expressions, the responses of the sick person to questions, the position of the patient in bed, inspection of the tongue, the character of the pulse, respiration, and all of those things which are so vastly important in arriving at a diagnosis but which the younger man in medicine is wont to consider as irrelevant and unimportant.

It is important to withhold morphine until some idea of the diagnosis is obtained. I could relate some very interesting experiences in which the family physician stood his ground although he was abused by the patient, his family, and his friends for withholding morphine until the arrival of the consultant. We all know the realms of insecurity into which morphine leads us, and it should be withheld until some idea of what is going on within the abdomen is well demonstrated to the attending physician and consultant.

MICHAEL G. WOHL (Philadelphia): There is one phase of the subject that was not mentioned by Dr. Lick which I would like to stress. There are patients with metabolic disturbances who present vague abdominal symptoms that will often mimic an intra-abdom-

inal lesion. Particularly is this true of the acidosis of diabetes mellitus, in which nausea, vomiting, and abdominal soreness are prominent signs. Since such patients often present leukocytosis and fever much confusion may arise as to the exact condition. This point may be illustrated by the history of a patient recently observed at Temple University Hospital. This boy was age 19 and had suffered from diabetes mellitus for 4 years. He was seized with an attack of vomiting and violent abdominal pain, the pain being so severe that it required a hypodermic of morphine. He also presented a general abdominal soreness although no localized tenderness. The latter is an important point in the diagnosis of abdominal tragedies. To complicate the picture he had an obstinate constipation, a temperature of 103° F., pulse of 132, a leukocytosis of 18,800 with 92 per cent polymorphonuclear leukocytes. In such instances the combined judgment of both the internist and the surgeon may often prevent unnecessary surgical intervention. Indeed, it was decided to delay any surgical intervention in this patient and to continue the treatment for acidosis. Heavy doses of insulin and forced fluids were given. A few hours after this regimen the symptoms were greatly ameliorated and the abdomen became normal. The patient with diabetic acidosis may also suffer from an associated abdominal disease such as acute appendicitis. However, it is worth while to emphasize that in an acute abdominal condition, if the patient is known to be a victim of a metabolic disorder, the abdominal symptoms may be simply metabolic in origin and not surgical in character.

DR. LICK (in closing): The practice of medicine and surgery is an art and not an exact science, which makes some men much better diagnosticians than others. If a reiteration of these simple truths, however, makes physicians more alert, it is well worth while to repeat them often.

STATUES AND DOCTORS

Six doctors are buried in Westminster Abbey—John Hunter, Richard Mead, David Livingstone, Matthew Baillie, James Simpson, and James Buchan. Sir James Y. Simpson's statue is a prominent object on Princess Street, Edinburgh. Crawford Long and Ephraim McDowell have statues erected to them in our national capitol. In Virginia, so far as we know, there are but 2 physicians whose life and work have been commemorated in the form of statues. In Fredericksburg stands the imposing equestrian figure of Dr. Hugh Mercer, Revolutionary general and hero. In the Capitol Square at Richmond is a statue of Dr. Hunter Holmes McGuire. Last month a group of medical students, doctors, and notables gathered about the statue of Dr. McGuire. It had been 100 years since his birth. They had come there to honor a doctor who was once Medical Director of the Second Army Corps of the Confederate Army, who founded the University College of Medicine and was its first professor of surgery, who was a pioneer in prostatic surgery, and who was honored with the presidency of the American Surgical Association and later with that of the American Medical Association, a "useful citizen, broad humanitarian, gifted in mind, and generous in heart."—*Virginia Medical Monthly*, Nov., 1935.

EDITORIALS

THE COMMUNITY CARE OF THE MENTALLY ILL

Over a quarter of a century ago Clifford W. Beers wrote the Magna Charta of the humane care of the mentally ill. The late Thomas W. Salmon, Beer's medical associate, added amendments comprising the professional care of the mentally sick and the relationship of medicine to the whole field.

In more recent years other amendments have been added, namely, the inalienable rights of the mentally sick and the community care of those thus afflicted. Community care is all-inclusive, implying prevention, early recognition, identification, mental clinics, adequate diagnostic units in general and state hospitals, adequate hospitals and schools, adequate treatment services and social service supervision, co-operation of the courts as well as of the medical and nursing professions, and social and community agencies.

The community care of the mentally ill is being generally accepted throughout the United States as the most direct onslaught against the attacks of mental illness. It supersedes the old method of attack of "rounding up" the insane and attempting to build a sufficient number of buildings to house and treat these unfortunate people adequately.

The formulation of this attack is simple in outline and practical in application. The question naturally arises, however, who is to assume leadership? Shall it be our educational institutions (medical schools), organized medicine, our state departments of welfare or commissions on mental disease, or the mental hospital in the respective district? There is no doubt that those primarily involved are the medical schools, organized medicine, and departments of welfare or commissions on mental disease. Organizations such as charitable associations and mental hygiene committees (national, state, and local) should willingly follow such leadership if available, but should always be on guard to protect the unfortunate wards of the state against medical politics, school politics, or governmental administrative politics.

In the set-up of many of the states there are no programs and no leadership; they still "round 'em up" and "put 'em away," the victims of those delegated to house, feed, and clothe them. In certain states there is aggressive leadership carried on by commissions on mental

health; in some by departments of welfare; in others through the educational systems. The basic keystone in the work, however, is the state mental hospital, for the mental hospital is the logical mental health center of the community which it serves. It is absolutely necessary that this be so, at least during this generation and the generation to come. For, otherwise, there are not enough psychiatrists to carry out a community program. Secondly, the hospital is the agency that contacts more closely the medical profession and the various educational and social agencies in its district. They are in the best position to protect and serve the interests of the medical profession. Thirdly, the vast percentage of the hospitals are in rural districts and in some instances in districts in which no psychiatrist has ever seen fit to try to eke out a living treading over the highways and byways of snow-capped mountains in the winter and sun-swept valleys in the summer.

What is needed throughout the United States and Canada is a national and international program for the community care of the mentally ill. Formulation of such a program could best be drafted by the American Medical Association, the Canadian Medical Association, the American Psychiatric Association, the American Neurological Association, the American Association for the Feeble-minded, the National Association of Social Workers, and similar associations of psychologists and others interested. Such formulations would be the Holy Book of the Ten Commandments, the new creed of the community care of the mentally ill—a book which all God-loving, humane American and Canadian citizens would revere and respect down through the ages and which no daring, charging Turk of any race, religion, creed, or politics would dare tamper with or destroy.

Such is the challenge of the community care of the mentally ill. Who are there big enough, humane enough, to work out such a formulation—a formulation simple and practical, one that is badly needed, that will eliminate the sob-sister stuff, the emotionalist, the evangelist, and crusades that are found necessary to arouse an apathetic people to situations that are repulsive to our human instincts, situations in which we find the mentally sick struggling in the filth and slime of abuse and neglect?

No doubt there has been expressed here what might be called a long-range vision on the attack

of mental disease and many years, possibly, will ensue before the program is consummated. This should not, however, lead to discouragement, for in the interim states, state hospitals, schools, and institutions are now beginning to apply this program in part or in full. During the past 15 years the Commonwealth of Pennsylvania, through its Department of Welfare and Bureau of Mental Health, and state hospitals and schools, the State Medical Society, and mental hygiene committees have been pioneers in this new field. Let us trust that the links will not be broken nor the pattern marred. Come what may, the written record cannot be destroyed nor the deeds of red-blooded men erased with time.

ARE WINES A FOOD OR A BEVERAGE?

According to legislation recently adopted in Georgia and North Carolina, wines have been taken out of the liquor class, which frees them from regulations, restrictions, and taxes now imposed on the manufacture and sale of distilled spirits.

Legislation of this type should encourage the manufacture of wholesome domestic wine which could be sold for appreciably less than the present market price of the same commodity.

According to the *New York Times*, Mr. Paul Garrett, dean of American winegrowers, avers that classifying table wine as a food would not be stretching the truth. He states that table wines are judged for their merits, taste, appearance, aroma, and effect on digestion, which effect is not due to alcohol but to the fine acids developed in fermentation and aging.

DEMAND FOR SPEED QUESTIONED

There are indications that the automobile-buying public may be in the mood to consider other advantages in lieu of high speed. The decrease in motor car advertising of emphasis on speed since the wide publication of "—And Sudden Death" suggests that manufacturers already recognize a change in attitude.

It would be of value to determine accurately the car buyer's attitude in this regard—his preference if given a clear-cut choice between a model capable of high speed and one with the advantages obtainable were the speed definitely reduced.

Surely automotive engineers could meet and could draw, with figures and facts, distinct pic-

tures of these 2 models, could bring out clearly differences in initial, operating, and maintenance costs, in durability, and in other important factors.

The result of such a poll at least would be interesting. Judging from the opinions expressed concerning the tragic costs of speed it might prove startling and enlightening to motor car manufacturers. A clear question put, a clear answer obtained—and death might not come so often, nor so swiftly.

The National Safety Council's program for reducing America's yearly automobile traffic deaths urges strict enforcement of laws by the police, which will materially and speedily reduce the death rate. In 1935 in America there were 36,400 deaths due to the automobile traffic.

TOO MANY NURSES GRADUATE

The finding of the Committee on the Grading of Nursing Schools in regard to overproduction of trained nurses is illuminating. Higher standards are urged. There is a tremendous overproduction of nurses in the United States. There is one woman trained as a nurse for every 424 persons and the number of graduate nurses has increased 39 per cent as fast as the population since 1900.

One-half of all the schools of nursing in the United States are conducted by hospitals with not more than 75 patients, while one-fourth of the hospitals have room for only 8 to 42 patients.

Unemployment in nursing was evident in 1926, long before the present economic depression. These conditions, the committee feels, only can be remedied by raising the standards of schools, limiting their number and selecting applicants for admission more carefully.

There are many so-called schools of nursing that should be closed just as rapidly as the hospital that conducts them can make arrangements for caring for the patients in another manner and for placing the students already on their rolls in other schools.

WILLIAM JOHNSON TAYLOR, M.D.

Dr. William J. Taylor, of Philadelphia, aged 74, died Jan. 22 at his home following a long illness. Dr. Taylor was born Oct. 13, 1861, in Winchester, Worcester County, Md., a son of William Johnson and Mary E. (Beardon) Taylor. His father was a major in the Union Army during the Civil War. Dr. Taylor's preliminary education was obtained in the preparatory department, East Tennessee University,

Knoxville, Tenn. Upon graduation from the University of Pennsylvania School of Medicine in 1882 he served his internship in the Pennsylvania Hospital and became assistant in private practice successively to the late Dr. S. Wier Mitchell, neurologist and novelist, and Dr. William W. Keen, for many years the dean of Philadelphia surgeons. For almost 50 years he was attending surgeon at the Orthopedic Hospital, and for a number of years was attending and consulting surgeon on the staffs of St. Mary's, St. Agnes, and Philadelphia General Hospitals; consulting surgeon to the Woman's Hospital, West Philadelphia Hospital for Women, and Abington (Pa.) Memorial Hospital.

He was elected a Fellow of the Philadelphia College of Physicians in 1887, serving on numerous committees, and was president in 1919-1921. He was also a Fellow of the Philadelphia Academy of Surgery, and its president 1908-1909. He was a member of his county and State medical societies and a Fellow of the American Medical Association and the American Surgical Association.

During the World War he served with the rank of lieutenant colonel in the Medical Corps of the United States Army and was assigned successively to Base 10, consultant in orthopedics on the General Headquarters medical staff, and with Base 16, British Expeditionary Force.

He was a member of the board of directors of the Library Company of Philadelphia from 1909 to 1935 and was president during the latter year. He was also a member of the Societe Internationale de Chirurgie and the Military Order of Foreign Wars.

Dr. Taylor was married Apr. 29, 1891, to Miss Emily Buckley Newbold, of Philadelphia, who with a daughter and 2 sons survives.

STUDENT HEALTH SERVICE AT THE WEST CHESTER (PA.) STATE TEACHERS COLLEGE

The following is a set-up of the program for the Student Health Service at the West Chester (Pa.) State Teachers College, as submitted by Drs. John A. Farrell and Joseph Scattergood, Jr., both of whom are members of the Board of Trustees of the State Teachers College. This program has the endorsement of the trustees of the College as well as the approval of the Chester County Medical Society. This particular outline is in keeping with and modeled after the one mentioned in the report of the last meeting of the House of Delegates of the State Medical Society.

It is hoped that this program may serve as a guide in formulating a policy for other state-owned and state-controlled educational institutions where such services are being established.

At the meeting of the board of trustees of this College on Dec. 18, 1935, the following motion was unanimously adopted:

That the Health Committee be authorized to outline a definite policy and present it to the board for ratification and that in the meantime the Health Service should function under that plan.

The committee, consisting of Dr. John A. Farrell and Dr. Joseph Scattergood, Jr., has instituted a most desirable health service at the college. The committee kept in mind the following definite thoughts:

(1) That the sudden resignation of Dr. Miller, who was the school physician, created an emergency requiring the inauguration of a plan almost immediately.

(2) That the health service at this college must conform to the recommendations of the Department of Public Instruction as laid down by Dr. I. D. Metzger, chairman of the State Board of Medical Education and Licensure, and

(3) That the service instituted should have the approval, co-operation, and support of the medical profession in the community.

With these aims in mind, the committee consulted with the Chester County Medical Society and obtained from that body suggestions both as to the type of service to be rendered and the physician in charge of that service. The committee believes that the health service should serve a definite purpose in college life, directed at preventive medicine. The school physician, then, should make weekly inspections of the school grounds and buildings to bring about sanitary and healthful conditions at the college. Examinations of all food handlers as well as the inspection of the source of all food materials is to be an important part of his duties. The school physician will become a member of the faculty and will instruct the students from time to time in the matter of important aspects of hygiene and other health problems.

Concerning the actual medical care of college students, the committee is most specific in its recommendations, all of which have the complete endorsement of the local medical profession. The school physician is to serve essentially in the capacity of a health officer or intern rather than an active practitioner of medicine. The doctor will have a daily office hour, at which time any student may consult him relative to matters of a medical nature. The doctor will be permitted to advise or treat the student on this first visit, but subsequent care must be undertaken by an outside physician. If the student's complaint can be taken care of on one visit, there will be no necessity for referring the student to an outside physician, but it is definitely understood that the doctor at the college will be essentially concerned with emergencies, first aid, and very minor ailments requiring but one visit to a doctor. In all protracted illnesses and accidents, the student will be directed to select his or her doctor of choice. If the student has no doctor, a list of reputable physicians will be made available to the student; the school physician may advise or suggest a local physician particularly adaptable to the illness at hand. The school physician will not be permitted to treat students at his own office or the hospital.

The college in no way will be responsible for medical bills of outside physicians except in the case of students on athletic teams. The school doctor will take care of all illnesses or accidents incident to participation in athletics by students on any of the college teams.

Röntgen-ray studies, surgical consultations, *etc.*, which may be necessary for athletes, will be done at local hospitals and, the college will be responsible for these bills. No difficulty is anticipated in making satisfactory arrangements for this work with the local hospitals.

The school doctor will be in attendance at various athletic events to administer first aid. The school doctor also will supervise the physical examination of all new students registering at the college.

No medical care will be permitted by the school doctor to faculty members or their families or any employee of the college. This medical service must be rendered by outside physicians at the patient's expense.

It may readily be seen that it will be necessary for the college physician to be at the school several hours each day, serving in his various capacities, but at the same time he will in no way be competing with the local medical profession as insisted upon by the State Medical Society.

The great supply of expensive drugs at the infirmary is unnecessary and only the everyday remedies should be available for the students' needs. Any special prescriptions should be filled by local pharmacists.

DUTIES OF COLLEGE PHYSICIAN

1. To be present each morning for an hour or more to consult with students or others, as elicited by teachers or by the nurse, and to advise care under the direction of the nurse.

2. To supervise redressings or treatment by the nurse.

3. To make a survey of the physical condition of each student early in the year and outline special means of development through the athletic department. Also, to interdict harmful physical activities in particular cases. (The state should encourage the educational training of only such persons for teaching as can eventually endure the strain of professional work.)

4. To assure the health of the group against infections which convalescents might carry back, by a careful check-up of the physical condition before being admitted to classes. This pertains especially to disease carriers which follow recovery from diphtheria, typhoid fever, scarlet fever, and diseases of childhood such as mumps, whooping cough, and measles.

5. To insist on the correction of physical imperfections that are correctible in any student, which will hamper study and later educational activities. (Examples: Enlarged and diseased adenoids and tonsils, decayed teeth, diseased sinuses, focal infection, eye refraction and fusion.)

6. To survey regularly the premises in order to detect any unhygienic conditions, bad plumbing, fire hazards, heat supply, ventilation, *etc.*

7. To inspect regularly the sanitary conditions relative to food supply, its preparation and service, and especially as to food handlers.

8. In any case of illness or threatened illness, to assume professional responsibility of the case until referred to another physician, and to do so without making any specific, special charge for the same.

9. To give specific health talks from the professional viewpoint which would sensitize these prospective teachers to the health needs of pupils who later will come under their care. Health surveys on themselves will induce them to urge the same on others later on.

10. To confer with the committee on curricula and with individual students relative to the amount of work and to the correlation of courses in respect to fatigue. (Maintaining mental alertness by securing variety in

program and by having it adequately interspersed with physical recreation.)

11. To outline correctional exercises to be followed individually or in class by the physical education department. (Examples: Spinal deformities, foot faults, inadequate respirations, equilibrium tests.)

12. To pass upon the physical qualifications of all applicants before acceptance as students and, generally, to advise the president and other administrative officers in respect to the activities of the institution in matters which pertain to the physical welfare of all at all times.

BUCHANAN DAY

The Allegheny County Medical Society had as its guest of honor Dr. John J. Buchanan of Pittsburgh on Jan. 21. Dr. Buchanan is professor of surgery in the University of Pittsburgh School of Medicine.

The clinical program began at 2 p.m. with approximately 975 physicians and dentists remaining through the entire afternoon listening to the eminently practical clinical program. The following program prevailed: Dr. Dean Lewis, surgeon-in-chief, Johns Hopkins Hospital, Baltimore, read a paper on "Endothelial Tumors," illustrated with lantern slides; Dr. E. C. Rosenow, Mayo Foundation, Rochester, Minn., read a paper on "Focal Infection and Elective Localization"; Dr. J. Eastman Sheehan, plastic surgeon, New York City, read a paper on "Application of Skin Grafts (Tube Grafts)—Correction of Unilateral Facial Paralysis (Technicolor Motion Pictures)."

Dr. Richard J. Behan, president of the Allegheny County Medical Society, opened the meeting and introduced the guest of honor, Dr. Buchanan, who in turn acted as chairman and duly presented the speakers.

A testimonial dinner was given Dr. Buchanan at the Schenley Hotel at 6:30 p.m. More than 800 attended the dinner. The program of the evening was opened by the invocation of Rev. Stuart Nye Hutchison. Dr. Richard J. Behan was toastmaster. The postprandial speakers were Mayor McNair of Pittsburgh, Dr. Holland H. Donaldson, W. W. Stoner, Esq., president of the Allegheny County Bar Association, and Dr. Dean Lewis. A medallion, a token of the medical society's esteem, was presented to Dr. Buchanan, the presentation address being made by Dr. Alexander H. Colwell, president of The Medical Society of the State of Pennsylvania.

Among those who were present were Dr. Maxwell J. Lick, of Erie, president-elect of The Medical Society of the State of Pennsylvania; Dr. Frank A. Lorenzo, of Punxsutawney, third vice-president of the State Society; Dr. Walter F. Donaldson, secretary of the State Society, who is also editor of the *Pittsburgh Medical Bulletin*; representatives of the Odontological Society; Dr. Walter E. Mendel, president-elect of the State Dental Society; Dr. Leo Shonfield, president of the Western Pennsylvania Odontological Society.

The Pittsburgh universities and schools were represented by the chancellor of the University of Pittsburgh, Dr. John G. Bowman; the president of Duquesne University, the Very Rev. J. J. Callahan; Dr. Charles Watkins, the acting head of the Carnegie Institute of Technology; the dean of the University of Pittsburgh Medical School, Dr. R. R. Huggins; and the dean of the school of pharmacy, Dr. C. Leonard O'Connell. Other organization representatives were the president of the Chamber of Commerce, Mr. H. B.

Kirkpatrick; the president of the Hospital Conference Association, Mr. A. Oseroff; and the president of the Allegheny County Bar Association, Mr. W. W. Stoner.

Buchanan Day will ever be one of the outstanding celebrations given by the Allegheny County Medical Society, a most worthy tribute to so distinguished a member, whose qualifications and accomplishments made him so well deserving of this testimonial.

THE POSTGRADUATE INSTITUTE OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY

The institute will be conducted by the Philadelphia County Medical Society from Apr. 20 to 24, inclusive; all the activities will be held exclusively at the Bellevue-Stratford Hotel, Broad Street at Walnut Street.

The registration and the scientific program will be held in the Rose Garden. The morning of Apr. 20, from 10:30 to 12:30, will be devoted to registration. The registration fee will be \$5 to cover the institute's expenses.

The official opening of the institute will be at 12:30 p. m. at a luncheon, the room to be assigned by the hotel; there will be a nominal luncheon charge. The guests of honor at the luncheon will be the Mayor and the Director of Public Health of the City of Philadelphia, Dr. Maxwell Lick, of Erie, president-elect of The Medical Society of the State of Pennsylvania, and the guest speakers on the program. It is hoped that those who register will attend the luncheon.

The opening scientific session will begin at 2 and close at 5; the remaining sessions will be held from 10 to 1, and 2 to 5.

Another feature will be the dinner, room to be assigned by the hotel, Wednesday evening, Apr. 22, at 6:30 o'clock; Dr. Alexander H. Colwell, of Pittsburgh, president of The Medical Society of the State of Pennsylvania, will be the guest of honor. Some of the trustees of the State Society will attend. A charge will be made for the dinner.

Following the dinner there will be held at the hotel: (1) The First Councilor District meeting, and (2) at 8:30 o'clock, the regular scientific meeting of the county society—the Annual Strittmatter Award, and the J. Chalmers DaCosta Oration. The oration will be delivered by Dr. Frank Lahey of Boston, Mass.

The program is as follows:

Monday, Apr. 20

MORNING

- 10:00-12:30—Registration.
12:30- 2:00—Luncheon.

AFTERNOON

- 2:00- 2:35—"Physiology of the Circulation," Henry C. Bazett.
2:40- 2:55—"The Valves of the Heart in Action" (Motion Pictures), William D. Stroud.
3:00- 3:25—"The Clinical Picture of Rheumatic Fever in Children," Ralph M. Tyson.
3:30- 3:55—"The Treatment of Rheumatic Fever," Stewart D. Polk.
4:00- 4:25—"Chorea and the Rheumatic Heart," Frederic H. Leavitt.
4:30- 5:00—"Rheumatic Heart Disease in Adults," Thomas M. McMillan.

Tuesday, Apr. 21

MORNING

- 10:00-10:25—"How the Laboratory Can Help the General Practitioner," Abraham Cantarow.
10:30-10:55—"Prevention of Renal Disease," David M. Davis.
11:00-11:25—"Toxemias of Pregnancy," Clifford B. Lull.
11:30-11:55—"Chronic Nephritis Complicating Pregnancy; Hypertensive Cardiovascular Disease Complicating Pregnancy," Philip F. Williams.
12:00-12:25—"A Practical Lesson in Prognosis in Heart Disease," E. J. G. Beardsley.
12:30- 1:00—"The Care of the Patient with Cardio-renal Disease," William E. Hughes.

AFTERNOON

- 2:00- 2:25—"Certain Characteristics of Streptococci in Relation to Their Infectivity," Stuart Mudd.
2:30- 2:55—"Some Clinical Manifestations Produced by Streptococci," Joseph Stokes, Jr.
3:00- 3:25—"Symptomatology of Cardiovascular Disease," Fred J. Kaltefleiter.
3:30- 3:55—"The Evolution of Glomerulonephritis" (Lantern Slides), Edward Weiss.
4:00- 4:25—"Hyperthyroidism and Hypothyroidism in Relation to Circulatory Disorders," Edward Rose.
4:30- 5:00—"Films Explaining Electrocardiography," George C. Griffith.

Wednesday, Apr. 22

MORNING

- 10:00-10:25—"The Pathology of So-called Medical Kidney Disease," Baldwin Lucke.
10:30-10:55—"The Pathology of So-called Surgical Kidney Disease," Stanley P. Reimann.
11:00-11:25—"Roentgen-Ray Diagnosis of Urinary Tract Disease," Willis F. Manges.
11:30-11:55—"Radiotherapy in Tumors of the Kidney and Bladder," George E. Pfahler.
12:00-12:55—"Obstructive Uropathies of Upper Urinary Tract Primarily Renal," Willard H. Kinney.
12:30-12:55—"Obstructive Uropathies of Upper Urinary Tract Primarily Ureteral," Leon Herman.

AFTERNOON

- 2:00- 2:25—"Pregnancy Complicated by Heart Disease," James M. Alesbury.
2:30- 2:55—"Cardiorenal Disease Complicating Pelvic Pathology," Margaret C. Sturgis.
3:00- 3:25—"Treatment of Syphilis of the Cardiovascular System," William Egbert Robertson.
3:30- 3:55—"Hypertensive Cardiovascular Disease," O. H. Perry Pepper.
4:00- 4:25—"Surgical Treatment of Angina Pectoris, Including Alcohol Injection, Cervical Sympathectomy, and Posterior Root Re-section," Francis Grant.
4:30- 4:45—"The Possibilities of Surgical Treatment for Hypertension," Francis Grant.

- 4:45- 5:00—"The Present Status of Ablation of the Thyroid Gland in Certain Forms of Heart Disease," Isidor S. Ravdin.

Thursday, Apr. 23

MORNING

- 10:00-10:55—"Functional Kidney Tests," Leonard G. Rowntree, Jefferson H. Clark.
 11:00-11:25—"Roentgen Methods of Determinating the Size of the Heart and Studying Its Physiology," W. Edward Chamberlain.
 11:30-11:55—"Roentgen Consideration of Lesions Involving the Aorta and the Heart," Eugene Pendergrass.
 12:00-12:25—"The Cardiorenal Complications in Prostatic Obstruction," Alexander Randall.
 12:30- 1:00—"Infections of the Urogenital Tract in Relation to Cardiovascular Disease," William H. Mackinney.

AFTERNOON

- 2:00- 2:50—"Fundus Lesions of Cardiorenal Disorders," George E. deSchweinitz.
 3:00- 3:25—"A Brief Discussion of the Preventive Aspects of Cardiorenal Disease," Sarah Morris.
 3:30- 3:55—"Cardiac Neuroses and Psychoses," Joseph C. Yaskin.
 4:00- 4:15—"Surgical Treatment of Spasmodic Arterial Affections, Including Raynaud's Disease, Buerger's Disease, Acrocyanosis, etc.," George P. Müller.
 4:20- 4:35—"Surgical Treatment of Aneurysms—Peripheral, Aortic, Arteriovenous," W. Wayne Babcock.
 4:40- 5:00—"Surgical Treatment of Chronic Pericarditis and Valvular Heart Disease," John B. Flick.

Friday, Apr. 24

MORNING

- 10:00-10:25—"The Excretion of Water and Nitrogen by the Normal Kidney," Alfred N. Richards, Ph.D.
 10:30-10:55—"Water and Nitrogen Excretion in Renal Insufficiency," Eugene M. Landis.
 11:00-11:25—"Nephrosis in Children," Edward L. Bauer.
 11:30-11:55—"The Diagnosis and Treatment of Pyelonephritis in Children," Emily P. Bacon.
 12:00-12:25—"Cerebral Vascular Spasms and Their Neurologic Manifestations," Bernard J. Alpers.
 12:30- 1:00—"Recent Advances in the Treatment of Occlusive Peripheral Vascular Disease," Lewis H. Hitzrot.

AFTERNOON

- 2:00- 2:25—"Angina Pectoris and Coronary Disease," Charles C. Wolferth.
 2:30- 2:55—"Its Electrocardiographic Study," Francis C. Wood.
 3:00- 3:25—"The Causes and Treatment of Cerebral Vascular Disease," Clarence A. Patten.
 3:30- 3:55—"The Modern Use of Digitalis," William D. Stroud.

- 4:00- 4:25—"The Treatment of Cardiovascular Disease Other Than Digitalis," Alfred Stengel.

- 4:30- 4:55—"Prevention of Cardiorenal Disease," Charles L. Brown.

STATE BOARD EXAMINATION

The following questions were submitted by the State Board of Medical Education and Licensure at the examination conducted Jan. 14 to 16, 1936.

Medical and Surgical

Physiology, Pathology, Bacteriology, and Physiologic Chemistry

1. Explain in a sentence or two the adaptation of the human organism (a) to meeting the attack of an opponent; (b) to the endurance of external coldness; (c) to the resistance of infection.
2. Give the characteristic physiologic and histologic changes (a) in peptic ulcer; (b) in gastric carcinoma.
3. Evaluate the reliability of the following laboratory tests: (a) Widal; (b) Wassermann; (c) von Pirquet.
4. Discuss the value and describe the technic of blood transfusion.
5. Outline the various methods of identification of organisms in bacteriologic study.
6. Explain briefly the meaning of each of the following: (a) Basal metabolism; (b) antigens; (c) agglutins.
7. Describe in a sentence for each the significance of the following terms: (a) Neuron; (b) reflexes; (c) ganglia; (d) reaction of degeneration; (e) nerve impulse.
8. What laboratory tests should be made routinely? Why each? What consideration should precede special requisitions for tests (a) in bacteriology? (b) in pathology?
9. Discuss amebiasis in respect to its identification and its transmission.
10. What laboratory tests are indicated in a case of toxemia of pregnancy?

Diagnosis, Symptomatology, Medical Jurisprudence, and Toxicology

1. In the case of a patient with painless hematuria and no history of trauma, what are the possible sources of that bleeding, and what organs should be studied to arrive at a diagnosis? What procedure would you follow to locate the cause of the hematuria?
2. In the case of a patient who has suffered a crushing injury of the pelvis, what are the symptoms of a ruptured urethra? What are the symptoms of extravasation of urine?
3. In a patient with sudden acute abdominal pain, how would you make a diagnosis between acute appendicitis and renal or ureteral calculi, especially if on the right side?
4. What are the prodromal symptoms (a) of variola? (b) of scarlet fever?
5. Differentiate clinically diphtheria from 2 other throat diseases. How may the diagnosis of each be confirmed?
6. What are the clinical symptoms and what would be your treatment in a case of poisoning by the following: (a) Carbolic acid? (b) bichloride of mercury? (c) barbitol and its derivatives? (d) morphine? (e) arsphenamine? (f) carbon monoxide?

7. Discuss the value of roentgen ray in diagnosis of gastro-intestinal pathology. What is a gastro-intestinal series?

8. How would you make a diagnosis of pulmonary tuberculosis?

9. What are the symptoms of acute alcoholism? If called into court to testify regarding your examination of an automobile driver who has been arrested for driving a car while intoxicated, what facts would you have to present to the court in asserting that the accused driver was or was not competent to drive his car with safety.

10. Discuss uremia from the standpoint of etiology and symptomatology.

Gynecology and Obstetrics

1. Give the differential diagnosis of placenta praevia; outline briefly the management of such a case.

2. A multiparous woman comes to your office complaining of lumbar and left lower abdominal pain. What condition would you suspect? Discuss briefly your management of such a case.

3. Discuss your treatment for syphilis during pregnancy. Outline the symptoms of and give treatment for a syphilitic newborn.

4. What do you understand by uterine ventrosuspension? Name the various methods employed for the same.

5. Give the etiology of (a) antepartum hemorrhage; (b) intrapartum hemorrhage; (c) postpartum hemorrhage.

6. Give the differential diagnosis among (a) ectopic pregnancy; (b) ovarian cyst with twisted pedicle; (c) ruptured ovarian cyst; (d) acute appendicitis.

7. How would you recognize a transverse presentation? Outline your method of delivery of such a case.

8. You are called to see a young woman who has vaginal bleeding; what would you suspect? Outline your method of procedure in caring for her.

9. What are the indications for (a) podalic version? (b) forceps? cesarean section?

10. What injuries may occur to the birth canal during delivery? Outline the management of each.

Anatomy and Surgery

1. Describe 5 common conditions that are characterized by unconsciousness and which result from an actual or simulating injury to the head. Give the chief points in differential diagnosis.

2. How would you diagnose and treat a case of ruptured duodenal ulcer?

3. What is phimosis? What is the difference between phimosis and paraphimosis? How would you treat a case of each?

4. What are the symptoms of, and how would you diagnose and treat, a fracture of the neck of the femur occurring within the capsule?

5. Give the differential diagnosis of tuberculosis lymphadenitis, Hodgkin's disease, and lymphatic leukemia. Discuss in a general way the surgical anatomy of the cervical lymphatics.

6. Discuss minutely the anatomy of the sacrum. Discuss the condition known as sacro-iliac sprain; outline its symptoms and give diagnosis and treatment.

7. Give symptoms, causes, and treatment of gangrene of the foot.

8. Discuss the indications for and the relative value of spinal, rectal, and inhalation (ether) anesthesia. Discuss the use of barbiturates in surgical anesthesia.

9. A man, age 65, who during the past 2 years has had difficulty in passing his urine, is seen because he is vomiting and is slightly irrational. What examination would you make? How would you treat him?

10. Define hernia. Name and describe the anatomic structures involved in each of the following types of hernia: Umbilical; direct inguinal; femoral; scrotal.

Practice, Materia Medica, Therapeutics, Hygiene, and Preventive Medicine

1. Outline in detail the treatment for a case of myxedema.

2. Outline the general and medical treatment indicated in some of the forms of cardiac arrhythmia, as may be found in individuals between ages 20 and 50.

3. Give the source of activated charcoal, its physiologic action, dosage, and therapeutic indications.

4. Name 3 official preparations of hydrargyrum. Give their dosage and the therapeutic indications for use of each preparation.

5. Given a case of acute alcohol poisoning in a man, age 30, admitted by patrol service, outline your line of treatment, including a study of possible conditions present that would add to the gravity of the patient's condition.

6. Enumerate the several points of personal and school hygiene that you would insist upon in primary, in secondary, and in high school grades in a district in which you may be the health officer.

7. Mention the various routes and methods of drug administration that may be resorted to in the practice of medicine, having regard to the age and sex of the individual, in respect to the selection of medication for the several decades of life. Illustrate.

8. In what diseases of mind and of body may heredity be of great importance? What may be done to provide anticipatory care for a child born with such susceptibility? Cite a given case to defend your thesis.

9. What drug, its form and dosage, would you administer for the relief of a case of auricular fibrillation? What are the dangers to be feared in the treatment of the above affection?

10. What methods, including drugs, may be put into action to overcome persistent insomnia? Cite illustrations.

[NOTE: In questions involving materia medica and therapeutics, answer in accordance with the school of medicine in which you have been taught. A member of the board representing your school will grade your paper.]

COMMENTS AND EXCERPTS

Red Cross Ranks Rise to Over 4,000,000.—The American Red Cross began the new year with a membership of more than 4,000,000 as against 3,837,941 last year. Because of the unusual number of disasters last year and the establishment of new programs, there was a heavy drain on the organization's resources. This added membership helps in a small way to meet it.

Gratifying progress of the safety campaigns conducted for the last few months was reported.

In its emergency first aid on the highway program, planned to reduce the loss of life from automobile accidents, the Red Cross now has 235 stations in 25 states, and 1436 in 32 states are in process of establishment.

In the home and farm accident prevention campaign, more than 2350 committees have been organized by Red Cross chapters, and through Junior Red Cross mem-

bers 15,000,000 homes have been reached with check lists and other printed material calling attention to hazards and ways and means by which they may be minimized if not eliminated in the home and on the farm.—*New York Times*, Jan. 2, 1936.

The Mission of the Medical Corps of the Navy.

—The ideal of military tactics has always been the concentration of a superior force against an enemy. Napoleon declared that victory was with the biggest battalions. The Confederate cavalry leader, Forrest, is credited with the picturesque statement that victory was won by him who "got there fustest with the mostest." The mission of a military medical department, stated in its briefest form, is conservation of manpower, so as to enable the military leader to fulfill the mission expressed by Forrest. A slightly more elaborate description is as follows: (1) Proper procurement of manpower (careful recruiting); (2) conservation of manpower (care of the sick and wounded, and prevention of disease); (3) elimination of the physically unfit.

It is of interest that the peace-time mission of the medical department is almost identical with the war-time mission, in other words, to maintain a state of readiness for any emergency. An English naval medical officer of the present day has stated that the first duty of a surgeon of a man-of-war is "to render the ship an efficient fighting unit as far as lies in his power." Farenholt, of our own Medical Corps, has expressed the surgeon's primary duty on board ship as: "(1) Keeping the health of the personnel up to the highest efficiency; (2) arranging for the care of the wounded in, and more particularly after, action."

The statement of the mission of the Medical Corps of the Navy placed on the cover of this issue of the *United States Medical Bulletin* was elaborated by another medical officer of our Navy, the naval hygienist Gatewood, and he has expressed it in a brief and striking phrase: "To keep as many men at as many guns as many days as possible."—Editorial, *U. S. Naval Med. Bull.*, Jan., 1936.

The Prevention of Deafness.—My chief concern has been and still is the tendency of physicians and otologists to belittle the significance of many of the ear conditions discovered in testing school children. I believe that continued publicity and statistics, particularly concerning the benefits of treatment, will do away with this attitude. At any rate, we are convinced that we are on the right road and in the end we are going to overcome all obstructions and reach our destination—the testing of hearing and the examination, care, and treatment not only of school children, but also of pre-school children. Our object is prevention! Prevention of any deafness! Prevention of increasing deafness! Prevention of severe deafness! Prevention of total deafness! If anyone under the conditions can suggest a better way to approach our problems, we will welcome him (or her) with open arms.—Edmund Prince Fowler in *The Laryngoscope* (*The Volta Review*).

The Sample Racket.—Because of its growing intensity, drug manufacturers are seriously concerned about the chiseling carried on by brokers who collect samples distributed to physicians' offices and then sell them to the trade at a discount ranging from 25 to 50 per cent less than prices on regular size packages. The racket is so well organized that regular collections are made of bags for which \$1.00 each is paid and of baskets for which \$2.00 each is paid, regardless of the

amount of loot in either of them. From information furnished by Mr. Mark Wallace of Frederick Stearns and Company, Detroit, Michigan (*Proceedings of the American Drug Manufacturers Association*, May 6-9, 1935), we gather that the employees of certain physicians, principally in New York, Chicago, and Brooklyn, are largely concerned in this traffic, although Mr. Wallace, while offering no specific proof, we regret to say intimates that they alone are not always involved. A system is being developed whereby the manufacturers hope to discover each plague spot and create lists which will guide distributors usefully.

Since the major part of the evil is localized in the 3 cities cited, and in particular parts of them, the projected system should lead to results upon which regulatory and punitive measures could be based. Such measures would properly involve publicity and the existing legal and medical codes.

We recall an effective crusade carried on some years ago by a leading manufacturer in the metropolitan district. It concerned substitution. After careful establishment of proof, the names of the offenders, with details of the offenses, were broadcast from time to time to the medical profession. Something akin to this method would seem to merit consideration in possible relation to the evil under discussion.—Editorial, *Medical Times*, Dec., 1935.

MEDICAL ECONOMICS

Socialized Medicine.—The late Herbert Hadley, former governor of Missouri, in his book "Rome and the World Today" drew the following conclusions: "Destroying the right of private ownership of property, denying to a man of talent and ability the right to advancement or extra reward for his services, brought upon the Roman world a social, industrial, and economic breakdown that was the natural result of these efforts to run counter to the inflexible rules of human nature and the inexorable laws of supply and demand. Hope and ambition were banished from the hearts and minds of men."

Quoting from Attorney-General Cram: "Unless there is a halt in this tendency to saddle all responsibilities on the Federal Government, the time will come when we will have in Washington a bureaucracy knowing no master—and one day the country will be in ruins." The centralization of power, whether in industry, commerce, education, or the trades or professions if granted to a bureau or individual, will set up an oligarchy which will create and foster Bolshevism.

Announcement has been made by the Julius Rosenwald Fund that they propose to expend 28 per cent of a million dollars during the coming year for the furthering of socialized medicine.

Edward R. Embree, president of the Fund, said that the Rosenwald effort to place competent medical service and hospitalization within the reach of persons of moderate means paralleled the program of the medical profession.

The medical profession should be aware of this propaganda in behalf of state medicine. In the crystallization of public opinion, physicians will do well to bring the point of view of the medical profession to the attention of their patients, women's clubs, chambers of commerce, and similar organizations.

In a previous editorial it was shown what socialized medicine has done for both patient and physician in

Russia, Germany, and England. Senator Henry J. Allen, in a recent address, described the result in Germany and England under this form of medicine which he had observed during trips abroad in recent years.

He declared that Germany had discovered under state medicine that diseases have multiplied alarmingly because of constant malingering and the load is reaching far above the estimation of the original proponents. Senator Allen said further that the keen ability of the profession in this country should be sufficient to save this country from the disaster that has befallen England, Germany, Austria, Poland, Italy, and other countries of Western Europe where medicine is practiced under direction and payroll of the state.

The danger in America is imminent. One-fifth of the people are now beneficiaries of the United States government. Sentimentalism will be used to extend the social phases of government to make the practice of medicine a function of the state. Senator Allen said, "The medical profession in the United States must lead the way to a middle ground. I can't help but believe the profession will be able to work out a modified answer, but medicine cannot hope to be left untouched; some changes will have to be made. There is no field of human activity in the United States that is so challenged to change as the practice of medicine. The great thing we call private practice has reached a plane in the United States that is worth saving, but the problems facing the medical profession will not solve themselves. An intelligent solution must come from within the profession."—Abstract of Editorial, *J. Oklahoma M. A.*, Oct., 1935.

The Pro and Con of Socialized Medicine.—In a book just published, the reader is privileged to sit down on an evening and read through a complete debate on the burning question of socialized medicine. Volume 10, Number 5, of the *Reference Shelf*, published by the H. W. Wilson Co., is called *Socialization of Medicine*. The compilation of these data was made by Julia E. Johnson, and it supplements a similar array of material gathered in 1930 by Edith M. Phelps. This volume brings the story up to date in a concise and objective manner.

An extensive brief covers 29 pages. One by one the points to be raised are carefully postulated, and the reader would be hard put to discover any significant omissions. Is there a vital need for some socialization of medical service? Is adequate medical care unattainable under present conditions for a large proportion of people? What about preventive medicine, the disadvantages to the profession, personal relationships, and countless other matters? Here are all the points from both sides of the fence.

Following this brief, an elaborate bibliography is presented. Among the general references are over 100 books and pamphlets, and 230 magazine articles. In addition, 80 titles are listed for the affirmative side and 100 for the negative. One dare not plead ignorance in not having read some of the important writings on the subject, even though but a small fraction could be covered by the average physician. For the doctor who is intensively concerned, these titles are invaluable.

The next section is devoted to definitions, and rightly so, for the phrase *socialized medicine* is subject to more than a score of interpretations. After this groundwork, the book takes up the general phase and the pros and cons of the topic. Some of the general considerations are: The present and future organization of medicine; the need for better provision of medical care; people's

ills and doctors' bills; state medicine in Europe; medicine in transition; industry in medicine, and so on. Then the affirmative and negative sides are given in adequate length, although there may be some feeling that the arrangement is a bit biased towards the affirmative. Regardless of this, the entire book is very informative and should be serviceable to those entering into more or less acrimonious discussion on socialized medicine.

Incidentally, the part played by the *Medical Record* in helping to throw light on this subject can be appreciated by the number of references to that periodical in this book. The bibliography includes 12 titles; in addition, the articles by Dr. Nathaniel P. Brooks ("Disadvantages of State Medicine," Mar. 10, 1932) and Dr. E. L. Hergert ("Should Medicine Be Socialized?" Apr. 20, Mar. 4, 1932) are quoted in full.—Editorial, *Medical Record*, Dec. 18, 1935.

Facing Realities.—From all indications the time is fast approaching when the medical profession and the general public of the United States are to face the reality of a legislative proposal to the Congress of the United States which embraces some form of state medicine or health insurance.

In so far as we can learn, the taxpayers of the United States have not sponsored this movement. The labor organizations of the United States, the members of which are the alleged beneficiaries under the plans proposed, have not endorsed the movement. The medical profession of the United States certainly has not endorsed the movement.

These so-called social service groups have endorsed the movement and are actively engaged in an effort to sell the idea to the public. One of the attractive features of the program for them is that they hope to land permanent jobs somewhere in the organization set-up. Another attractive feature is that they might become a dominant influence over the insured groups and the medical profession, embracing many millions of people. If they achieve their first objective, it naturally follows that they will occupy a dominant political position, influencing some 40 millions of persons and controlling untold millions of money and a far-flung organization of people. It would give them the political power to do just about as they might choose.

It is reported that sampling investigations are being carried on at the present time very largely by lay groups concerning purely medical matters. They are carried on as federal projects, and the federal taxpayers, of course, supply the funds.

Another feature entering into this consideration is the fact that a politician owes his power very largely to patronage. When a politician is offered an opportunity to vote for a measure which will enormously increase his patronage, and at the same time do it in the name of social welfare, there has been placed before him a very tempting morsel. Any opposition to such a proposal, according to the proponents, is based on an anti-social attitude and an antagonism to the welfare of humanity.

Therefore, we say that we are well beyond the cross-roads on this issue. We do not face abstract questions now. We face realities. It is high time that members of the medical profession inform members of Congress on this subject. The most influential informants of a congressman are his constituents, and we must not forget that the social groups in his constituency are active.

Our legislative committee in Washington and our legislative committee in the state, however active, will

fail unless the local members of the profession inform their respective congressmen and senators.

Some definite legislative proposals likely will be presented to the next Congress which convenes in January, 1936.—Abstract of Editorial, *J. Tennessee M. A.*, Oct., 1935.

Additional Data on Medical Economics

Berks County	p. 451
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MEDICOLEGAL

Evidence of Cause of Death.—In an action on a life policy, the Louisiana Court of Appeal, *Price vs. Douglas Life Ins. Co.*, 162 So. 83, held that the certificate of the superintendent of a hospital giving the cause of insured's death as "hypertensive heart disease, nephritis, and uremia" and the explanation of a medical witness that hypertensive heart disease is organic and uremia is a symptom of Bright's disease, without contradiction or explanation, were sufficient to establish the insurance company's defense limiting the liability to one-half the face value of the policy in case of death by organic heart disease or Bright's disease.—*Medical Record*, Dec. 18, 1935.

Necessity for Operation.—The West Virginia Supreme Court of Appeals held, *Barnes vs. State Compensation Commissioner*, 178 S. E. 70, that in the case of a compensation claimant, age 43 or 44, not shown to be a bad or doubtful surgical risk, the compensation may require a rehabilitative major surgical operation for a fracture of the left leg above the ankle and another of the right leg below the knee if the medical opinion was that the operation would result in material improvement in both legs and the reduction of disability with no more than the usual risk of an ordinary major operation or unusual pain. The court considered this in accordance with the overwhelming weight of authority, although there is some conflict in the decided cases.—*Medical Record*, Jan. 1, 1936.

Limitation of Time for Malpractice Actions.—The Minnesota Supreme Court, *Plotnik vs. Lewis*, 261 N. W. 867, held that the writing of a letter by the defendant physician, who had previously in treating a sciatic nerve injected alcohol to relieve the pain, to a physician who had taken up the case and would not administer morphine until he had heard from the defendant, the letter stating that morphine to keep the patient comfortable was all that could be done, did not renew the relation of patient and physician between plaintiff and defendant so as to interrupt the running of the 2-year limitation statute.

In an action against a physician for malpractice consisting in leaving tight bandages on plaintiff's legs without an order for their removal at the proper time, the Michigan Supreme Court held, *Weast vs. Duffie*, 262 N. W. 401, that the running of the 2-year statute of limitations was not interrupted by the fact that an agreement of plaintiff not to sue was induced by the defendant's representation that he had entrusted the postoperative treatment of plaintiff to another physician. This representation could not operate to conceal from plaintiff a right of action against defendant. At most it merely

indicated that the other doctor was morally the more to blame. Plaintiff had no notice of nor did he consent to defendant's entrusting the postoperative treatment to another. Decree for plaintiff was reversed and the action dismissed.—*Medical Record*, Jan. 1, 1936.

Roentgenograms the Property of Physician Making Them.—In the absence of an agreement to the contrary roentgenograms are the property of the physician or surgeon who has made them incident to treating a patient, notwithstanding the cost of taking the roentgenograms was charged to the patient or to the one who engaged the physician or surgeon, the Michigan Supreme Court holds, in *McGarry vs. J. A. Mercier Co.*, 262 N. W. 296.

It is a matter of common knowledge, the court said, that roentgenograms are practically meaningless to the ordinary layman. But their retention by the physician or surgeon constitutes an important part of his clinical record in the particular case, and in the aggregate these negatives may embody and preserve much of value incident to a physician's or surgeon's experience. They are as much a part of the history of the case as any other case record made by a physician or surgeon. In a sense they differ little if at all from microscopic slides of tissues made in the course of diagnosis or treating a patient, but it would hardly be claimed that such slides were the property of the patient.

And in the event of a malpractice suit against a physician or surgeon, the roentgenograms which he has caused to be taken and preserved incident to treating the patient might often constitute the unimpeachable evidence which would fully justify the treatment of which the patient was complaining.

The case in which the question arose was an action by a physician and surgeon for services rendered at the request of an employer to an injured employee. The plaintiff's employment was admitted by the employer but the defendant sought to avoid payment because plaintiff refused to deliver to defendant for use by other physicians roentgenograms which plaintiff had taken incident to treating the employee, although plaintiff was willing the negatives should be inspected by other physicians if not removed from plaintiff's care.

Careful research by the court indicated that the case was one of first impression. Judgment for plaintiff was affirmed.—*Medical Record*, Dec. 18, 1935.

Necropsy as Evidence of Cause of Death.—The Louisiana Supreme Court, *Lado vs. First National Life Ins. Co.*, 162 So. 579, held that the testimony of the senior pathologist of a hospital, who conducted the necropsy on a patient as to the cause of the patient's death, was admissible in an action on a life policy as against the objection that the physician who treated the deceased would have been in a better position to say what caused death. The court said that the testimony of an expert who performed a necropsy is admissible and entitled to probative value just like the testimony of other doctors who might have examined the patient.—*Medical Record*, Dec. 18, 1935.

Practice of Optometry by Corporations Barred by West Virginia Statute.—The West Virginia Supreme Court of Appeals, in *Eisensmith vs. Buhl Optical Co.*, 178 S. E. 695, held that a corporation is forbidden by the state statute, Code 1931, article 8, chapter 30, from practicing optometry. The court quoted with approval the recent case of *Stern vs. Flynn*, 278 N. Y. S. 598, under a similar statute regulating the practice of

optometry, and held the statute constitutional for the reason that the kind of work undertaken by the optometrist bears such intimate relation to the health of mankind as to bring it within the power of legislative supervision through the exercise of the police power.—*Medical Record*, Dec. 18, 1935.

Physical Examination of Defendant as to Existence of Disease.—In an action to annul a marriage on the ground that the defendant had concealed from plaintiff that, prior to and at the time of the marriage, she was suffering from tuberculosis, the New York Appellate Division held, *Galligano vs. Galligano*, 280 N. Y. S. 419, that the plaintiff was entitled to examine the defendant upon the matters specified in his notice of motion except as to those which would violate the statutory privilege under section 352 of the Civil Practice Act, as to which the privilege extends to the testimony of the patient as well as of the physician.

Plaintiff was held entitled to a physical examination of the defendant unless she waived her statutory privilege as to all physicians or surgeons who had examined or treated her and unless the stipulation provided for by section 354 of the Civil Practice Act should be signed and filed.—*Medical Record*, Jan. 1, 1936.

HOSPITAL ACTIVITIES

Turning a New Leaf.—Here comes a New Year. But what of the hospital, you ask? What of socialized medicine? What of group hospitalization? Of hospital finance? Well, some of these are in the test tube now and in time we shall see the end result. But what of the hospital? What is the next great development in the hospital field?

The answer is summed up in one word: Research.

Research is the future of the hospital. While now a somewhat neglected function, undoubtedly it will be the big movement of the future, for through research the institution will be able to march forward in line and in keeping with the advances that the clinician and the chemist will bring.

While the hospital has for its object primarily the treatment and care of its patients, properly kept records are a storehouse of valuable information, and a co-ordinated effort should be made to compile statistics from these records to supervise the treatment of many diseases or investigate clinical problems.

The various services could be organized so that one member of each group acts as a co-ordinator, and all these co-ordinators would be a Committee on Hospital Research.

This should bring a wealth of medical and surgical information that now remains untouched because of lack of organization and may develop some outstanding advances in medicine from hospital bedside observation. Of paramount importance in this research are clinical records from the hospital.—Abstract of editorial in *Hospital Topics and Buyer*, Jan., 1936.

Maintaining Staff Ethics.—One of the harmful effects of economic stress is a temptation on the part of physicians to lower their previous standards of professional conduct by a tacit understanding between surgeons and community physicians that some type of reward awaits the latter when he refers patients to the former.

The development of a group which interchanges professional courtesies, the requirement for a fee in advance before treatment is undertaken, the promise of

a cure for a lump sum, the prolongation of treatment from which no further benefits may accrue, are all evidences of an unhealthy moral tone on the part of physicians.

General hospitals have recently noticed increasing numbers of requests for the admission for treatment of patients suffering from the results of an interrupted pregnancy. Those in authority in the hospital must not be so blinded by the pressing need for an increased income that they do not appreciate that their reputation for the exemplification of high ethical standards is in danger. It is more than difficult to obtain proof of the existence of nonprofessional practices among physicians or nurses. Nevertheless, it is a plain duty of the executive to put forth every effort to maintain the character of the hospital at the highest level.—Editorial, *The Modern Hospital*, Nov., 1935.

How Should Cutting Instruments Be Sterilized?

—This inquiry comes to *The Modern Hospital* from the superintendent of a midwest institution of 50 beds. The physicians on the staff of this hospital demand that all cutting instruments be chemically sterilized. Information is requested as to which of the following antiseptics should be chosen for this purpose—phenol, compound solution of cresol, or alcohol in 70 or 90 per cent strength.

Most institutions believe that scalpels and other cutting instruments should be sterilized chemically and not by boiling. In some institutions phenol or compound solution of cresol in high strength is employed. It is, however, more often considered safe and effective to employ 70 per cent alcohol for this purpose. The immersion of scalpels in 70 per cent alcohol for 20 minutes will effect sterilization without injuring the cutting edge.

Phenol and compound solution of cresol are of course capable of destroying organisms but it is thought that their corrosive action affects the cutting edge of delicate instruments, such as cataract knives or bistouries. These chemicals also produce serious burns if they are carelessly handled by the operating room personnel. It would appear, therefore, that 70 per cent alcohol is not only efficient but is also highly convenient and economical for sterilizing cutting instruments.—*The Modern Hospital*, Dec., 1935.

Should the Physician Be a Member of the Board?

—There is a somewhat militant demand on the part of physicians generally that they be represented on the governing body of the hospital. It is contended that since the doctor sends the hospital its paying patients, he should have a voice in the physical conduct of the institution. There is little to commend such a policy. The average physician is too much concerned in the medical care of his patients to give much thought to the physical and administrative angles of institutional work. He is more likely to see defects than to give advice as to their correction.

It is true that the hospital's income is secured largely through the physician. On the other hand, the hospital furnishes, at great expense, the implements with which the physician works. It is said that the presence of a physician on the hospital board of trustees provides medical advice when necessary and prevents errors on the part of the governing body. Theoretically this is true. But this advice can be supplied by an executive committee of physicians or by a joint conference committee composed of members of the visiting staff and of the board of trustees. It would give rise to complications for a board member to sit at staff meetings, and

there are disadvantages in having a staff member present at deliberations of the board.

Little is to be gained by the adoption of such a policy intended only to recognize the importance of the medical staff to the hospital. The average physician is not interested in discussions on investment of hospital funds or on improvements to the lawn or the buildings. The presence of a physician on the hospital board has proved beneficial in some institutions. On the other hand, a practical and understanding relationship between the doctor and the board of trustees has been brought about by the presence of a joint board and staff committee or by an advisory committee of physicians working with the board of trustees.—*The Modern Hospital*, Nov., 1935.

How Should the Staff Approach the Board of Trustees?—There is a strong feeling in some hospitals among the members of the visiting staff that their opinions are not valued by the board of trustees and that they have no easy avenue of approach to the governing body of the hospital.

This, in some instances, is all too true. A great administrative gap separates too often the staff and the board. To be sure, a medical executive officer is usually capable of furnishing specialty advice to the board and yet, in a way, this does not suffice. The staff of today has more or less with reason assumed that its activities are vital to the hospital because it refers paying patients to the hospital's private department. It more than ever is demanding its place in the administrative sun.

Now, the conduct of the hospital cannot be delegated to the staff. On the other hand, the board should respectfully listen to its suggestions and should act favorably on those which seem in the best interest of the hospital. A conference committee consisting of members of the board and staff is probably the best method of meeting these staff demands. Often when this avenue of approach is created the staff finds that after all the conduct of the hospital rather nearly meets with its approval.

To the person asking this question *The Modern Hospital* suggests that the creation of a conference committee will tend toward improving staff morale by creating an assurance that the board is interested in what the staff is doing and that it really appreciates constructive administrative criticism.—*The Modern Hospital*, Nov., 1935.

Bids and Board Members.—The board of trustees of a representative hospital recently ruled that bids for hospital repairs and new construction would not in the future be received from its own members. This action is eminently wise and just. But to have delayed so long in ruling against the obviously improper is as surprising as it should be unnecessary. That a contractor member of the above group promptly resigned would lead one to surmise that the *quid pro quo* for serving as a hospital trustee in the mind of this gentleman at least was the money-making possibilities of such an affiliation.

Legal prohibitions are usually found which interdict a member of a public board or a trustee of a government institution from selling goods to or receiving contracts from the group of which he is a member. In the voluntary hospital the practice of board members placing themselves in the embarrassing position of profiting by their position is to be highly condemned. The board is but the custodian of community funds. To favor one of its own members by not requiring free and open bidding before the purchase of large bills of supplies

or prior to contracting for hospital construction is next to dishonest.

To say the least, the practice of politics of any degree or type is sure to soil the good name of the community hospital. When favoritism is shown to a board member and bidding is not required or is loosely carried out in the purchasing practices of the hospital, the trust of the community is certainly betrayed.—Editorial, *The Modern Hospital*, Nov., 1935.

When May the Doctor Refer Clinic Cases to His Office?—It is natural that a dispensary patient should learn to respect the ability of some particular dispensary doctor and covet an opportunity to secure his sole attention.

Requesting the physician's name and the location of his office, the patient asks if he may make a visit. The doctor is then in a dilemma where, ethically, he must refer his patient to the director of the clinic or the social service department for this information. A physician who solicits private patients in the dispensary is unethical, and should be punished by dismissal from the staff.

For the social service department to admit patients who are able to pay for a private doctor is wrong and represents inefficiency. Circumstances may arise, however, which would seem to be extenuating insofar as the physician is concerned and these should be taken into consideration.—*The Modern Hospital*, Nov., 1935.

INDUSTRIAL MEDICINE

Camphorated Oil in the Treatment of Minor Industrial Wounds.—Lieutenant D. N. McInturff, Medical Corps, United States Navy, states that in the treatment of minor industrial wounds the first concern is to return the patient to his work with the least pain possible and with maximum prevention of primary and secondary infection. The great bulk of their cases is made up of lacerations and burns, so that this article is directed at their treatment exclusively.

The prevention of pain begins immediately after the patient sustains the injury, for he realizes that if it is possible to continue work he will be allowed to do so. Thus the fear of losing time is dispelled, and he enters the dispensary in a co-operative mood, minimizing rather than exaggerating the injury.

The prerequisites of an ideal antiseptic are: It should be strongly inhibitory to bacterial growth; it should not hurt, burn, or alter adversely the wound or surrounding tissue; it should make dressing changes possible without sticking and tearing the new or injured tissue; it should produce no general toxic symptoms; it should be inexpensive, easily handled, and free from offensive odor. Camphorated oil fills these requirements.

The treatment of lacerated wounds is first to flush the wound thoroughly with ether which is allowed to evaporate. This is followed by stitching if necessary. The wound is then dressed with sterile gauze saturated with camphorated oil. If the wound is so situated that surgical rest cannot be obtained otherwise, a splint is applied. Tetanus antitoxin is used when necessary.

Ether acts as a local anesthetic which makes suturing less painful, as well as being bactericidal and influential in inducing phagocytosis. It is a tissue irritant but the oil dressing which follows makes this transitory.

The treatment of second-degree burns first is to apply amertan, a tannic acid jelly, to obtain the benefit of

coagulation, followed the next and subsequent days by gauze dressing saturated with camphorated oil. Under this treatment, re-epithelization is especially rapid since there is no secondary infection and no trauma associated with dressing renewal, which is done daily.

No primary or secondary infection resulted in any of the cases. In mutilative wounds of the fingers, which occur quite frequently, no attempt is made to improve the appearance of the member the first day. Often partial amputation is seriously considered but, because of previous good results, conservative treatment has been given preference. In a day or so the amount of devitalization can be seen, and removal at that time is tolerated much better. In such cases the amount of scar tissue is minimal, since there has been no aggravation by infection. Contractures are prevented by splinting.

In the burn cases, the results are particularly gratifying—healing and re-epithelization going on together, with the patient continued at his work.

None of the patients complained of pain, but on the contrary they often comment on the contrast found between the oil treatment and other forms they have previously undergone.

Navy statistics show that the number of accidents is usually higher on Friday than any other day. This makes redressings quite a problem for, although the dispensary is always open, the yard does not work the remainder of the week. The workmen often live a considerable distance from the yard. Many have no cars, etc. In such cases, rather than have them go to a drug store or apply home remedies, they are given a bandage and a small bottle of the oil to take home. Their instructions are to remove the outer dressing daily, re-saturate the underdressing without disturbing it, and rebind the wound. If any throbbing or unusual pain develops, they are instructed to come to the dispensary at once. So far this arrangement has been very satisfactory, and they often return Monday morning with the wound nearly healed.—*U. S. Naval Med. Bull.*, Jan., 1936.

PHYSICAL THERAPY

Editorial Comments

Long years of traditional conservatism have developed in the medical man a spirit of skepticism regarding all innovations in medicine. This, of course, is a healthy condition but it can be carried too far. How often do we wake up to find valuable therapeutic procedures, which rightfully belong to the medical profession, appropriated and exploited by the cultists. If the medical profession was progressive and far-thinking, therapeutic procedures which promise to be of value would be thoroughly studied and either discarded or incorporated into medical practice.

Physical therapy is certainly one of the procedures which definitely forms a part of medical practice, and yet for years it has been exploited by various cultists to the disadvantage of medical practice, not only in reputation, but also economically.

There are several reasons why this situation exists. The average practitioner has never been taught anything about physical therapy in the medical schools. Whatever he knows has been gathered from reading or, as too often happens, from high pressure sales talks. Having acquired apparatus under such conditions, and with insufficient knowledge of technic, the physician employs it injudiciously and unskillfully, which results in

failure. Consequently he loses interest in physical therapy and the equipment stands idle, while the physician not only suffers financially but in his reputation, and the patient is deprived of valuable methods of treatment.

The correct use of physical therapy results in remarkable improvement in suitable cases, and fortunately it is often in chronic patients who have drifted from one doctor to another without obtaining benefit. These patients are not slow to tell their friends and neighbors the benefits they have received from physical therapy, and many a reputation is quickly developed upon this basis. The average intelligent patient is well aware that superior results can be obtained by the proper application of physical therapy, and they are no longer willing to tolerate old-fashioned dosing with pills and medicine, which frequently takes considerable time to produce an effect.

When a patient comes to a physician for relief of pain, he expects something to be done for him and, with the proper use of physical measures, relief can often be given during the patient's visit at the office. Is it any wonder such patients have a higher regard for the physician and the methods employed than those who have to wait over a considerable period of time for the uncertain action of drugs?

With a physician's knowledge of medicine and diagnosis, there should be no question of competition with irregulars. In the hands of a properly qualified man, the combination of medicine, surgery, and physical therapy presents a system of practice which cannot be equalled by anything else within our knowledge today. It is our duty, therefore, to acquire a proper knowledge of the technic of the various physical measures and their indications and contraindications, and to employ them in suitable cases in which they are of known value. We owe it not only to ourselves to build up our reputations and improve our economic conditions, but also to the patient so that he may obtain the best treatment known to medical science and be restored to health in the shortest possible time with the least disability.

Artificial Fever Therapy of Gonorrheal Arthritis.—In the *American Journal of Surgery*, Sept., 1935, there is a very important article on "Artificial Fever Therapy of Gonorrheal Arthritis" by Kendall, Webb, and Simpson.

One of the most frequent and disabling complications of gonorrhea is gonorrheal arthritis. The fact that many different methods of treatment have been employed provide evidence of the inadequacy of most, or all, of them. During the past 3 years the outlook for these patients has been enormously improved by the use of artificial fever.

Much work has been done by various men. Hench, Slocumb, and Popp state that the results are so striking and apparently so superior to those obtained by other methods that fever therapy is the method of choice. There are many records of spontaneous recovery from gonococcal infections during intercurrent febrile disease. This recognition has led to the use of various methods of fever therapy, because it must be recognized that patients with gonorrheal arthritis are suffering from a systemic disease requiring systemic treatment.

Carpenter, Boak, Mucy, and Warren have shown that 99 per cent of the gonococci are killed in 5 hours by a temperature of 105.8° F., the remaining 1 per cent requiring a longer time. It is apparently possible in most

instance to exceed the thermal death time of the organism without injury to the human host.

The authors report a series of 31 patients with gonorrheal arthritis and believe the introduction of fever therapy is of greater importance to the clinician than was the discovery of the gonococcus by Neisser in 1879. No attempt was made to adapt the treatment to the strain of gonococci of each individual patient, as it is quite likely that factors other than direct destruction of the gonococci, such as the stimulation to the defense mechanism of the body, are responsible in part for the results achieved by fever therapy.

Patients were given 4 or 5 treatments of 5 to 7 hours' duration, at a temperature of 106° F. or above, at intervals of 3 days. The average number of treatments given was 5, fewer treatments being necessary when given at shorter intervals. Twenty-six men and 5 women formed the subject of this report. Nineteen had acute forms and 12 were chronic. Contrary to common belief, multiple joints were usually affected. Twenty-one of the patients had received some local form of treatment before the onset of the arthritis. In all cases previous histories of gonorrheal infection could be elicited.

Following the course of fever therapy, smears from the genito-urinary tract of 24 showed no gonococci. Seven were positive, 4 of which became negative 2 weeks later without further treatment. Three received local chemical treatment. Prostatic massage was carried out in all the male patients. The average interval between onset of arthritis and institution of treatment was 11 days in acute cases, and 2 years and 3 months in the chronic. Of the 19 patients with acute gonorrheal arthritis, the average improvement in joint function immediately after the conclusion of the course of fever therapy was 77.6 per cent, in 3 restoration being complete. Of the 12 with chronic gonorrheal arthritis, the average improvement was 62.5 per cent; in 4 joint function was completely restored.

At the present time the average improvement in joint function in acute cases is 98.4 per cent. Thirteen patients have obtained complete restoration of joint function. In chronic cases the average improvement at the present time is 88.3 per cent. Of particular mention were 2 cases of chronic gonorrheal arthritis in which almost complete limitation of motion of one knee joint remained after the usual course of fever therapy. The joints were manipulated under general anesthesia, and fever therapy was immediately instituted following surgical manipulation. In both cases practically complete joint function has been restored.

PUBLIC HEALTH

The Nicotine Fallacy.—Dr. P. Charles Green, of Philadelphia, Pa., is the author of a paper with this title, which appeared in *Medical Times*, Feb., 1936, and concludes as follows:

This paper has been written for one purpose, and one purpose only, and that is to bring out the fact that not only does every brand of cigarettes differ in its chemical formula from every other brand, but cigarettes of the same brand may differ over a few months' time in manufacture. Furthermore, the chemical formula in the catalytic action of heat, moisture, and the inhaled air of the smoke may and does change the smoke of the tobacco vehicle so that no nicotine may reach the lungs of the smoker. What does reach the lungs of the smoker is tar, for it is absolutely impos-

sible for any one to take even the lightest puff without some of that smoke being taken into the lungs. With every puff the smoker unconsciously takes a deeper breath, and the air that comes through the nose mixes with the smoke and so both enter the lungs at the same time. So much is this the case that if iodine is added to a cigarette and that cigarette smoked, roentgen ray of the lungs will outline its presence clearly. Not only the cigarette but all forms of smoking should be a major concern of every physician.

Reporting Paralytic and Nonparalytic Poliomyelitis.—By a recent vote of the Massachusetts Public Health Council it was determined that, effective Jan. 1, 1936, all cases of anterior poliomyelitis in that state shall be reported as paralytic or nonparalytic (preparalytic) infections. This action was taken in order to obtain, so far as possible, a true picture of the current prevalence of the disease as contrasted with former years when the nonparalytic cases were not reported to the same extent as they are at the present time.

In the future all reports made by the Department of Public Health of Massachusetts will be in accordance with the classification above mentioned, and supplemental reports will be filed as cases reported as preparalytic subsequently develop paralytic signs and the change in the classification therefore becomes necessary. —*Public Health Reports*, U. S. Treas. Dept., Jan. 10, 1936.

Tuberculosis on Wane.—Notwithstanding the depression, the number of deaths from tuberculosis and the number of new cases reported continued to decline steadily from 1930 to 1934 inclusive, according to a study of special data for those years made public by the National Tuberculosis Association.

Cupid Busy Despite Law.—Cupid began the new year in Connecticut with an indication that even under the handicap of Connecticut's new "blood test" marriage law it may approximate its 1935 record.

Dr. Stanley H. Osborn, State Health Commissioner, reported that blood tests for an average of about 30 couples daily had been made by the State Health Department and other approved laboratories since the act became effective Dec. 27. The monthly marriage average for 1935 was 967.

The act is designed to prevent the spread of social diseases and compels each applicant for a marriage license to submit to the test. The marriage ceremony cannot be performed if the test proves unsatisfactory.

Dr. Osborn said his office had not received any complaints against the new law, but had received many letters of commendation.—*New York Times*, Jan. 1, 1936.

Health Campaign.—Health protection for the public of the United States is disposed of with the expenditure of only 50 cents annually per person in tax money, compared with the annual average expenditure of \$4.52 per person for police protection and \$3.32 per person for fire protection.

This is but one item in a pamphlet, *Health Facts*, just off the press, published by The National Health Council as part of the material for the "Health Today and Tomorrow" campaign, recently launched and planned for the winter and spring months. Already more than 400 cities have enlisted in the campaign through their state or city health officers, who are taking the initiative in most of those localities. The climax of the campaign

is to be, in general, an open town meeting held after a thorough community-wide health inquiry has been made to discover public health needs in that locality.

Most of the statistics contained in *Health Facts* furnish a basis of comparison of local health conditions with immediately attainable health goals. Among other striking statements made in this pamphlet, the following are a few which show the need for greater appropriations for community health work from both public and private sources.

As many persons are graduating from the community into nervous and mental hospitals as are being sent out into the community each year from colleges and universities. More than 50 per cent of all hospital cases in this country are those of some form of mental illness. The present annual average of mental cases recovered or improved is about 40 per cent.

Relief funds make little appreciable addition to health services for the needy. Social Security Act appropriations, when they become available for public health work, will not be large enough to make up for the depression shrinkage in regular health department appropriations since 1929.

Voluntary hospitals, with about half as many beds as government hospitals, accommodate about 70 per cent of the admissions in any one year.

Through health education campaigns financed privately the diphtheria case rate (in one urban campaign) was reduced from 197 for every 100,000 population to 24.

Forty-eight per cent of the nurses available for community services are paid from private funds. On the other hand, the public health nursing service is the largest single item among public health expenditures—about one-third to one-half of the tax funds for public health goes to pay for public health nurses. Yet the total number of nurses now serving the country, however, amounts to only one-third of the number needed in communities. Public health nursing organizations have suffered a 10 per cent reduction in income, while the volume of free service has had to be increased.

"Health Can Be Measured" and "Health Can Be Purchased" are headings of 2 other sections of the pamphlet. To cover the cost, a nominal charge is made of 20 cents for a single copy and 15 cents a copy in lots of 100 or more, ordered from The National Health Council, 50 West 50th Street, New York City. Other pamphlets on health subjects are now being prepared.

It is planned to make this health education campaign permanent, to be sponsored by The National Health Council.

Widespread Deception Found in Alcohol Rubs.—Rubbing alcohol is frequently adulterated and misbranded, Federal drug officials find. In recent years rubbing alcohol compounds have been used widely for massage and bathing purposes. In December and January, activity in inspecting and testing supplies on the market have led to seizures involving 13,000 bottles, shipped under various names by dealers in the Eastern States. In all the seized rubbing compounds, the examining officials found isopropyl alcohol instead of ethyl (grain) alcohol. One lot, in a class by itself, contained only 2 per cent of isopropyl alcohol, although the label on the shipping case claimed 70 per cent alcohol.

Isopropyl alcohol, relatively a newcomer among the commercial alcohols, is a by-product of the petroleum

refining industry. It is known that this alcohol, when taken into the human system, is destroyed and eliminated very slowly; that is, its harmful effects are relatively persistent. For this reason, its use in foods such as flavoring extracts has been vigorously opposed by the Food and Drug Administration, and its use in drugs for internal use is subject to like attack.—U. S. Dept. of Agriculture, Jan. 29, 1936.

Puerperal Sepsis.—As with so many diseases, the etiology of puerperal sepsis is by no means clearly evident. Opinions of authorities differ on various points, and it is interesting and instructive to discuss the views of those competent to deal with the question and endeavor to glean useful information. Such a source of information is afforded by an article on streptococcal infection by Dr. Phyllis M. Condon, published in the *Lancet*, Dec. 7, 1935. After a careful study of the origin of infection and the grouping of strains in 204 cases of puerperal fever and 101 cases of septic abortion a summary with comments was made as follows:

(1) *Streptococcus hemolyticus* was isolated from the uterus twice as often in puerperal fever as in septic abortion. (2) The importance of group-A strains in the causation of uterine infection in the puerperium, as stated by Lancefield and Hare (1935) is again demonstrated. Of 61 strains from 57 cases, 60 belonged to group A, and it is not certain that the exception (from the vagina of a fatal case) was actually the infecting strain. In septic abortion group-A strains were recovered from the uterus in only 8 of 12 cases. (3) All the deaths, with the possible exception of one, were caused by group-A strains. (4) The statement of Hare and Colebrook (1934) that 30 to 40 per cent of women harbor the human pathogenic type of streptococcus in the nasopharynx at the time of puerperal infection and that not infrequently the nasopharyngeal and uterine strains are serologically identical is supported by our results. Hemolytic streptococci were found in the throat or nose of 16 of 60 cases of puerperal uterine infection (27 per cent). Cultures from 12 cases only were tested by the precipitin reaction but all were found to belong to group A. (5) An effort was made to determine the source of puerperal uterine infection by looking for a strain of streptococcus identical with the uterine strain in the nasopharynx of the patient or attendants, the criterion of identity being based on agglutinin absorption. In 12 instances identical strains were found 6 times in the patient's nose or throat, 4 times in the nose or throat of an attendant, and twice in both patient and attendant.

There is therefore considerable support for the view that the patient's own nasopharynx may frequently be the source of the uterine infection. It is obvious that the discovery of the cause of puerperal sepsis would aid greatly in its prevention and consequently all researches leading in this direction are valuable. Some of Dr. Condon's conclusions are confirmed by or in accord with those of other investigators. The distinctive feature, if the term is applicable to Dr. Condon's investigations and deductions, is that a strain of streptococcus identical with that of the uterus was found in the throat of the patient herself. As is pointed out in an editorial in the *Lancet*, Dec. 7, 1935, this finding does not necessarily mean autoinfection, since both throat and uterus may have been infected from elsewhere. Further, do such findings constitute a sufficient cause for a bacteriologic overhaul of all attendants and prospective attendants on women in labor, and the exclusion of those found to be carrying group-A streptococci?

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the co-operation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

WHEN the doctor secures the admission of his patient to a sanatorium his primary object is to secure optimum conditions under which the repair of the damaged lung may be effected. But he has every right to expect also that the sanatorium perform another function which is sometimes overlooked or done in a perfunctory manner, namely, education of the patient. The following abstract of a paper, originally addressed to sanatorium physicians and their staffs, will interest also the general practitioner.

TEACHING THE TUBERCULOUS PATIENT

By training, inclination, and the tacit consent of the patient, the doctor is a dictator. Fortunately, the really sick person *wants* to be bossed—until he is convalescent, when he begins again to exercise his cantankerous democratic rights. But absolute dictatorship does not work in the treatment of tuberculosis. Here we are dealing with a long-drawn-out struggle, the outcome of which depends almost entirely upon what the patient is willing to do for himself. The patient's own conscience and understanding must guide his course in the innumerable petty and critical situations of daily life. He cannot be under the constant supervision of his doctor and one foolish act may undo the gains purchased by months of expensive care.

The active case of tuberculosis is like a ship shattered by stormy seas. He needs first and foremost, repairs. That's why he is in the sanatorium. But what is going to enable him to stand further stress? For the patient to resign himself to a millpond existence for the rest of his life is intolerable defeatism. And the hope of restoring the staunchness of his vessel once strained by tuberculosis is a fatuous one. For these reasons the patient himself must learn to command his own ship. Time and again he may have to call upon his doctor for special piloting but, in the end, he is the captain in a voyage which lasts for life. It is therefore not enough that the sanatorium be a drydock; it must also be a training station for the patient.

Of course we hear objections to the proposal

that patients should be taught to understand their own pathologic condition. Self-treatment and introspection create an unhealthy mental attitude; many are not capable of learning; and so on. None of these objections are valid, but they are each to be respected and should guide us so to plan the training of the patient as to avoid committing these errors.

All this implies that the superintendent of the sanatorium should be, in effect, educator as well as doctor. Every one of his assistants, nurses, orderlies, and servants is a teacher under his supervision and shares with him the responsibility.

What should the tuberculous patient be taught? His curriculum might be divided into 3 main groups: (1) A way of life, (2) an understanding of tuberculosis, particularly *his* tuberculosis, and (3) knowledge of how to protect others.

(1) The essence of the cure (for most cases at least) consists in learning a new way of life. While the tubercle bacillus is the sole, direct cause of the disease, environment* (in its broad sense) tips the scale in favor of, or against, the infected person. Of the many people who are invaded by *Bacillus tuberculosis*, only those few whose mode of life or environment or attitudes (again in a broad sense) violate nature's demands are most likely to develop the disease. And if, after arrest of the disease has been achieved, the patient returns to his old ways and attitudes, he is almost surely doomed to relapse. It is essential, therefore, to make a diagnosis of the

* Environment includes opportunities for massive infection.

patient's habits of living and thought pattern. Mental attitude perhaps comes first, for hope, cheerfulness, and confidence are the patient's staunchest allies, and depression of spirits his cruelest enemy.

However, cheerfulness that is put on like a top coat or like a cosmetic will not outlast the grueling experience of the cure with its many ups and downs. No, unless well grounded in a sound philosophy of life, hope is likely to give way to deeper despair. Self-deception is not called for. Indeed for most patients the only tenable policy is to face frankly the fact that an unwelcome guest has established headquarters in his lungs and that for the rest of his life he must effect a truce with the invader, the terms of which call upon the patient to surrender cherished desires for guarantee of bacterial peace.

(2) Long ago Dr. Lawrason Brown instituted his famous question box for patients at Trudeau Sanatorium. This was acknowledgment of the conviction that patients have a right to know the answers to their personal questions. By skillful guidance and deft answers he managed in these group meetings to teach his patients what he believed they should know, in well-rounded form. Today every sanatorium follows that precedent in principle at least.

Understanding of the basic biological principles underlying tuberculosis is necessary if the patient is to be motivated in the right direction or to change his attitudes. Our job as teachers and trainers is to interpret the highly technical knowledge that we have in terms which people of ordinary intelligence can grasp. The basic facts of tuberculosis are simple and a child can understand them, if the teacher is competent.

There is perhaps a basic alphabet which all patients should master. To catalogue here the several facts and concepts which the patient should learn is not necessary, for these are contained in several books and treatises written for the patient. But we might profitably resurrect a few pointers given us by Dr. Brown in his original essay. For example:

Carefully explain to the patient the nature of a fresh tubercle and show him how exertion may undo its protective tendencies. Then the patient is persuaded to elect bed rest. Since his choice is of his own volition based on intelligence the act becomes his own and he may be depended upon not to break training.

Smatterings of knowledge are worse than none—take time to lay a sound foundation.

Do not discuss the patient's physical findings

nor his complications with him, for that leads to introspection, but encourage objective study.

In teaching the patient to recognize symptoms let it be with the understanding that symptoms are to be regarded as red and green signal lights and not something to worry about.

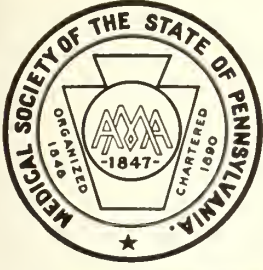
The educational vehicles at the disposal of the sanatorium are abundant—the printed word, spoken word, the library, motion pictures, and stereopticon slides. Surpassing all these methods is the personal contact of the doctor with the patient. He best knows the time and place for imparting this or that particular bit of information. By far the most potent educational force is actual practice. We learn to do by doing. To what extent can the practice of the sanatorium be carried back to the home, factory, and shop? What is the use of achieving in the sanatorium a technical perfection which cannot later be duplicated in principle, in the home?

(3) The third broad grouping of the patient's training has to do with the prevention of the spread of his disease. Furnishing a patient with a sputum cup and installing an incinerator may be the alpha of prophylaxis but it is not the omega. He should learn of course why such scrupulous attention is paid to sputum disposal. But he should learn also the numerous ways in which tubercle bacilli migrate from one person to another. He should develop automatic habits of safety—something akin to the surgeon's aseptic conscience. To learn by rote that kissing, spitting, the use of common eating utensils, *etc.*, are forbidden is well but not enough.

It is better to teach simply and clearly the general biology of the disease, the manner in which the germ gets from one person to another, and how it does its deadly work. Give the average person an understanding background and a few specific examples, and he will, himself, regulate his conduct to the best interests of others and his own good.

From an understanding of his own tuberculosis and the desire to avoid infecting his loved ones and friends is but a short step to the cultivation of an interest in the larger problem of combating the pandemic, tuberculosis. Every patient who leaves the sanatorium should have a good grasp of the broad epidemiologic picture of tuberculosis. The graduate of a sanatorium should be a crusader striking his blows in season and out of season. In him burns an everlasting fire. There are thousands like him. Against the cumulative effect of such force the old, old enemy is bound sooner or later to crumble.

Address—Tuber. San. Conference of Metro., N. Y., Jan. 8, 1936, H. E. Kleinschmidt, M.D.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh. Pa.

THE FEDERAL FADE-OUT

Borrowing from the expressive vocabulary of twentieth century slang, we draw attention to the rapidly changing forced processes by which emergency medical relief as we have known it in Pennsylvania since 1933 is fading step by step into ———?

On January 1, 1936, federal funds which had previously supplied a very large percentage of the cash expended in all Pennsylvania counties for all phases of emergency relief were withdrawn. Since that date the money expended has been withdrawn from the remainder of \$60,000,000 appropriated for emergency relief purposes by the Pennsylvania Legislature of 1935. It is said that this balance will be exhausted by May 1, 1936.

The second step has not been taken, but it is believed that it will be in the general direction of decentralization. Just as the Federal government via the creation of the existing WPA set-up withdrew its financial support from emergency relief in Pennsylvania, so may our state government in a further step toward decentralization of relief problems within the next few months plunge more and more responsibility on our 67 county governments.

Likewise the third step in the transition of relief sickness service has not been taken, but it should be initiated promptly, at least by each county medical society. Agreeing that the functioning of the Emergency Child Health Committee and the Medical Advisory Committee to the CERB in the various counties of the state may not as yet have had time to point the way *definitely* to efficiency and economy in the

delivery of sickness service to the economically unfortunate among our citizenship, nevertheless 4 years of county, state, or federal experience has certainly failed to uncover any system of delivery approaching in practicability that sponsored by the organized medical profession of county and state through the activities of the above-mentioned county society committees.

In further proof of the desire and the organizational set-up inherent in the average county medical society to deliver sickness service to those in economic distress, we would call attention to existing plans in 7 Pennsylvania counties, whereby the county medical society has signed agreements with the poor authorities of the county to deliver such service on the basis of free choice (by the indigent) of physician and fee payment (by the county).

The Mercer County plan, which was published in the Officers' Department of the JOURNAL for February, offers not only simplicity but emphasizes the continuous need of a committee in each county medical society to confer with county authorities on relief whether they be the commissioners of the poor or the CERB.

Wherever there is need for better distribution of sickness service to any considerable portion of the population, we claim that the profession of medicine has not created any part of such need, the truth being that the services of physicians or the interest of their representative organizations has not been sought. All surveys, when their results have been intelligently analyzed and clearly expressed, have indicated that there were many people not receiving adequate sickness care only because of their ignorance or prejudices resulting in their failing to seek available sickness service or in spending their available funds for patent medicines and quackery.

The final step in the transition of relief sickness service in all probability **THE FINAL STEP** never will be taken. It is apparent at the present writing that unemployment remains practically unabated and that there will be continued governmental experimentation with increasing danger of the development of highly organized and closely consolidated governmental bureaus, into which must never be permitted to creep influences which may deprive beneficiaries of the privilege of the free choice of physician. It may be difficult for some laymen to grasp this point (free choice), especially when it concerns people with little or no incomes, but is it not the wish inherent in the members of the profession that they be permitted to practice in competition attracting through sheer ability patients who desire their personal services?

There is great need for bringing to the public at large our sincerity on the principle of free choice. We may discuss it among ourselves at our meetings until doomsday and accomplish much less in educating the public to the fundamental health values in free choice of physician than we will accomplish by openly soliciting, through an advisory committee of the county medical society, the privilege of treating those unfortunates supported temporarily or permanently by city, county, or state on the familiar free choice of physician fee basis now in operation between the county medical society and the county poor authorities in 7 Pennsylvania counties. (See page 363, February JOURNAL.)

As Dr. Alexander H. Colwell so well said in his Presidential Address (see October, 1935, JOURNAL), the organized medical profession must "be more insistent on a better type of medical care for the indigent," and further that such medical care should be continued "on a decent basis of professional supervision." How better may county medical societies bring about this much to be desired state of affairs, each in its own county, than by maintaining constantly an active committee of the medical society, whose duty it shall be to keep constantly in touch with county and state authorities responsible for the care of the indigent, soliciting the development of the plan and sponsoring the quality of the service.

IF THREATENED WITH SUIT

If you are threatened with suit for alleged malpractice you should communicate at once with the secretary of your county society, the councilor for your district, or the secretary of the State Society *before consulting an attorney.*

The State Society will not undertake the defense of any member unless his application is made *within 7 days* after summons has been served by the court.

BOARD OF TRUSTEES MEETING

An excerpt from the minutes of the Feb. 4 meeting of the board of trustees, under the heading, "New Business," reads as follows: "Secretary Donaldson read a communication from the secretary of the Dauphin County Medical Society reporting to the board regarding the Medical and Dental Service Bureau chartered by the Dauphin County courts on Jan. 9, 1936, said bureau to be controlled by a board of directors composed of 3 dentists and 12 physicians of the county."

The report stated that the service has been inaugurated by the payment by 193 members of an initial fee of \$10, the charter membership certificate costing \$10 being redeemable later plus 5 per cent interest added annually. There are no other dues or assessments.

The report further stated that the profits derived from collections are to be used as "a means to an end," namely:

1. By various approved methods assisting persons in the low income groups to underwrite expenses for needed medical and dental care;
2. Supervising the investigation and proper assignment of applicants for free hospital or medical or dental service;
3. Bringing about, in conjunction with the poor board of Dauphin County, a medical and dental service to the indigent of the county on a free choice of physician and fee basis.

Discussion on the above report, which was free and open, resulted in the adoption of a motion made by Dr. Anderson, seconded by Dr. Yeager, authorizing the chairman of the board of trustees to appoint a committee of 5 members of the board, to be known as the Committee on the Social Aspects of Sickness Service, whose duty it shall be in the interim between regular meetings of the board to confer, if necessary, with representatives of standing committees of the State Society or others engaged in the study of the social aspects of sickness service as they may involve all forms of medical service under consideration or proposed by the various component societies for the benefit of (1) the indigent, (2) those on emergency relief, (3) those seeking to pay on a budget system, (4) those seeking to

provide in advance for so-called catastrophic illnesses, *etc.*

Chairman Edgar S. Buyers later announced the appointments to this committee as follows:

Augustus S. Kech, Altoona, *Chairman*
David W. Thomas, Lock Haven
George C. Yeager, Philadelphia
Robert L. Anderson, Pittsburgh
Laurie D. Sargent, Washington

Ex-officio

Alexander H. Colwell
Maxwell Lick
Edgar S. Buyers
Walter F. Donaldson

Consultants

Chauncey L. Palmer
William H. Mayer
Francis F. Borzell
George L. Laverty

At the Feb. 4 meeting of the board of trustees other items of particular interest for discussion and decision centered largely around the problems developing under the application of the Federal Social Security Act to health services in Pennsylvania. Apropos of this subject we herewith quote liberally from reports submitted to the board.

FROM REPORT OF SECRETARY

In addition to the activities likely to develop under the provisions of the Federal Social Security Act, which have been previously discussed, there should be brought up for consideration and final approval by the board proposals discussed between Secretary of Health MacBride-Dexter and the committee of the State Society (Dr. Chauncey L. Palmer, chairman) appointed to confer with her on the subject of educational courses in maternal and child health for practicing physicians.

The members of the conference committee of our State Society who have conferred at different times with the Secretary of Health are as follows: Drs. Chauncey L. Palmer, *chairman*, Francis F. Borzell, Alexander H. Colwell, Walter F. Donaldson, Samuel McC. Hamill, George L. Laverty, William H. Mayer, W. Burrill Odenatt, Paul B. Steele, James L. Taylor, Ralph M. Tyson, all of whom have had uppermost in their minds at all times the possibility of criticism later by members, who may or may not completely understand the problem, of having involved the profession more deeply in the intricacies of state medicine.

However, remembering that the money has not yet been provided by Congress and remembering at all times that federal legislation definitely provides that health activities provided for shall be directed by the health department of each state, "in co-operation with existing agencies," which include medical societies, our confer-

ence committee is making every effort to keep the private practitioner in the foreground at this time, hoping thereby to demonstrate our accomplishments under emergency medical relief service and emergency child health set-ups, which may forestall all immediate extension of health department activities through the addition of a few salaried physicians.

It is believed that if there is any state medical society in the American Medical Association that has opportunity to maintain the much desired private physician-private patient relationship throughout the social changes which are in progress, our society stands high because of the sincere endeavors of its membership to serve with other organizations and with state departments during the past 2 or 3 years especially, and because we have now, as we have had in the more recent past, an understanding state administration of health, of welfare, and of emergency relief.

It is believed, therefore, that we shall be able to bring an infinitely better quality of service to the people of Pennsylvania by attempting to continue our policy of co-operation in these newer federal social security projects rather than by refusing.

FROM REPORT OF CHAIRMAN

MEDICAL ADVISORY COMMITTEE TO SERB

Since my last report a slow but steady transfer has been made from the EMERGENCY MEDICAL RELIEF roll of relief recipients to works projects under WPA. At the present time the number on relief is slightly less than 1,000,000, the lowest number since emergency medical relief was instituted. It appears that the relief program will continue until midsummer. No appreciable changes have been made in procedure. In order that medical expense may be budgeted more accurately on account of the approaching termination of the program, federal contributions having stopped, the auditing department requires all bills for medical services to be submitted within 30 days from date of issuing the medical order.

I am pleased to report that co-operation in the program of relief has operated more smoothly than at any time since its inception.

FROM REPORT OF CHAIRMAN

COMMITTEE ON PUBLIC HEALTH LEGISLATION

It was decided to withhold activity on the House of Delegates' resolution regarding the merit or civil service system for the trained professional personnel of the state departments of

health and welfare until after the special session of the legislature.

Regarding the resolution providing physical examinations for automobile drivers, we decided to withhold activity on this procedure until public sentiment is more definitely crystallized.

It is our opinion at the present time that amendments to the Workmen's Compensation Act, which we sponsored in the last session of the legislature, should be presented at the special session, if and when a special session is called by the Governor, as separate measures under our own leadership. In order to have these measures passed, it will be necessary to have very marked activity on the part of each individual member of our State Society.

We have discussed with the Secretary of Health plans for carrying out the provisions of the Federal Social Security Act.

There is to be an expansion of educational work under the direction of our State Department of Health in co-operation with the proper committee of The Medical Society of the State of Pennsylvania, both for graduate work for physicians and educational work for the laity. There is to be an increase in the personnel of the State Department of Health to carry out other provisions.

On Jan. 18 the chairman of the Committee on Public Health Legislation met with representatives of the Pennsylvania Pharmaceutical Association and representatives of the Narcotic Division of the Pennsylvania Department of Health to formulate rules and regulations for the enforcement of the act to regulate the sale of certain hypnotic, analgesic, and body-weight reducing drugs.

On Jan. 30 the conference committee again met with the Secretary of Health to consider ways of carrying out the provisions in Part 2 of Title 5 of the Federal Social Security Act—"Services for Crippled Children." There is to be an expansion of graduate educational facilities for physicians regarding orthopedic defects in indigent children, together with the organization of regional diagnostic clinics as well as central operating clinics to correct these defects.

We also discussed activities under Title 6 of the Federal Social Security Act—"Public Health Work"—expanding the present facilities of the Division of Epidemiology under Dr. J. Moore Campbell of the Department of Health in order to increase the efficiency of public health work in all its phases throughout the state; also expansion of the facilities of the Division of Genito-urinary Clinics under Dr. Edgar S. Everhart in order to provide more care for in-

digent venereal patients, with the idea always in mind to keep this expansion well in hand and keep patients under the care of private physicians.

There is to be a regulation in the Department of Health requiring physicians to report syphilis of 1 year's duration. Patients in these reports are to be designated by numbers.

The Department of Health under the direction of Secretary Edith MacBride-Dexter is seriously considering taking over the industrial hygiene division of the Department of Labor. This activity would include a study of occupational diseases and attempt to develop ways and means of preventing these serious conditions.

The provisions under the Federal Social Security Act, administered through the State Department of Health, are all amenable to alterations as circumstances arise and are only for indigent people.

The Medical Society of the State of Pennsylvania at this time owes a debt of gratitude to Dr. Edith MacBride-Dexter, Secretary of Health of this Commonwealth, for her hearty co-operation, time, and energy spent with representatives of The Medical Society of the State of Pennsylvania in the development of ways and means to best carry out the provisions of the Federal Social Security Act in this State.

Your committee feels that the administering of the provisions of this act through our State Department of Health is a step in the right direction in that it places the leadership in public health matters squarely upon the shoulders of the medical profession, where it should be. At the same time we are cognizant of the fact that we are likely to become enmeshed in some scheme or schemes which may eventually interfere with our proper function.

We therefore again most emphatically suggest very active continuation of the procedures bringing to component societies and to their members information with the request that they give these important problems some of their individual time and attention, so that we may all work together as a solid unit in carrying out the traditions and principles for medical service for which organized medicine has always stood.

FROM REPORT OF CHAIRMAN MEDICAL ECONOMICS COMMITTEE

The various subcommittees are proceeding with varying degrees of speed with the investigations allotted to each committee. A few counties have been rather slow in making responses. It is requested that the councilors lend

their aid in stimulating responses from certain counties. We hope to have the major portion of this work completed by the time of the April meeting of the committee.

The committee has been studying rather intensively such GROUP HOSPITALIZATION schemes for group hospitalization as have been brought to its attention. We have not yet had presented to us any plan for group hospitalization which entirely avoids a number of objectionable features. The Adrian Hospital Plan was submitted for comment, and it was found to contain so many vicious features that disapproval was expressed without hesitation. This was so very thoroughly discussed by Secretary Donaldson in a letter to the secretary of the hospital staff that it left nothing further for us to add.

It would appear that either through misunderstanding of the functions of the RECOGNITION Committee on Medical Economics as an unbiased fact-finding DESIRED committee, or failure to appreciate the necessity for maintaining a co-ordinated relationship with the state organization, the various counties, by failing to recognize one of its most important functions, are not submitting proposed economic plans for review by the committee. Consequently, it is often only by accident that we learn that plans are under consideration, resulting in our being handicapped in rendering the service that might prevent embarrassment to the county societies. In other words, an *invitation* to study and render an opinion upon plans under consideration places us in a much more co-operative light with the county society than if we are compelled to make inquiries concerning something which we have not been officially invited to consider.

The chairman feels it highly desirable that the committee be enlarged by 2 or possibly 3 members in order to facilitate the work in certain sections of the state. The nature of the economic problems in the strictly anthracite coal section, in the soft coal section, and possibly in the region of Altoona is such that with representation on the major committee from these specific areas we believe the committee could function with more efficiency.

In view of the comments made under the headings "Group Hospitalization" and "County Society Plans," the following resolution is submitted for your careful consideration:

WHEREAS, The so-called Washington (D. C.) Plan, which incorporates a system of hospital insurance to-

gether with a finance credit system and a plan for the care of the indigent, appears to conform to the 10 points approved by the American Medical Association; therefore be it

Resolved, That the board of trustees of the State Society approve in principle the plans of the Northampton and Dauphin county medical societies and the Washington (D. C.) plan, and be it further

Resolved, That the board of trustees recommend to those county societies that find, after careful investigation, a need for the establishment of similar plans that they seriously consider these plans as models to be adapted to their special conditions, and be it further

Resolved, That the county societies be requested, in accordance with the resolutions already adopted by the House of Delegates, to submit full details of any proposed plan to the State Society Committee on Medical Economics, it being understood that, after the report of the Committee on Medical Economics, it be submitted to the board of trustees for their consideration and final approval or disapproval.

In view of activities in certain counties looking toward the possible adoption of various schemes of hospital insurance, and in view of the apparent feeling on the part of some county societies that their communities really need something of this kind, together with probably some kind of credit and finance bureau, it is incumbent upon our committee to make some specific recommendations to the board of trustees at this time. The plan which is in operation at Washington, D. C., has already been reviewed by my predecessor, Dr. Philip J. Lukens, and a report made to the State Society. This report was contained in the Committee's 1934 report to the House of Delegates.

Emphasis should be placed upon these considerations: (1) The determination by the county society, after careful investigation, of a real need for the establishment of such plans; (2) attention is called to plans already in operation as guides but not necessarily inflexible standards; (3) emphasis should be placed upon the desirability of the county societies submitting their proposals before any action is taken.

It may be that criticism might be directed at our committee for not having presented up to this time something more concrete for the consideration of the county society, but we must emphasize that each county presents its own peculiar problems and any plan studied or proposed must be in the light of specific considerations.

A suggestion made by Secretary Donaldson in personal correspondence might well receive consideration by the board. This was that someone fitted for the task might be engaged to go to Washington, D. C., and for a period of 90 days, more or less, study at first hand the active operation of this plan. This would serve 2 purposes, to bring back a report of the strength and weak-

nesses of the plan, and at the same time make available for the use of our counties one who would be prepared, if desired, to assist greatly in the installation of a county plan. We believe that such a trained individual is essential in the formative stages of any suggested program.

The subject matter of our committee meeting at Harrisburg on Dec. 10, 1935, has been so completely covered, both by publication of the proceedings and through circularization and publication in the JOURNAL, that details may be omitted in this report.

The committee has received a communication from the chairman of the Medical Economics Committee of the Pennsylvania Dental Society asking for co-operative contact with their society. No action has been taken beyond an appointment for a conference with Dr. R. M. Walls, the chairman, at Bethlehem, on Feb. 12, mainly with a view to determining what objectives they have.

MARCH 31 AND MEDICAL DEFENSE BENEFITS

Members who have not paid their 1936 county society dues should bear in mind that medical defense benefits are not extended to those whose annual dues are not received by the State Society Secretary on or before Mar. 31. Reinstatement is easily possible, but protection against suits for alleged malpractice can never be restored for the period from Jan. 1 to the time of payment of the delinquent dues.

On Feb. 28, 1936, this office had received the annual assessment of 4554 members; on the same date in 1935, of 4218 members.

The percentage of 1936 dues received to Feb. 28 from certain component county societies is herewith indicated:

Juniata	100%
Adams	96%
Warren	93%
Mifflin	82%
Perry	79%
Montgomery	76%
Franklin	75%
Columbia	74%
Cumberland	74%
York	74%
Lycoming	73%
Dauphin	72%
Clinton	71%
Somerset	70%
Northumberland	68%
Bucks	66%
Carbon	66%
Delaware	65%
Huntingdon	65%
Mercer	64%
Washington	64%

Clarion	62%
Elk	58%
Greene	58%
Erie	55%
McKean	55%
Philadelphia	54%
Berks	53%
Fayette	53%
Chester	52%
Blair	51%
Allegheny	50%
Center	50%
Indiana	50%
Potter	50%
Susquehanna	50%
Venango	50%
Wayne-Pike	50%

LIBRARY NEWS

The new package library service continues to grow. Borrowers have shown great co-operation, and satisfaction and appreciation have been expressed for the packages which were sent in response to requests. Local members have found the central location of the library convenient when they wished material on a subject, either for their practical use or for the preparation of papers.

Members desiring reprints on a subject should send 25 cents in stamps to cover the postage and part of the expense of collecting the material. Address the Library, The Medical Society of the State of Pennsylvania, 230 State Street, Harrisburg, Pa. Only one package may be borrowed at a time, and it must be returned within 14 days.

Up to Feb. 15, packages have been borrowed from the library by the following:

A. Reid Leopold, Lewistown—*Therapy of Chronic Arthritis* (29 articles).

David I. Giarth, Kittanning—*Traumatic Cerebral Concussion and Its Effects on Vision and Hearing* (6 articles and JOURNAL).

David I. Giarth, Kittanning—*Uveitis* (15 articles).

Walter J. Stein, Ardmore—*Medical Economics* (24 articles).

Kri Kor Yardumian, Pittsburgh—*Factors Influencing Sedimentation Rate of Blood* (10 articles).

Samuel R. Kaufman, Wilkes-Barre—*Anaphylaxis and Allergy* (35 articles).

Myer W. Rubenstein, Pittsburgh—*Skin Manifestations of Lymphogranuloma, Leukemia, etc.* (15 articles).

Walter J. Stein, Ardmore—*Medical Economics* (10 articles).

Philip J. Rosenthal, Pittsburgh—*Hippuric Acid Test* (21 articles).

Ralph F. Himes, Altoona—*Therapy of Lobar Pneumonia* (17 articles).

Thomas R. Gagon, Pittston—*Perimetry* (5 articles).

C. R. McKinniss, Oakmont—*Psychoses Resulting from Use of Drugs* (13 articles).

William C. Schultz, Jr., Waynesboro—*Miscellaneous articles for use in preparing addresses for lay groups* (24 articles).

Augustus S. Keech, Altoona—*Pneumonia* (20 articles).
Henry R. Douglas, Jr., Harrisburg—*Undulant Fever* (5 articles).

John A. Daugherty, Harrisburg—*Diabetes and Peripheral Vascular Disease* (14 articles).

Robert Denison, Harrisburg—*Acute Aseptic Meningitis* (9 articles).

Norman B. Shepler, Harrisburg—*Diabetic Gangrene* (14 articles).

A. Harvey Simmons, Harrisburg—*Diabetes* (14 articles).

Carson Coover and William L. Clark, Harrisburg—*Intravenous Anesthesia* (11 articles).

Henry R. Douglas, Sr., Harrisburg—*Sympathetic Nervous System* (7 articles).

When A. Reid Leopold, Lewistown, returned his package, he added, "It was just the thing and helped out wonderfully." David I. Giarth, Kittanning, expressed his appreciation as follows: "This is to acknowledge with thanks the reprints furnished to me. This service should become popular." Walter J. Stein, Ardmore, said, "I found the desired information. Thank you." In regard to the second package which was sent to Dr. Stein, he added, "Thank you for your trouble in getting me this additional information. It has been most helpful to me." "I am returning," wrote Ralph F. Himes, Altoona, "the library package which you so kindly let me have. The data on pneumonia which it included has been very helpful, and I wish to extend my sincerest thanks for the promptness of delivery of this package."

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contributions to the fund:

Dr. Moses Behrend, Philadelphia \$50.00
Woman's Auxiliary, Somerset County Medical Society 10.00

Total contributions since 1935 report \$739.00

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to Feb. 12:

ALLEGHENY: *New Members*—Clarence L. Boyd, 1910 Ardmore Blvd., Thomas G. Ferguson, Highland Bldg., Raymond J. Gray, 212 Bingham St., John E. Madden, 3130 W. Liberty Ave., Eugene B. Schuster, 1831 Murray Ave., Carl W. Truter, 510 S. Aiken Ave., Edmund F. Truter, 430 Brownsville Road, James E. Topper, 3472 Perrysville Ave., N. S., Pittsburgh; William F. Brennan, 910 Wood St., Wilkinsburg; Camilla M. Anderson, Mayview. *Removal*—James S. Hammers from Mayview to Lancaster County Hospital, Lancaster; James M. McNall from Aspinwall to Hillcrest Sanitarium, Woodville. *Death*—Louis F. Ankrin, Pittsburgh (Coll. Phys. & Surg., Balt., '86), Jan. 25; Wilson B. Cathcart, Pittsburgh (Univ. Pgh., '88), Jan. 10; Howard L. Farquhar, Pittsburgh (Univ. Pa. '16),

Jan. 31, aged 47; Harry M. Felton, Pittsburgh (Univ. Md. '05), Jan. 23, aged 54; Michael E. Kapinya, Pittsburgh (Univ. Budapest '20), Jan. 26, aged 43; Frank E. Luke, Chatham (Trinity Med. Coll., Toronto, '86), Jan. 7, aged 73; George A. McCracken, Woodville (Univ. Pgh. '05), Jan. 24, aged 62; William J. McGear, Allison Park (Bellevue Hosp. Med. Coll. '93), Oct. 2, aged 68; John L. McBride, Pittsburgh (Univ. Pa. '06), Feb. 5, aged 57; Dan W. Frye, Pittsburgh (Univ. Pgh. '97), Feb. 9, aged 66.

BERKS: *Transfer*—John H. Kupp, Wernersville, from Carbon County Society.

BUCKS: *Reinstated Member*—Thomas E. Lindsey, Richboro.

CAMBRIA: *Reinstated Member*—James A. Lynch, Cresson. *Removal*—John Wm. Testa from Johnstown to Nanty Glo. *Death*—Frederick C. Kress, Johnstown (Jeff. Med. Coll. '98), Jan. 25, aged 63.

CRAWFORD: *New Members*—Carl F. Benz, Linesville; Richard L. Bates, 231 Chestnut St., Meadville; Hjalmar Anderson, Titusville. *Reinstated Member*—Charles K. Ferer, 276 Center St., Meadville.

CUMBERLAND: *New Member*—Paul A. Cox, Newville. *Removal*—Chloe O. Fry from Newville to 1939 Walnut St., Camp Hill; Benjamin E. Niebel from New Cumberland to Bryn Mawr.

DAUPHIN: *New Member*—Wilson A. Swanker, Polyclinic Hospital, Harrisburg. *Removal*—Henry R. Shallenberger from Hershey to R. D. 2, Union, Ky.

ERIE: *New Member*—George H. Pogorzelski, 1226 Parade St., Erie. *Reinstated Member*—George Barrett, 301 W. Ninth St., Erie.

FAYETTE: *New Member*—Herbert Lund, Uniontown. *Death*—Don D. Brooks, Connellsville (Md. Med. Coll. '10), Dec. 25, aged 48; William H. Hopwood, Uniontown (Jeff. Med. Coll. '77), recently, aged 83.

FRANKLIN: *New Members*—Edward H. Preininger, 125 E. Queen St., Chambersburg; Kenneth E. Reynolds, W. Main St., Waynesboro.

GREENE: *Death*—Smith A. Hogue, Rices Landing (Coll. Med. & Surg., Chicago, '01), Jan. 28, aged 67.

INDIANA: *New Members*—Allan V. Morgan, Ernest; John H. Lapsley, Waterman; William S. Woods, 143 S. Spring St., Blairsville.

JEFFERSON: *New Members*—David Matzke, Francis J. Trunzo, Punxsutawney; Raymond F. O'Connor, Reynoldsville.

LACKAWANNA: *New Members*—Meyer A. Kline, Dalton; Lorain A. McAndrew, 448 Main St., Vandling.

LANCASTER: *Death*—Harry M. Sultzbach, Lancaster (Med. Chi. Coll., Phila., '94), Feb. 4, aged 67.

LAWRENCE: *New Member*—Charles F. Kissinger, Enon Valley. *Removal*—Theodore R. Shrop from Garrettsville, O., to 1156 Riverside Drive, Akron, O.

LEHIGH: *New Members*—Dominic A. Donio, 401 Washington St., Allentown; Myles R. Miller, 21st & Lincoln Sts., Northampton.

LUZERNE: *New Member*—Edmund Francis Hanlon, Markle Bank Bldg., Hazleton. *Reinstated Members*—Isaiah C. Morgan, 3 W. Broad St., Nanticoke; Thomas A. Duffy, Rose Ave., Plains. *Removal*—Albert Kaufman from Wilkes-Barre to 17 W. 71st St., New York City. *Death*—James M. Nealon, Plymouth (Coll. Phys. & Surg., Balt., '02), Jan. 9, aged 60.

LYCOMING: *Removal*—Morris W. Curtis from Trout Run to 416 High St., Williamsport.

MIFFLIN: *New Member*—Martin W. Helfrick, Belle-ville.

Feb. 1	Mercer	33-35	2187-2189	\$22.50
	York	91-94	2190-2193	30.00
3	Bradford	1-13	2194-2206	97.50
	Perry	10	2207	7.50
	Warren	1-8	2208-2215	60.00
4	Center	8-12	2216-2220	37.50
	Mifflin	15-17	2221-2223	22.50
	Erie	55-63	2224-2232	67.50
	Delaware	79-88	2233-2242	75.00
5	Northumberland	24-36	2243-2255	97.50
	Clearfield	39	2256	7.50
6	Fayette	26-30	2257-2261	37.50
	Venango	15-29	2262-2276	112.50
	York	95-100	2277-2282	45.00
	Schuylkill	1-45	2283-2327	337.50
	Northumberland	37-43	2328-2334	52.50
7	Greene	12	2335	7.50
8	Dauphin	134-148	2336-2350	112.50
	Montgomery	114-137	2351-2374	180.00
10	Columbia	23-26	2375-2378	30.00
	Adams	11-13	2379-2381	22.50
	Mifflin	18-20	2382-2384	22.50
	Cumberland	19-23	2385-2389	37.50
	Philadelphia	23-974	2390-3341	7,140.00
11	Warren	9-43	3342-3376	262.50
	Perry	11	3377	7.50
	Cambria	51-53	3378-3380	22.50
	Chester	5-26, 53-57	3381-3407	202.50
	Mercer	36-38	3408-3410	22.50
	Westmoreland	1-40	3411-3450	300.00
12	Northumberland	44-50	3451-3457	52.50
	Dauphin	149-151	3458-3460	22.50
	Fayette	31-55	3461-3485	187.50

COMMITTEE ON SCIENTIFIC WORK

FREDERICK B. UTLEY, M.D., *Chairman*
Pittsburgh, Pa.

THE 1936 SESSION

The Eighty-sixth Annual Session of The Medical Society of the State of Pennsylvania will be held in Pittsburgh Oct. 5 to 8. At a meeting of the Committee on Scientific Work held in Harrisburg Feb. 4, the chairmen and secretaries of the various sections presented tentative programs unusually well advanced for this time of year. These sections have been correlated to present the strongest program with the greatest educational value to the general practitioner.

Since Pennsylvania is largely an industrial state, the program for the general session is emphasizing the treatment of medical conditions caused or aggravated by industry. One of the 2 guest speakers will discuss the present knowledge on silicosis and the other the proper management of infections of the hand. Both speakers are nationally known authorities in their respective fields. There will be papers on lead poisoning in industry and on pneumonia. Pneumonia has such a large mortality in Pennsylvania that a new therapeutic approach, based on years of intensive research, has been found which will reduce the present mortality, irrespective of type, at least 50 per cent.

Before the general session there will also be papers on cancer, mental hygiene, and other equally important subjects for the general practitioner, such as focal infections, asthma, arthritis, and deafness.

The relationship of physiology, normal and abnormal, to health and disease will be discussed. And closely related to this subject will be a paper on the toxemia of pregnancy based on several years of research, which will suggest that eclampsia is a preventable disease.

This year a special effort is to be made to have all subjects on the program illustrated as far as possible in the scientific exhibit, to which reference will be made in the official program by booth number.

The committee is making an effort to present an attractive program of vital interest to the State Society so that each member will feel that he can ill afford to miss this meeting.

THE SCIENTIFIC EXHIBIT

Great preparation is in progress to give the members of The Medical Society of the State of Pennsylvania the finest meeting possible. A most valuable and practical program is being arranged. The Scientific Exhibit Committee is, therefore, most anxious to arouse the interest of the profession in the scientific exhibits, both as participants and as visitors, at our Eighty-sixth Annual Session next October.

There is still a very limited amount of space available. If you have something of a practical nature—a diagnostic method, or a simple, practical laboratory procedure which will add something to the practice of general medicine—communicate with the chairman of the Scientific Exhibit Committee, and we will endeavor to place your exhibit.

Please apply early while there is still a little space available.

LESTER HOLLANDER,
Chairman, Scientific Exhibit.

County Society Reports

BERKS

Jan. 8, 1936

The monthly meeting was held at Medical Hall, President William F. Krick presiding. The following officers were elected: President, Ralph L. Reber, Reading; first vice-president, William F. Krick, Reading; second vice-president, Henry A. Gorman, Hamburg; secretary, Richard C. Travis, Reading; treasurer, Daniel Longaker, Reading; reporter, Pearl E. Hackman, Reading; librarian, Calvin B. Rentschler, Reading;

district censor, Irvin H. Hartman, Reading. There was no scientific program. William F. Krick, the retiring president, summarized the events of his year of administration in a brief address. Dr. Krick said in part:

Much as physicians are loath to be dragged from their daily tour of medical service, they are faced with conditions that demand most serious consideration.

Not so many years ago medical economics was confined to efforts to maintain some uniformity of fees, the suppression of fee-splitting and commercial rebates, the detection and elimination of chronic beats. Today the field of medical economics is much wider, and we find doctors of philosophy, social workers, sociologists, and economists taking a dynamic interest not in medical ethics but in medical economics.

The medical profession may be largely at fault for its present plight, but whether this be true or not it is facing a situation that can be met only by organized forces within the profession.

The profession must expect to identify itself actively with the study of all social problems for its own protection as well as that of society.

This calls for a much broader field of service than in the past, which can be made possible only by a strongly knit organization, backed by the support of every ethical, practicing physician.

The newly installed president, Ralph L. Reber, said in part:

There is a new committee to be appointed this year, the Medical Economics Committee, whose duty it is to investigate the society's agencies for providing medical care in the county, namely, the Visiting Nurses' Association and the local baby stations.

At the last business meeting there was a great deal of criticism about the work being done at the local baby stations regarding the administration of diphtheria toxoid to patients able to pay their own physicians. The outcome of this discussion resulted in a motion for this new committee.

The criticism concerning the Visiting Nurses' Association has been mentioned by past presidents and now the members feel that some investigation must be made.

There continue to be constant arguments and debates as to the extent to which the Department of Health shall enter into medical practice. It is right that the state, through its Department of Health, control its water supply, food supply, and the disposal of sewage, which are matters of vital interest to the health of the people. It is in order for the state to determine when an infected individual is dangerous to the community, and to limit his movements by isolation and quarantine. We recognize the right of the state, when an epidemic of smallpox threatens, to enforce the vaccination of individuals against smallpox. Does the state, however, have the right when no epidemic threatens to vaccinate forcibly? Does it have the right, in the absence of a diphtheria epidemic, to force children to be inoculated by employees of the state against diphtheria with the use of diphtheria toxoid? Does the state have the right to inoculate any considerable number of children against whooping cough?

From these questions it may be seen that there are different points of view as to how far the state may go, even in the practice of preventive medicine. It is a safe rule to observe that the state has the right to carry out any procedures which involve the health of the community as a whole, even when they concern the individual, but that the individual's personal health

is his own affair as long as it does not too greatly concern the well-being of the community.

The county medical society is the natural guardian of the quality of medical service given in its locality.

The annual banquet of the society was held at the Berkshire Country Club, with 140 members and guests in attendance. Erwin D. Funk acted as toastmaster.

PEARL E. HACKMAN, *Reporter.*

BRADFORD

Nov. 26, 1935

The meeting was held at the Troy Hotel, Troy, in joint session with the Tioga County Society. The meeting was well attended by both societies. Dinner was served. Howard L. Prince, of Rochester, N. Y., gave a talk on several topics of importance to the general practitioner.

The first subject on which Dr. Prince commented was foot strain. Among the points stressed were these: The foot is a grasping organ and as long as it remains so, foot strain does not occur. Shoes and sidewalks have made the necessity for sense of balance less conspicuous and the stride longer. Among aboriginal peoples a short stride with toes straight ahead or "toeing in" is the manner of walking. Encouraging this may help patients with foot strain. With this measure there can be advised a wedge on the inner side of the heel of each shoe, grasping with the toe, exercising the feet by bearing the weight on "the ball of the foot," and also by having the patient stand on a wedge of proper width. These exercises are aimed at strengthening the muscles of the foot and increasing their tonus.

Short shoes are a common cause of limping in children. Dr. Prince advised that the shoes should always be examined most carefully in individuals who complain of limping.

For the prevention of foot strain the following rules were recommended: (1) Avoiding overweight. Dr. Prince decried the habit which is prevalent among physicians of putting weight on expectant mothers, in an attempt to enhance the milk supply; (2) following protracted illness—the strapping of both feet for 2 weeks after the patient gets out of bed. This should not be continued. Strapping of the feet is an excellent therapeutic test before ordering supports.

In the treatment of foot strain, proper shoes, together with proper walking and exercises, offer the best relief. Neglect of these may cause recurrence. Few patients need surgical intervention.

Dr. Prince in speaking of the differential diagnosis mentioned diabetes mellitus and the attendant neuritis, hypertrophic arthritis of the knees, knee strain with effusion into the joint, and arthritis involving the heads of the femurs. In closing the discussion on this subject he mentioned backache as a possible result of foot strain. Concerning backache he said, "There is more said and written about this than is done about it." Too frequently the pelvis is looked upon as the etiologic factor when in reality it is rarely a cause of backache. The most frequent causes are: (1) Too soft a bed—these individuals give a history of awakening in the middle of the night, arising, walking around for a few minutes, securing relief, and reclining again; (2) too many individuals ask their backs to do more than they are capable of; (3) foot strain; and (4) arthritis.

Treatment: (1) Hard bed—a strip of cellotex placed between mattress and springs serves to add enough rigidity to afford relief; (2) the application of an

abdominal binder, about 8 inches wide, made from several thicknesses of an old blanket. This is applied while in the recumbent position; (3) attention to foot strain if present.

Dr. Prince made a plea for better care of lacerated wounds. He advised thorough cleansing and careful suturing, being certain that infection is absent before suturing. The avoidance of too many sutures was stressed.

Concerning tendon injuries, the casual repair of these should be avoided. Hospitalization, good light, and a good surgeon are the prerequisites for the best end result.

The importance of knowing and recognizing the signs and symptoms of acute intestinal obstruction was next discussed. The following points were considered: It is next in importance to appendicitis; potential cases are those which have had abdominal operations; it occurs more frequently in women because women as a whole have more abdominal surgery than men; these cases if neglected have a 100 per cent mortality; pain—cramp-like in character; inability to pass gas or feces; nausea; "noisy belly."

Acute obstruction is quite typical and, if the above symptoms and signs are kept in mind, an early diagnosis should always be made. Flatus and feces may be secured in these people by giving an enema, but they are unable to secure relief from their symptoms by such a measure.

In closing, Dr. Prince decried the use of expensive transilluminating apparatus when used as a means of diagnosis without regard for other findings. The microscopic examination of lumps in the breast always should be insisted upon.

WILFRED D. LANGLEY, *Reporter.*

CHESTER

Jan. 21, 1936

The meeting was held at the Chester County Hospital. President J. Ashbridge Perkins presided. Luncheon was served. As the January meeting each year is devoted to the business of the organization, no scientific program was presented.

Concerning the matter of insurance companies naming certain physicians in each community to handle compensation work, the Economics Committee recommended that definite efforts be made legally to prohibit insurance companies from engaging in this type of practice, and further recommended that any member of the society having such a contract with any insurance company make immediate application to the censors for an opinion concerning the ethics of the contract. It was approved that the Chester County Medical Society request the State Society officers to make an effort to have the present law changed whereby the family physician would be permitted to take care of the compensation case in his own practice. If the insurance company is not satisfied with the family doctor, it could make recourse to the county medical society's Workmen's Compensation Committee for an opinion in the matter. It was further recommended that the Workmen's Compensation Committee of our society be authorized to contact the various insurance agents throughout the county for the purpose of devising a plan applicable to the handling of these cases to the satisfaction of all parties concerned.

It was approved that the physicians of the county report all cases of tuberculosis to Dr. Dickey. This report should include the name, age, address, sex, number of contacts, and classification of the disease.

It was reported that the Tuberculosis Society is contemplating the purchase of a pneumothorax machine for use in the county under controlled conditions. It was finally decided that a subcommittee of the Public Health Commission should be appointed to confer with the Tuberculosis Society concerning this matter and that this committee report at some future meeting what action it deemed advisable.

The society agreed that a subcommittee of the Public Health Commission should be appointed to gather factual information concerning the public health needs of the county with a view to determining what public health need in the county is most urgent so that an intelligent appeal can be made to the County Commissioners for financial aid.

The Health Service Committee reported concerning the results of its study of the health service at the West Chester State Teachers College. The Board of Trustees of the College has agreed in full to the plan devised by the Health Service Committee of our society. In brief, a part-time physician will be employed by the college for the purpose of lecturing on public health and personal hygiene subjects. The physician also will be expected to make weekly inspections of food handlers and all sources of food supplies, attend athletic contests to administer first aid and also to conduct a daily office hour for students. The purpose of this daily office hour will be to administer first aid and attend students with very minor ailments requiring but one visit to a doctor. The actual medical attendance upon all students, faculty members, employees, and visitors at the school will be undertaken exclusively by the physicians in the community. In no way will the Teachers College attempt to compete with either our local hospitals or local physicians in the practice of medicine. The report of the Executive Committee was approved.

A letter and questionnaire regarding 8-hour private duty nursing was read. This questionnaire comes from the Board of Trustees of the State Society who are endeavoring to carry out the mandate of the House of Delegates requesting a thorough study of this problem with a view to making a report at the next State Convention. This report was assigned to the Public Health Commission for study and action.

The society is advised of the fact that 2 films have been prepared by the State Society, one for the purpose of instructing physicians in the art and technic of making periodic health examinations, and the other to be used for public demonstrations to lay groups and audiences. The society is urged to take advantage of the opportunity to use these films.

The following officers were elected: President, Charles J. Brower, Spring City; president-elect, I. P. P. Hollingsworth, West Chester; first vice-president, J. Ashbridge Perkins, Coatesville; second vice-president, Howard B. F. Davis, Downingtown; secretary-treasurer, Joseph Scattergood, West Chester; censors, U. Grant Gifford, West Chester, Howard Y. Pennell, West Chester, S. Horace Scott, Coatesville; reporter, Joseph Scattergood, Jr., West Chester; editor, Thomas Parke, Downingtown.

District Councilor Edgar S. Buyers reviewed the State Society's activities during the past year.

JOSEPH SCATTERGOOD, JR., *Reporter.*

CRAWFORD

Jan. 17, 1936

More than 40 physicians attended the annual President's Dinner held at the Meadville Country Club, as guests of V. G. Hawkey. George Kastlin, of the Pittsburgh Skin and Cancer Clinic, discussed "Indications for and Value of Blood Transfusions." Dr. Kastlin deplored the overplay of blood transfusion topics in the newspapers. He detailed the hazards, indications, and other vital steps in this procedure. He stressed the value of small, frequent transfusions, and their uses.

RICHARD L. BATES, *Reporter.*

DAUPHIN

Jan. 7, 1936

The meeting was held at the Harrisburg Academy of Medicine, with Henry R. Douglas, Sr., in the chair. In accordance with custom, the meeting was addressed by the retiring president and by the incoming president, the entire evening being devoted to these talks and to the annual report of committees.

The address of the retiring president, Dr. Douglas, embraced a brief "History of medicine." He concluded as follows:

America's outstanding contribution is in the field of surgery; this is sometimes attributed to the technical skill of Americans. This comment suggests the idea that Americans are also noted for their skill in business. Since medicine is a vital resource of the people and affects the cost and efficiency of labor, business is naturally concerned with medicine, and medicine has found it necessary to adapt itself to a business world. In that adaptation, medicine must always recognize the importance of developing the scientific and professional aspects as paramount. The heritage of medical knowledge based on intensive study of its basic sciences must be held in trust for the service of mankind and not encroached upon or restricted by those who would propose outside control and mediocre medical service in an attempt to exploit a valuable resource of the people.

Park A. Deckard, newly installed president, read a paper on "Medical Economics." He said in part:

Unfair legislation and criticisms from the laity must be fought and broken down.

The question of medical economics is a very vital one and every phase of the subject must be met with a grim determination to win. This can be accomplished in but one way and that is to present a united front, allowing for no division in the ranks of our profession.

At the meeting of the Pennsylvania State Medical Society in Harrisburg in October, 1935, the House of Delegates approved the following recommendation by the State Committee on Medical Economics: "In order to avoid precipitate action by any county society, looking toward the adoption of any plan for the care of the indigent or those of low-income groups, it is recommended that no county society take any action toward the establishment of any plan without having first consulted the State Committee on Medical Economics.

"It is hoped that under all circumstances no plan will be considered which does not fully conform to the 10 principles laid down by the American Medical Association."

We have many specific problems facing us, but time will permit me to touch upon but 2 of the most important:

- (1) The United States Public Health Survey, and
- (2) the High School Debate.

What should be the attitude of the Dauphin County Medical Society toward this survey?

Francis F. Borzell, chairman of the State Society Committee on Medical Economics, believes that we should help in this survey as individuals but not go on record as a society.

No statement has ever been given as to the purpose of this Public Health Survey, but it begins to appear as though it is a wedge to be inserted toward health insurance or, as Dr. Borzell has said and rightfully so, health taxation. It has been shown that 55 to 60 per cent of all funds collected would go to the insurance companies and the various interested agencies, leaving very little to the doctor who must do the work. For a small sum an individual would have the privilege of calling on his doctor every day in the year, no matter how trivial his ailment. Do we want this condition to exist as it does in many of the European countries?

A great deal has been written during the past year about "The High School Debate" which will be presented in many communities. This year the subject will be on "Socialized Medicine." Here again our local county medical society must get busy and attempt to make the whole thing act as a boomerang. Publicity means a great deal and contact with the newspapers and other friendly organizations will help us to accomplish the desired result. A suitable physician should be appointed by our society to coach the negative side on this subject.

Success or failure at this time depends upon the degree of activity of each doctor in his own community working not only as an individual but also as a member of his county, state, and national societies.

Feb. 4, 1936

The regular monthly meeting was held at the Academy of Medicine with the president, Park A. Deckard, presiding. The program consisted of a Symposium on the Eye, Ear, Nose, and Throat.

"Acute Otitis Media," by Jay Smith. He said in part:

There are 5 arbitrary classifications of otitis media: Acute simple otitis; acute purulent otitis of adults and children; acute purulent otitis of infants; acute epitympanic otitis; and mucosus otitis.

Because of its frequency, the purulent type of otitis was the chief concern of this paper. It is essentially a child's disease, but occasionally is seen in adults and infants. The etiology is always an infection, usually staphylococcal, streptococcal, or pneumococcal, through the medium of upper respiratory diseases. Transmission of the organisms to the middle ear is usually by way of the eustachian tube.

Pulsatory ear pain is the outstanding symptom, and is usually accompanied by deafness on the affected side and by a temperature of 99½° F. to 101° F.

The tympanic membrane varies with the stage of the otitis, from simple hyperemia to an intensely red bulging drum that exhibits no landmarks.

Mastoid symptoms are very common in the early state of acute otitis because the mucous membrane of the mastoid antrum and cells is also inflamed. This should not stampede us into mastoidectomy.

The differences in the anatomy in the adult and in the infant ear account for the differences in symptoms and ease of diagnosis.

The treatment of acute otitis media varies with the stage of the disease. Early, 5 per cent phenol in glycerin in the canal and 1 per cent ephedrine in normal saline in the nose will often contribute to a rapid recovery. If bulging occurs, the membrane should be incised; this should not be done without thorough knowledge of the anatomy. After incision, the wet method is frequently followed. This consists of daily irrigations with sterile boric acid or saline solution, followed by the instillation of antiseptic drops, such as 1 per cent or 2 per cent mercurochrome or 5 per cent argyrol.

Usually, an acute ear will discharge from 1 to 4 weeks. If discharge continues longer, in children remove the adenoids; in adults do a simple mastoidectomy and wait. If, in the former case, the drainage continues beyond 8 or 9 weeks, do a mastoidectomy.

"Acute Mastoiditis, its Diagnosis and Treatment," by George H. Seaks. He said in part:

Acute mastoiditis is an infection of the mastoid cells caused by virulent organisms, almost always secondary to an infection of the middle ear. The virulence of the organism plays a rôle in the management of the case and can be ascertained only by culture. The streptococcus is the most virulent, especially *Streptococcus mucosus capsulatus*, with which the recovery may be slow and dangerous complications occur.

In the ordinary case, there is a moderately elevated temperature, pain over the mastoid, and a profusely discharging ear that has had an open drum for a week or 2. Roentgen ray and culture can be used as guides for diagnosis and treatment. If the pneumococcus mucosus is present, operate early and keep the wound open, but if there are other organisms, wait for local resistance to be built up.

In a series of ear cases at the Manhattan Ear, Eye, and Throat Hospital, nearly 3 times as many cases in which the drum was allowed to rupture spontaneously came to mastoidectomy as when myringotomy was performed.

Some authorities do not operate upon a mastoid until the acute phase is past (sometimes 4 or 5 weeks). This course is based on the inciting organism. An ultra-conservative stand on the mastoid will yield gratifying results.

Beware of masked mastoiditis—little or no fever, history of middle ear infection with a reduction of hearing. Watch these cases carefully; disaster may follow.

Always culture the cases.

"Complications in the Eye Due to Upper Respiratory Infection," by Byron B. Bobb. Complications in ophthalmology due to upper respiratory conditions are only vaguely mentioned in the literature, but are not infrequently seen in routine practice.

It is usually held that the lymphatics of the eye, oculomotor system, and ocular pathway are continuous with or contiguous to some of the lymphatics of various parts of the upper respiratory system, especially the accessory nasal sinuses. The optic, oculomotor, abducens, and trochlear nerves leave the skull through the sphenoidal fissure, and in doing so may be affected by the condition of the lymphatics in that area.

The ethmoid and sphenoid sinuses are the outstanding offenders in thus producing a secondary affection of the strategically located nerves, and these sinuses are often aided and abetted by a deflected nasal septum. The deflected septum reduces aëration and drainage, thereby producing chronic congestion of the nasal

passage. Chronic congestion of the middle turbinate will affect the eye secondarily because of the consequent blockage of the paranasal sinuses and the resulting chronic infection.

Scotomata, hemianopsia, iritis, uveitis, optic neuritis, glaucoma, photophobia, and conjunctivitis all may be caused by trouble in this area and relieved by the appropriate treatment of the upper respiratory condition.

"Some Practical Considerations of Pathologic Conditions in the Nose," by Harold Lanshe. He said in part:

Physiologically the nose serves at least 4 purposes—respiration, olfaction, resonance, and bacteriostasis.

The respiratory function is the most important. The blood vessels in the turbinates controlled by the sympathetic nervous system heat the inspired air while the secretions from the serous glands moisten it.

The sense of smell engages with the sense of taste—for as this sense diminishes or disappears, so the acuity of taste diminishes or disappears. It helps to detect the quality of foods and therefore aids digestion. It is a defense against foul odors and toxic foods. Sneezing is a rebellious outcry against irritating odors.

The quality of resonance of the voice is increased by the lack of any nasal obstruction.

The mucous membrane of the nose and sinuses is a continuous and contiguous carpet—a micro-organism could travel everywhere in the nose, in and out every sinus, without getting off this carpet. The integrity of its structure as well as the chemical nature of the secretion from these millions of glands acts as the primary defense against all infections. Nowhere in the body should there be more respect for tissue, for the minute the surface epithelium in the nose is destroyed a permanent change results.

This brings up the question of indiscriminately advising the correction of deformities of the nasal septum. This should be done, if possible, after the growing period ends, namely, after age 20, and before age 50. The operation has fallen into disrepute because of the lack of judgment in selecting cases.

The physiology of the sinuses is three-fold: They assist in warming and moistening the air, act as resonating chambers, and tend to lighten the head.

In standing erect the frontals and ethmoids are the only ones in which the openings are in the most dependent portion.

The maxillary sinus or antrum has an ostium near its roof. This is important, for a patient with an acute maxillary sinusitis presents this picture: The pain is seldom over the antrum, but for reasons unexplained is over the supra-orbital ridge. Remember that the pain in all sinus infections is due largely to distention of the sinus with pus. A patient, therefore, with maxillary sinusitis who subconsciously sleeps on the side opposite to the side affected will complain of pain beginning toward noon, after being in an erect posture a sufficient length of time to allow the sinus to fill. The pain reaches its height about 4 o'clock, then by syphonage the sinus empties.

The frontal sinus cases can therefore be rather easily distinguished. The ostium is in the lower anterior portion when the head is erect. The sinus fills while lying down. The patient may awake with a headache that will disappear in the forenoon. The frontal sinus pain is over the frontal bone above the supra-orbital ridge.

The sphenoid ostium is located at the uppermost part of the sinus similar to the maxillary sinus. The time of onset of the pain and discharge parallels that of

the maxillary sinus, but because of the location of this sinus, the pain is between the eyes, deep seated, and in the occipital region.

The ethmoids, more or less, parallel the frontals but the pain complained of is between the eyes.

Any patient with a suppurating discharge from the nose or ear existing for 2 weeks or longer should be referred to the otorhinolaryngologist. The head cold at times presents some sinus disease; the draining ear occasionally presents mastoid disease.

A. HARVEY SIMMONS, *Reporter*.

DELAWARE

Jan. 9, 1936

The eighty-fifth annual meeting was held at the Chester Club, Chester; President John S. Eynon presided.

The chairman of the Welfare Committee explained in detail the new regulations regarding welfare orders.

The following officers were elected: President, John J. Sweeney, Highland Park; first vice-president, Albin R. Rozploch, Chester; second vice-president, Ralph E. Bell, Media; secretary-treasurer, John B. Klopp, Chester; librarian, Ferdinand W. Nyemetz, Chester; reporter, E. Arthur Whitney, Elwyn; editor of Bulletin, C. Irvin Stiteler, Chester; censors, Katharine Ulrich, Chester, Walter E. Egbert, Chester, and Augustus H. Clagett, Upper Darby.

The new president, John J. Sweeney, and the new secretary, John B. Klopp, were installed.

Mr. A. V. Hart gave an address on "Public Relations As I See It." Mr. Hart is the legislative chairman of the State Association of the Home Loans Organization. He stated that his position was very much that of a dollar-a-year man in the public relations field. He divided the work of public relations into 2 distinct sections—the educational division and the legislative division. The work of the educational division also might be divided into 2 parts. The first, and perhaps quite an important one, is the education of the members of the organization in the field of public relations, and the second is the education of the general public in matters pertaining to the organization.

The major part of the address dealt with the legislative division. He outlined the development and growth of the legislative division in his own organization and applied it by contrast to the medical organizations. He stated that it was essentially as important to contact legislative members, cabinet officers, and others in official capacities when the legislature is not in session as when it is in session. It is Mr. Hart's opinion that the physicians have been very lax in their attention to legislative matters and that an aggressive campaign would work to the mutual good of all physicians.

The annual dinner given in honor of the new president was attended by the members of the society and the members of the Woman's Auxiliary, who were the guests of the society at this function.

E. ARTHUR WHITNEY, *Reporter*.

DELAWARE (EASTERN BRANCH)

Jan. 28, 1936

Fred Weidman, of Philadelphia, delivered an address on "The Common Fungal Dermatoses." He said in part:

Dermatophytosis.—Characteristics—eczematous appearance on back of foot; sharp margination is a distinguishing feature; intertriginous distribution (moisture, warmth, etc.); it may spread hematogenously, in which case it is called dermatophytide.

Dermatophytide.—Characteristics—usually a macular eruption; often eczematous, red, scaly, and itchy. Treatment for subacute cases of dermatophytosis: Salicylic acid 3 to 15 per cent; Whitfield's ointment, which contains salicylic acid, 3 per cent, benzoic acid, 6 per cent, Lassar's paste, 91 per cent; tincture of iodine, one-half strength; chrysarobin, especially in dermatophytide, 20 grains to the ounce. Treatment for acute cases of dermatophytosis: The following lotions are useful—boric acid; potassium permanganate, 1:4000; and Burrow's solution.

Ringworm of the body.—Treatment: Tincture of iodine, one-half strength; ammoniated mercury, 20 or 30 grains to the ounce.

Ringworm of the scalp.—May be confused with alopecia. In alopecia there is a loss of hair, the skin is white, and there are no scales; in ringworm there are scales, the skin is red, and the loss of hair is not complete. Treatment of ringworm of the scalp: Sulphur or ammoniated mercury, one drachm to the ounce; roentgen ray is the method of choice; thalium acetate, 8 mg. per kilogram of body weight.

Ringworm of the beard.—May be confused with actinomycosis or syphilitic gumma. In ringworm the upper lip is never involved; stumps of hair are present, which come out easily and with no discomfort; microscopic examination for the organism is helpful; and no sinuses are formed as in actinomycosis. The treatment is: Sulphur or ammoniated mercury, one drachm to the ounce; iodine intravenously, one drachm of Lugol's solution diluted with 2000 c.c. of normal saline solution.

Tinea versicolor.—May be confused with syphiloderm. In tinea versicolor there is no element of erythema, and the lesions are pink; tinea is not an inflammatory disease; the fungus lies in the superficial layers of the skin; microscopic examination is important.

Favus of the scalp.—Favus leaves baldness; in ringworm the hair regrows. The characteristic lesion of favus is yellow colored with a crater in the center—sulphur crusts. Treatment: Ointments (ammoniated mercury clears lesions of the body, but not those of the scalp); roentgen ray. THEODORE LIDLE, *Reporter*.

ERIE

Jan. 7, 1936

The meeting was held at Erie, Arthur G. Davis presiding.

Arthur G. Davis read a paper on "Treatment of Fractures of the Spine," illustrated with charts, slides, and motion pictures. Hyperextension is the accepted treatment and the only controversy is in the matter of its application. The foot suspension method, introduced by the essayist about 10 years ago, remains the logical method for the usual case. Less stress per degree of reduction is needed by this, the "hockey stick" method of reduction, than by any other procedure thus far offered. Complete restoration of the vertical height of the centrum is more certain, and there is less risk in its use. No real compression is exerted upon the posterior arch. General or partial anesthesia can be used or omitted.

In the uncomplicated case, recumbency is indicated for a period of from 6 to 8 weeks; a close fitting hyperextension jacket is necessary for another 6 to 8 weeks. If roentgenologic study indicates callus and union, ordinary activity is then gradually resumed. The continuance of tenderness over the spinous process means that more gradual convalescence is indicated.

In spite of the fact that numerous authors have emphasized the overlooked fracture of the spine, fractured spines are still missed. Every victim of an automobile accident, all those injured by falls from a height, patients with fractures of the os calcis, and all other severely injured patients should be surveyed for the possibility of spinal fracture. If tenderness over or lateral to the spinous processes is elicited, roentgenograms should be made, especially remembering that most vertebral fractures are at the dorsolumbar level.

DELMAR R. PALMER, *Reporter*.

FAYETTE

Nov. 7, 1935

The monthly meeting was held at the Uniontown Hospital, John D. Sturgeon, Jr., presiding.

The meeting was in charge of Ralph P. Beatty, of Uniontown, who read a paper on "Prostatic Obstruction." He said in part: The symptoms of prostatic obstruction are chiefly dysuria, nocturia, frequency of micturition, and a difficulty in starting of the stream, especially in males more than age 55. A summary of 75 cases occurring in the Uniontown Hospital was read and discussed. Hyperplasia of the prostate occurs in 35 per cent of all men past age 50. However, symptoms are present in only one-third of these cases and they are not in proportion to the degree of enlargement of the gland.

Carcinoma of the prostate occurs more frequently than the average physician supposes. Four out of every 100 men past age 50 will develop it sometime. The initial symptoms are those of prostatitis. Early recognition is important as the average span of life in these cases is $3\frac{1}{2}$ years. The average age of the 75 patients between 1927 and 1933 was 67 years while the extremes were 43 years and 85 years. Seven emergency cystostomies were performed with spinal anesthesia, the anesthetic of choice.

Sixteen patients had hypertension while 47 had hypotension. Only one case developed a permanent fistula. The complications that developed in these cases were pneumonia, pyelonephritis and epididymitis. Three cases developed gangrene. Thirty-six of the 75 cases of urinary obstruction had a prostatectomy performed with a mortality of 13 per cent. In conclusion, Dr. Beatty stated that early urinary obstruction may not need surgery. Frequently transurethral resection is good in selected cases. Physicians must be as carcinoma-conscious when investigating the prostate in men as they are when examining the breast and cervix in women.

Harry J. Bell, of Dawson, gave a brief talk on "The Art of Prognosis." He said that all men practice prognosis in one way or another. It is an art in itself which develops with experience. More emphasis frequently should be placed on the patient than on the disease. A corpulent person might be considered more susceptible to infectious diseases with especial reference to pneumonia. Fair-skinned individuals are usually considered more vulnerable than dark-skinned individuals. The presence of menopause symptoms frequently changes

the expression of functional conditions. Many symptoms are bizarre and do not respond to treatment. In making a prognosis many factors should be considered, at the same time considering such important factors as hypertension, albuminuria, coated tongue, pyrexia, and an individual study of the patient's reserve.

Robert H. Jeffrey, of Uniontown, in discussing Dr. Beatty's paper, urged the general practitioner to refer such cases as need hospitalization to the specialist.

Laurie D. Sargent, of Washington, was announced to have been elected to complete the remainder of the term of Arthur E. Crow, of Uniontown, as the Eleventh District Councilor.

A resolution of the Executive Committee was adopted that "the president appoint a committee of 5 to examine any doubtful relief case claiming illness."

Herbert J. Levin, of Connellsville, John B. Hibbs and Chas. W. Lewis, of Uniontown, were admitted to membership. A committee to investigate the interest of physicians in establishing a graduate course in the county in the near future was appointed.

RALPH L. COX, *Reporter*.

Dec. 5, 1935

The meeting was held at the Medical Hall, Uniontown Hospital.

William J. Fetter, Mercy Hospital, Pittsburgh, read a paper on "Some Bone Conditions Important in Medicine." Dr. Fetter said in part: There is increasing evidence that the parathyroid glands are related to the various bone conditions. Holding the balance of the calcium phosphorus ratio at normal figures, any disturbance of these glands causes bone changes. The most frequent is hyperparathyroidism, the basis of which is frequently the existence of an adenoma in one or more of these glands. Demobilization of the calcium in bones occurs with consequent excretion of the salt in the urine. Areas of absorption in the bones appear as cysts. The most frequent form found is osteitis fibrosa cystica. More severe changes produce softening and pathologic fracture. The essential changes are in the flat bones. Later the long bones may be involved.

In many cases the formation of numerous renal calculi occurs, probably due to the retention of an excessive amount of calcium excreted by the kidney. In many cases the first symptoms are those of stone in the kidney.

In a few cases, polyuria, hyperproteinemia, anemia, low specific gravity, and albumin appear with a diagnosis of chronic nephritis. Subsequent study of the calcium and phosphorus ratio shows these cases to be hyperparathyroidism rather than chronic nephritis.

The most common early symptoms of excessive parathyroid secretion in a series of 115 cases were backache, sometimes diagnosed as sacro-iliac strain, weakness, irritability, muscle tenderness, renal calculi, and polyuria with albumin in the urine. In the laboratory a high urine calcium, high blood calcium, a somewhat raised phosphatase index, and hyperproteinemia are found on a test diet.

Roentgen ray may show areas of decreased density in the flat and long bones in the form of cysts, numerous renal calculi, fracture of a bone, and bone bending due to softening.

Differentially, multiple myeloma may be diagnosed by the facts that the condition is more extensive, attacks bone centrally, invades the periosteum, shows no new bone formation, Bence-Jones protein is found in the

urine, and by biopsy. Paget's disease, by the fact that it occurs in older people, affects bones symmetrically with overgrowth of new bone and the marrow cavities may be obliterated. Malignant tumor metastases to bones, the site of original tumor, show little disturbance of the calcium phosphorus ratio by biopsy. The treatment is not yet developed. Removal of an existing adenoma in the gland should be done early before important bone changes have occurred.

Fracture cases confined in bed for a long period of time are prone to formation of renal calculi. Therefore, an effort should be made to keep the kidneys actively secreting and the urine acid. This to some extent aids in preventing calculi formation.

In discussion, George H. Hess stated that many bone conditions of an obscure nature, such as Legg-Perthes' disease, are still undefined and that there may be a possible relationship to the activities of the parathyroid glands.

LOUIS F. ROGEL, *Reporter.*

FRANKLIN

Jan. 21, 1936

This meeting constituted the annual dinner, and election and installation of officers.

The essayist was Gibson Colby Engel, of the Graduate School of the University of Pennsylvania, Philadelphia; his subject was "Diseases of the Thyroid Gland." In substance Dr. Engel said:

The thyroid gland and iodine are almost synonymous. In the human body iodine has a double action—as a stimulant to oxidation, and as a depressant to the same function. In other words, iodine is likely a regulator of oxidation. Partly by accident and partly by sheer determination, Kendall isolated the active principle from the thyroid and named it thyroxin. This substance is now made synthetically and is readily obtainable for medical use.

Acute inflammation of the thyroid gland may occur. It begins with chills, elevated temperature, and the signs of localized inflammation. Suppuration of the gland usually occurs only when the inflammation is due to scarlet fever, typhoid fever, or puerperal fever. If suppuration does not occur, the inflammation subsides in 7 to 10 days. If suppuration occurs, it may be necessary to slit the isthmus of the trachea. Treatment should begin early.

There is a rare form of goiter, the congenital type, which generally is fatal. The period of greatest danger is the first 2 days after birth, and suffocation is possible. If possible the occurrence of this malady should be prevented by giving small doses of thyroid extract to women who have nontoxic or simple goiter, during the period of gestation, and obviously to women who have lost their thyroids by surgery.

Occasionally a case of cretinism is seen. Here there is decreased function of the thyroid. There are 3 forms of cretinism—congenital (only 4 cases reported), infantile, and juvenile. There are all shades and variations of these forms, and to differentiate them may be most difficult.

Myxedema in the adult may be due to a degenerative process in the thyroid, as acute infection (already mentioned), colloid goiter, adenomas, cancer, or total surgical removal. These cases are readily recognized, if the physician suspects a thyroid condition. Treatment calls for from 1 to 2 grains of thyroid extract daily, or 1/80 of a grain of thyroxin. The result usually is satisfactory.

Dr. Engel emphasized an important fact in goiter work—that the various stages of this condition are but stages of the same disease, and not separate entities. The simple goiter, now being considered, is very common in the goiter belts. (Franklin County is in a goiter belt.) Normally the thyroid enlarges in pregnancy and at menstruation. If this condition is observed, its treatment is simplicity itself—3 grains daily of sodium iodide for 10 successive days, twice a year.

The colloid form is a degenerative state of the gland, in which the thyroid tissue is changed into colloid bodies. Frequently myxedema is present in the colloid form. These glands often become very large and unsightly. Treatment consists of surgical removal.

Adenomas of the thyroid gland are common, and have all the dangerous potentialities of epithelial tumors. The most usual type is the fetal form, and it is quite possible for this to last for years without being observed. Growth of this tissue may occur and direct attention to the tumor. Adenomas may be toxic or nontoxic, and may become malignant (80 to 90 per cent). The symptoms may vary from none at all to severe toxemia. Examination discloses a round or cystic mass in one of the thyroid lobes or at the isthmus. The treatment unquestionably is surgical.

The malignant thyroid tumor grows rapidly, and becomes firmly adherent to the skin. The mass usually is painful and tender.

If surgery is employed prior to capsule infiltration, the result is good. If infiltration and fixation have occurred, the case is grave indeed. Treatment with roentgen ray is far superior to surgery unless the case is diagnosed very early. Radiation alone seems best.

While the etiology of Graves' disease (toxic goiter) is not perfectly known, its increasing frequency is a fact. Women tend to have this disease far more often than do men, in a ratio of perhaps 10 to 1, up to age 50, when men begin to take the lead on a 3 to 1 basis.

To consider the etiology of exophthalmic goiter there must be considered acute infections, and the emotional stress and strain of present-day living, which is exceedingly harmful to the endocrine system, of which the thyroid gland is an exceedingly important part.

The onset of this form of goiter varies from a very gradual one to a quick development, sometimes a matter of hours. In cases of rapid development there may be diagnostic confusion.

The size of the tumor growth bears no relationship to its seriousness. A toxic goiter may show no enlargement. However, if there is no enlargement and the other symptoms exist, a roentgenogram should be taken for a possible substernal or intrathoracic goiter. The outstanding importance of symptoms is obvious, and a careful history is highly valuable.

The classical toxic symptoms of Graves' disease were detailed. These patients sooner or later become conscious of their hearts. The organ acts wildly, usually at a higher rate in the morning than later in the day. This point differentiates the disease from myocarditis. If the myocardium is intact the rate and steadiness of pulsation is an indication of the severity of the disease. Pulse behavior as to rate, rhythm, and volume is the most important single phase in reaching a decision as to the employment of surgery. Early, the blood pressure may be slightly plus, to fall later when myocardial changes occur.

Icterus is a danger sign; however, this condition also may occur from a gallstone obstruction of the common duct and not be connected with the toxic goiter.

Weight loss usually is noted, which with the pulse rate is the major indication of severity.

The eye signs are important. Loewi describes a test of value, namely, the instillation of a drop of 1:1000 epinephrine which in a positive case will dilate the pupil widely.

Study of the blood reveals little. The basal metabolic test may be of value or it may not. This must be done carefully and repeated. Increased basal metabolic rate findings occur in acidosis of starvation and of diabetes. Likewise it appears in pernicious anemia, in endocrine disorders, fever, and tuberculosis. A study of blood cholesterol is a more valuable test, considering the healthy normal as from 150 to 230.

The essayist stressed surgery as the most valuable curative measure, and the preoperative administration of Lugol's solution, 10 drops three times a day. A high caloric diet is used, fluids are forced, and the synchronous use of bromide or elixir of phenobarbital is helpful. Patients must get complete bed rest, and be weighed often. The desirable time for operation seems to be when the weight is stabilized or increasing and the pulse has slowed and become steady.

Avertin has been shown to be of high value. The operation is performed in 2 stages—one lobe first, with the isthmus. If the patient's condition is satisfactory, the second lobe may be removed at the same time; otherwise a delay of 3 months is allowed to complete the work.

Following operation give 1500 c.c. of normal saline by hypodermoclysis, and force fluids and carbohydrates as the patient emerges from the anesthesia. Instill 5 c.c. of Lugol's solution into the rectum at once, and give 10 drops of the same medicament 3 times daily for the first 3 days, then stop it.

The patient is placed in a semi-sitting posture, with ice bags to head and heart. By the third postoperative day use a high caloric, nonstimulating diet. Absolute quiet is essential. Inhalations of compound tincture of benzoin give great comfort to the traumatized throat. It follows that morphia may be used to considerable advantage during the first 3 days. Each day 3000 c.c. of fluid should be given by the various routes. At the sixth or seventh day the patient may arise, and go home on the eighth.

The discussion was about evenly divided between the comparative value of surgery and roentgen-ray treatment.

FASSETT EDWARDS, *Reporter*.

HUNTINGDON

Nov. 20, 1935

A joint meeting was held at the J. C. Blair Hospital with the County Dental Society to discuss plans for forming a credit and collection bureau. Walter Orthner discussed the Northampton plan and other economic matters. A committee from both societies was appointed to formulate a plan and present it to the physicians and dentists. Wolfgang F. J. Vogel, Huntingdon, was elected to membership.

Dec. 12, 1935

The society met at the J. C. Blair Hospital at 3:00 p.m. Harry H. Negley, Jr., Alexandria, was elected to membership.

The following officers were elected: President, Walter Orthner; vice-president, George A. Parker; secretary, John M. Keichline, Jr.; treasurer, Charles R. Reiners; censor for 3-year term, John M. Beck; reporter, Paul

Maxwell; delegate, Cloy G. Brumbaugh; alternates, John M. Keichline, Jr., and William T. Hunt, Jr.; district censor, Howard C. Frontz.

Walter Orthner presented a plan for an agreement with the County Poor Board relating to services rendered to the indigent poor; the plan was referred to the medical economics committee for further study and action.

WALTER ORTHNER, *Reporter*.

LEBANON

Jan. 20, 1936

The annual banquet and election of officers was held at the Hotel Weimer. President Walter H. Brubaker was the toastmaster. Theodore B. Appel, of Lancaster, former State Secretary of Health, gave a talk on the present status of the medical care of indigents in the state. He also stressed the importance of co-operating with the State Committee on Maternal Welfare, giving postpartum hemorrhage and puerperal sepsis as the chief causes of maternal mortality.

Norris Kirk gave a lecture, illustrated with motion picture films, of the 103d Medical Regiment at Indian-town Gap Military Reservation.

Richard C. Wenner, Lebanon, was elected president; George E. Flanagan, Myerstown, president-elect; J. DeWitt Kerr, Lebanon, secretary; and C. Ray Bell, Jr., Lebanon, treasurer.

EDWARD L. JONES, *Reporter*.

LEHIGH

Jan. 14, 1936

The meeting was held at the Hotel Americus, Allentown; Robert Schaeffer presided. A banquet followed and Charles R. Fox, Northampton, was inducted as president. Maxwell Lick, Erie, president-elect of the State Medical Society, was the guest speaker; his topic was "Medical Economics."

VAUGHAN SPRENKEL, *Reporter*.

LUZERNE

Jan. 8, 1936

The meeting was held in the Medical Building, Wilkes-Barre; President Vivian P. Edwards, Edwardsville, presided.

Jay W. Boyle, Luzerne, read a paper on "Agranulocytosis—Case Report." He said in part:

The first case reported in America was in 1924 by Beatrice Lovett. The importance of the syndrome depends upon the fact that none of the causes usually recognized as causing the leukopenia are present. The condition is far different from the leukopenia of sepsis of the older writers, or from that which follows intoxication by benzol and arsphenamine, or intensive roentgen-ray irradiation.

The cause of the disease is unknown. It is safe to say that it is not contagious.

The disease occurs as a rule between the fourth and sixth decades and usually in women. The condition often appears after a minor trauma such as dental extractions or minor surgery involving the throat. Amidopyrine or other barbiturates may be a causative factor, but experiments show that administration of the drug does not reproduce the disease.

The onset is usually sudden and accompanied by symptoms suggestive of an infection. Swallowing and masti-

simple classification of heart failures was given. The diagnosis is not always as simple as it sounds on paper. In a case of aortic regurgitation and left heart failure the chief symptom may be dyspnea. Morphia is the best drug in all 3 types. The use of digitalis always must be carefully supervised, so as not to have toxic effects. Dr. Closterman said that in the terminal stage of a condition there may be more than one type in evidence. Dr. Boas stated that body-weight determination for digitalis is incorrect as some persons, especially the nervous ones, require more than the less nervous ones.

MARJORIE E. REED, *Reporter*.

LYCOMING

Jan. 10, 1936

The meeting was held in Medical Hall, with President Herbert P. Haskin presiding. George M. Piersol, of Philadelphia, presented a paper entitled "Coronary Artery Disease." Dr. Piersol said in part:

This discussion will be confined to obstructive phenomena. A better understanding of the coronary circulation and its relationship to myocardial changes has resulted from improved methods of pathologic study. Within the past 3 years at the Abington (Pa.) Hospital, in the pathologic study of hearts, a simple method of visualizing the coarser coronary circulation by mercury injections and stereoscopic roentgenograms was employed. By this method they are enabled to estimate the degree of arteriosclerosis present in the coronary vessels and to discover and locate occlusions that in many instances might otherwise be overlooked. The method has the advantage of great simplicity; it can be carried out with the expenditure of little time, and may be utilized routinely in the necropsy room. It was employed by his associate, John Eiman, in every case in which there was even a remote suspicion of coronary artery involvement.

The method of studying the coronary circulation which has been employed is as follows:

The apparatus required consists of an ordinary laboratory stand with split ring, 200 c.c. leveling bulb, 2 feet of thin pressure tubing, 2 cannulas with stopcocks, 1 adapter to fit the cannulas, 30 cm. rule, curved intestinal needle, 2 hemostats, a shallow tray, and commercial mercury.

The procedure is carried out in the necropsy room before or after separating the heart from the lungs. As much blood is removed from the heart cavities as possible by washing. Cannulas are inserted into the left and right coronary orifices and tied in place by passing a strong ligature on a curved intestinal needle around the vessels close to their origins, hugging the external wall of the aorta. The thickness of the heart when lying on a shallow tray is then measured. The leveling bulb is adjusted so that the level of the mercury is 15 cm. plus one-half the thickness of the heart, above the bottom of the tray. The pressure tubing is connected by an adapter to the cannula inserted in either the right or the left coronary. With the stopcocks of both cannulas open, the mercury is permitted to run into the cannula until droplets appear at the opening of the cannula inserted in the other coronary. Should escape through vessels around the cava or pulmonary veins occur, they must be ligated before the injection is completed. Then turn off the stopcock of the full cannula and maintain mercury pressure for about 30 seconds. Now turn off the stopcock of the cannula through which the mercury was injected, clamp the tubing to leveling

bulb, and disconnect the adapter from the cannula. Raise the heart gently so that the base is down, insert a finger or hemostat through the aortic orifice into the cavity of the left ventricle and jar the heart slightly to facilitate the escape of mercury from this cavity. It may be necessary to refill the coronaries and to repeat the above procedure in some cases. Then stereoscopic roentgenograms are taken. Changes in the coronary vessels can then be observed and localized.

It should be emphasized that this procedure is designed to demonstrate only the coarser coronary circulation. The mercury does not penetrate beyond the smaller arterioles. If it is desired to inject the finer capillary circulation a different method must be employed. In their experience, if the mercury injection technic is carried out carefully, rupture of the arterioles does not occur.

Various materials have been used to inject the coronary vessels. For the most part, these substances have produced changes in the cardiac muscle that have seriously interfered with the subsequent histologic study of this tissue. This difficulty does not arise after the mercury injection. In every instance, when this method was employed, the heart muscle was unaltered by the injection and could be examined microscopically with entire satisfaction.

On the stereoscopic roentgen-ray plates of the hearts that have been injected with mercury, the coronary vessels stand out most satisfactorily. In a heart with a normal coronary circulation, the vessels will be well filled, smooth and regular in outline, and there will be no pinching or angulation where the branches are given off. In such a picture, the importance of the left coronary artery, and especially its anterior descending branch, is clearly shown.

When arteriosclerosis is present, the vessels are not uniformly filled, the lumen is irregular and definite narrowing and pinching can be demonstrated where the vessels branch. The existence of an occlusion, whether it be partial or complete, is readily recognized by the absence of the mercury in the vessels below the obstruction. In their series, they have been able to demonstrate definitely these different changes in the various types and degrees of coronary artery disease encountered.

Coronary disease may be classified as follows:

1. Sclerosis *without* occlusion.
2. Occlusion.
 - a. Occlusion gradual by the sclerotic process.
 - b. Arteriosclerosis plus the formation of a thrombus.
 - c. Embolic occlusion.

Instances of arteriosclerosis of the coronary vessels without occlusions (Group 1) are by no means uncommon and a number of examples have been observed by them at the necropsy table.

Ample blood supply to the heart muscle is essential for its efficient functioning; with gradual reduction of the blood supply, the efficiency of the myocardium will become impaired. This can be readily demonstrated even in cases without occlusion of the coronaries, in cases with marked arteriosclerosis of the vessels. Such hearts may be considerably enlarged, the muscle may be quite firm in consistency, but on closer examination, one finds diffusely disseminated myosclerosis, and extensive replacement of muscle by connective tissue. The more marked the coronary sclerosis, the more marked is the myosclerosis.

In Group 2 the occlusion may be gradually superimposed upon a pre-existing arteriosclerotic process (sub-

group a. Since coronary arteriosclerosis is progressive, many cases develop slow occlusions of the coronary vessels.

This most frequently takes place in the first half of the anterior descending branch of the left coronary artery. In addition to the diffuse, marked or moderate arteriosclerosis, the development of localized large areas of fibrosis with complete replacement of the muscle takes place. If the patient lives long enough, an aneurysm may develop in this area and mural thrombi will be seen adherent to the endocardium. The development of such a fibrous walled aneurysm in the anterior wall of the left ventricle near the apex is very common in arteriosclerotic occlusions of the anterior descending branch of the left coronary. Occlusion of the right coronary by this process does not produce noteworthy changes in the myocardium.

Occasionally, when more than one artery supplying the same area becomes occluded, even if this process seems to be gradual, acute necrosis surrounding the area of fibrosis will develop.

Subgroup b. of Group 2 includes cases with marked coronary sclerosis, which suddenly develop occlusions, due to the deposition of soft thrombi in the narrowed portion of the vessels especially where the intima is roughened. Since these occlusions develop fairly suddenly in vessels which are already markedly damaged the changes in the myocardium are striking, namely, acute necrosis over large areas.

In this group also the necrosis affects most commonly the anterior wall of the left ventricle and the lower portions of the interventricular septum. If localized fibrosis, with or without aneurysmal dilatation, already exists, the zone of necrosis will surround the area of fibrosis.

Here, again, the anterior descending branch of the left coronary plays an outstanding role; its occlusion by a thrombus, if the patient lives for a few days, invariably will lead to extensive necrosis. The frequency with which this artery is involved has earned for it the name of the "artery of sudden death." On the other hand, they have not observed either massive fibrosis or extensive necrosis in the area supplied by the right coronary following the occlusion of that vessel.

Embolic occlusions make up the last group (subgroup c.). These cases are less common. They have encountered but 2 cases.

The prognosis of coronary artery disease, particularly coronary occlusion, is always grave. When the evidences of cardiac failure do not occur at the time of occlusion, the outlook is more favorable than in those whose initial attack is complicated by signs of serious functional cardiac impairment. Although many succumb during the acute stage of occlusion or soon thereafter, extensive cardiac infarction is not incompatible with life and even productive work. Many such instances are common to the experience of every clinician. Conner and Holt, in a survey of 117 cases made in 1930, found 93 per cent in good health at the end of 3 months after the first occlusion and 21 per cent continued in good health after 5 years. They had examples of a 10-year survival and one of 17 years. Recurrences are the rule. The chances of recovery after coronary occlusion depend in large measure on proper treatment, which is a prolonged one, and this requires the co-operation and willingness of the patients to follow out all the guidance of the physician.

Holman, too, Harold L. Foulton emphasized the importance of correct diagnosis in this condition, not only

because of its value in prognosis, but because of the necessity for careful and prolonged care and watchfulness during the ensuing months. A. Rowland Kirch referred to the great number of patients who seek relief for heart trouble when in reality the true diagnosis lies elsewhere.

State Society Secretary Walter F. Donaldson, of Pittsburgh, spoke concerning the physician's obligation "as a neighbor" to inform his friends and patients of their true status should socialized medicine become a universal order. He emphasized that although the work of the national and state societies is vital, still the backbone of the effort must be the thoughts and actions of the individual physicians in their contacts with their immediate friends and patients.

The following officers were elected: President, Galen D. Castlebury; first vice-president, Willbur E. Turner; second vice president, John W. Arbogast; treasurer, LaRue M. Hoffman; secretary, Walter S. Brenholtz; librarian, Wesley F. Kinkle; reporter, Edward Lyon, Jr.; censor, Herbert P. Haskin; trustees, George Klump and James Burrows.

The annual banquet was held at the Lycoming Hotel that evening. The guests included Mrs. Piersol, Donaldson, District Councilor David W. Thomas, of Lock Haven, and the Rev. James Corbett, district chaplain of the CCC camps, who delivered the evening's address.

EDWARD LYON, JR., *Reporter.*

NORTHAMPTON

Jan. 17, 1936

The monthly meeting was held at the Easton Hospital, at 11 a. m.

William R. Stecher was admitted as a transfer from the Delaware County Medical Society.

The Child Health Committee reported that about 650 injections of toxoid have been given by the committee during the past 2 years. Only 15 of the physicians of Bethlehem have consented to administer the immunization to the children on relief. Toxoid is furnished free by the state and may be used for private as well as indigent patients. Vaccine virus is furnished free for indigent patients but not for pay patients.

The following officers were elected: President, William J. Hoppel, Bethlehem; first vice president, Thomas C. Zukel, Jr., Bethlehem; second vice president, George L. deSchweinitz, Bethlehem; secretary, Frederick O. Zillesen, Bethlehem; corresponding secretary, Russell S. Rinker, Bethlehem; reporter, Frederick J. Pearson, Bethlehem; censor, James E. Brackbill, Bangor.

The retiring president, Francis J. Conahan, read his presidential message. He referred to the great value of attendance at county society meetings as a broadening influence in the life of a physician. These gatherings enable members to obtain a truer appreciation of our fellow physicians with whom we are all too often in not too friendly rivalry. Here we can learn that the other fellow has just as keen an appreciation of the problems that we are facing as we have and consequently has a more intelligent approach to their solution. Frankness in admitting this leads to co-operation with the other fellow. Attendance at county society meetings and active participation in the proceedings will remove the tendency to narrowness that too often besets the members of a profession. Attendance at the meetings is still rather small, and is one of the problems that must be solved. *Frederick J. Pearson, Reporter.*

PERRY

Jan. 15, 1936

The society held its annual banquet on Jan. 15 at the Hotel Rhinesmith, New Bloomfield. The officers elected for 1936 were installed. Morris J. Gerber, of Duncannon, is the president. Sixteen attended with their wives. The next place of meeting will be at the residence of Robert R. Stoner, New Bloomfield, March 26, at 9 p. m.

J. EDWARD BOOK, *Reporter*.

PHILADELPHIA

Jan. 8, 1936

SYMPOSIUM ON NEUROPSYCHIATRY

"Mechanisms in Hysteria and Neurasthenia" was presented by Edward A. Strecker. His discussion was confined to a consideration of "conversion hysteria." He does not think that the anxiety hysteria of Freud is a clinical conception since it denotes an emotional reaction which is foreign to the true nature of hysteria. Freud concentrates on the sexual aspects of hysteria and interprets the symptoms as an unconscious wish fulfillment. Psychiatrists who served at the front during the World War saw the so-called shell-shock, in reality a conversion hysteria, and reached an agreement upon certain features of it. Hysteria was determined to be a more or less unconscious effort to escape from an intolerable situation, and just so long as the symptoms existed they made impossible a return to the situation that occasioned them. Clinically, the agreement between the symptoms and the situation was quite convincing. For instance, it was not uncommon to have total hysteric deafness occurring in soldiers who had been subjected to hearing the ceaseless cries of the wounded; blindness resulted after witnessing horrors; loss of smell after being detailed for burial parties; amnesia after frightful experiences. Hysteria was a protective thing and the particular way out of an intolerable situation.

In the hysteria of civil life there is likewise psychologic conflict. It is translated by steps into a series of symptoms designed to protect the individual and remove the recognition of his real difficulties. Neurosis is also an escape—not a total but a partial escape. The route of the escape first is emotional upset, next disturbances traceable to the upset, erroneous conclusions traceable to the source—the patient suggests the disease to himself, and eventually the derangement comes into existence. Although hysteria and neurosis are fundamentally an escape, hysteria appears promptly and dramatically, as in the case of the probation nurse who was ordered to scrub the operating room floor after an operation, and at once lost the use of her arms. Neurosis, on the other hand, appears gradually and after long fatigue. Neuroses occur more frequently than does hysteria in civil life among the more intelligent. Hysteria is crude, primitive, simple, naïve, and child-like. In the neurotic patient, the emotional difficulty or conflict is much nearer the surface of consciousness than in the hysteric patient. With the neurotic, the symptoms are only a partial solution of his problem, while in the hysteric the pathologic solution is complete and he blandly regards his particular disability. The syndromes of hysteria are much more clear-cut and defined than those of neurosis. The hysteric experiences little or no mental reaction, while the neurotic suffers considerable mental anxiety. With these fundamental

points clearly in mind, the essayist proceeded to illustrate his contentions by history charts and clinical records. In conclusion, he stated that hysteria and neurosis are basically the same in their objectives and purpose. They protect the individual and rescue him from an intolerable situation, and they strive to rescue him without loss of approval of his self-ideal or of his fellow men. Temporarily, hysteria succeeds completely; neurosis and the anxiety neurosis, only in part. Both are pathologic.

"The Diagnosis of Organic Neurological Conditions with Special Reference to the Diagnosis and Treatment of Neurosyphilis" was presented by Samuel B. Hadden. He deplored the extent of ignorance regarding neurologic diagnosis on the part of the physicians in general practice. He believes that every physical examination should include a study of the nerve, the motor power, and co-ordination just as it includes auscultation of the heart. A little time spent in the correlation of these findings will enable any physician to diagnose disease of the nervous system. History is important, especially family history, since many disturbances of the nervous system are hereditary or familial.

The nervous system is subject to the same general disease classification as other organs or organ systems of the body, namely, congenital injuries, inflammations (localized or diffused, acute or chronic), trauma, degeneration, and tumors. The symptomatic phenomena produced depend largely upon the location of the lesion. The nerve diseases which deserve special emphasis are chronic, and hence offer diagnostic difficulties. Among the symptoms that afford considerable aid in differentiation are those in respect to the position of the fingers in repose, muscle tone, the rate of blinking of the eyelids, the movements of the tongue, the mouth movements, and the variation in the phenomena that attend or follow the repetition of commonplace local muscle activity. His remarks upon the diagnosis of neurosyphilis were directed towards the awakening of interest in the early recognition of this affection when cure or checking of the progress of the disease is within the range of possibility. The early subjective group of symptoms comprises mental and physical fatigue, restlessness, inability to concentrate, and emotional instability. Interest is lost in the usual pursuits. The early physical signs are disturbances of the pupillary reflex, tendency to misspell, to miss words in writing, mental and physical inco-ordination. In addition to the specific methods of therapy he referred to the nonspecific measures, especially fever therapy and particularly the malaria inoculation. Rest, alone, effected remarkable improvement in many patients. Tryparsamide is likewise valuable.

"Dementia Praecox and Psychoneuroses" was presented by Baldwin L. Keyes. He regards dementia praecox as probably the most important of all the psychoses; 40,000 new cases of this affection arise annually in the United States. About twice as many dementia praecox cases arise as do new cases of tuberculosis. The characteristic feature of this condition is first evidenced by a split between the emotions and the thought content. The thought does not react in the emotions. The onset occurs usually in adolescence or the early twenties. There is decided maladjustment to the situation surrounding the patient and the end-state is deterioration, emotional and intellectual.

In order that a patient may develop dementia praecox, it is almost a requirement that the patient have a suitable soil for the illness, a schizophrenic constitution and a shut-in type of personality. If there exists this shut-in personality, and if there is added to the case a direct

or organic illness, with a further addition of faulty habit development and lack of self-discipline or an incomplete adolescent preparedness, and on top of this further added mental stress and an acute physical illness, the patient develops a maladjustment and an inability to meet a situation, hence a flight from reality which we call dementia praecox. A small percentage of those diagnosed early make recovery, but they are sensitized to a recurrence of the illness. About 80 per cent of these cases are chronic and ultimately develop deterioration. He divided the condition into 4 types—hyperphrenic, catatonic, paranoid, and simple—and described each. The pathology is indefinite. The prognosis depends upon the constitution of the patient, the presence of focal infection, and the suddenness of onset. The emotional manifestations also influence the prognosis. As to treatment, psychoanalysis was mentioned only to be condemned. The re-establishment of self-confidence and a gradual renewal of education were stressed as essential to the treatment as well as hospitalization. The physical condition likewise must be brought to normal. The consideration of neuroses embraced a discussion of functional nervous exhaustion. A poor nervous background was assigned as a factor of importance in their production.

In the prevention of both dementia praecox and neuroses he emphasized the fact that the management of the adolescent is probably the most important factor. Training in personality, in emancipation of the child, in self-confidence, preparation for the future, and preparation to meet adversities that may arise are essentials.

"Toxic Psychiatric Reactions and the Mental Symptoms Encountered in Brain Tumors" was presented by George Wilson. He gave a very elaborate study on the statistics of insanity and showed the high percentage of psychiatric cases traceable to cerebral syphilis. He referred to the high percentage of psychotic cases that escape diagnosis and ventured the thought that many of these were of a toxic character. By means of slides he showed an analysis of 100 cases admitted to the Philadelphia General Hospital which were decidedly toxic in origin. The puerperal cases headed the list, with influenza next in order. Epidemic influenza seems to have a tendency to involve the nervous system. Pulmonary tuberculosis shows a high percentage of cases. A large proportion of dementia praecox cases die of tuberculosis. In referring to his experience in the Veterans' Bureau he remarked that alcohol and influenza were factors of great importance in many of the cases diagnosed as dementia praecox. Considerable emphasis was laid upon those cases of toxic psychosis that occur in the alcoholics. Pernicious anemia, cardiorenal disease, impacted feces, focal joint infection, hypoglycemia, pancreatic tumor, and other less common conditions were in turn shown to be productive of toxic psychosis at times. Barbitol preparations are at times responsible, especially when taken in large doses or too frequently. Brain tumors are also accompanied by mental symptoms. The possibility must always be eliminated in the study of cases with mental manifestations.

SAMUEL HORTON BROWN, *Reporter.*

TIOGA

Jan. 17, 1936

The meeting was held in the Penn Wells Hotel in Wellsboro, where dinner was served. President Harry Howland presided.

Harry B. Knapp, of Wellsboro, read a paper on "The Medical Profession and the Present Changing Order." Dr. Knapp said in part: There is a threat that some change will take place that will alter the practice of medicine. There is agitation among the public to use their political influence to regiment the American medical profession under a governmental bureaucracy.

One of the ways that has been suggested to spread the cost of medical care is to have some form of voluntary health insurance. Voluntary insurance in all countries where it has been tried has led to compulsory insurance because it was unable to retain medical service of a satisfactory quality, low costs, and financial stability in the face of political pressure and unpredictable demands placed on it.

Strange as it seems, it is not the people concerned or in need of cheaper medical care that are making the demands, but the propaganda is coming mostly from endowed foundations having socialistic and communistic tendencies. In order to carry this proposition to the public they have induced the National Forensic League to conduct debates in high schools, colleges, and universities in 40 states, on the question, "*Resolved*, That the several states should enact legislation providing for a system of complete medical service to all citizens at public expense."

The methods of medical care in Russia—the only country in the world where anything resembling complete state medicine exists—have failed to provide the people with a quality of medical service even remotely approaching that in the United States. The panel system of Germany and Great Britain has a type of medical service that would meet with protest and dissatisfaction in the homes of the American workmen.

Social medicine would add to the total cost of sickness because of the added cost of enforcement through increased bureaucratic personnel.

To decrease the cost of medical care the quack and the proprietary medicine menace should be eliminated first. The public, which insists on supporting these dishonest activities to its own detriment, does not deserve great sympathy but education.

In the handling of any commodity, and medicine may be considered as such, 3 possible agents are involved—the consumer, the distributor, and the producer. The product is that which the consumer demands. Such demand can be stimulated by education, of which advertising is a variety, but in medicine we must be certain that such education is the awakening of the consumer to a real need and not to a fictitious or harmful one. Advertising by the producer in order to create a demand for his goods or services is rarely unprejudiced and therefore has been correctly rejected by the medical profession. The demands of the consumer must be intelligent and influenced by sound general education in matters of health and disease.

In former days the family practitioner was sufficient for providing medical care, but today the situation has so changed that the misguided consumer feels that he must procure his commodities from producers, each of whom knows infinitely much about his particular field; only too frequently he is correspondingly ignorant of those things outside of it. At least 80 per cent of the illnesses that occur and practically all of the preventative measures employed are quite within the knowledge and skill of a competent and properly trained general practitioner.

At present the opinion of the public is that the expenditure for health should represent about 4 per cent of an individual's income. Probably this is not an adequate

allocation, but the remedy is the education of the individual to the importance of medical care, not the forcing of it by compulsion, nor the bribing of the consumer by cheapening it below the level at which the medical producer can turn out a product of proper quality.

The family doctor then, owing to his wide geographical distribution, is in all probability meeting the demands of civilization in caring for the great majority of illnesses as well as or better than would any figmentary figure of social planning ever yet devised. His effectiveness in his field of activity of course depends upon character, knowledge, and skill rather than upon material resources or organization. The problem is to attract such men into the profession of medicine and then properly educate them in matters which are neither new or unappreciated.

Socialism on the face of it seems like a nice theory. But to socialize a single profession while the rest of the country remains idealistic, to reduce to a common standard a large group while the rest of the country accumulates wealth, seems illogical.

The American profession aims to furnish the best kind of medical service practically available for every man, woman, and child regardless of financial status. Were it possible to attain this end by a leveling process of professional standing, initiative, interest, and compensation through health insurance, the medical profession would be the first to propose this method. Critical examination of the results of health insurance as it is working in various foreign countries should furnish sufficient basis for denying its establishment in the United States.

The time is at hand when the local medical societies must assume leadership in their district affairs of public and private health problems. The medical society has long prided itself on its multiplicity of meetings for mutual scientific enlightenment and advancement. The public is mightily interested in medicine and the health problems of today. It is high time that each county society in Pennsylvania should enter into sympathetic and cordial relations with the public in a larger manner than it has in the past. If each member of the county society will hold himself or herself responsible for informing every man and woman of these facts as relate to the present issue between the medical profession and the professional propagandists, our great work will not be interfered with. ROBERT D. LEONARD, *Reporter*.

WARREN

Jan. 20, 1936

The annual meeting was held at the Conewango Club, Warren, with 30 in attendance.

All members are paid up and an active interest is shown in the society's meetings as evinced by an average attendance of 80 per cent. The membership includes every ethical practitioner in the county.

Twenty-five members have enrolled in a graduate course which will be held at the State Hospital.

The retiring president, William M. Cashman, gave a comprehensive survey of the newer studies with endocrines, with especial reference to those resembling the anterior pituitary body extracts. He referred to the growth hormones, the gonadotropic substances which stimulate the ovarian and uterine mucosa, the lactogenic hormones which act on the mammary gland and stimulate the production of milk, and those which like insulin affect fat and carbohydrate metabolism and are more or

less related to the adrenals. He described the action of estrogenic substances found in the blood stream and urine of pregnant women. Reference was made to the practical uses of some of these hormones: (1) In the diagnosis of ectopic and early uterine pregnancy as utilized in the Aschheim-Zondek and Friedman tests; (2) in the treatment of amenorrhea, of sterility in the male, and dysmenorrhea; (3) the stimulation of milk secretion where the flow is insufficient by the use of the hormones, progesterin and prolactin.

In undescended testicle some experiments have been reported with Antuitrin-S (obtained from the urine of pregnant women) and this same pituitary-like substance has been used with some success in habitual abortion.

Hormones derived from the ovarian follicle, called theelin by Doisy, have been of use in postoperative and the natural menopause, and a more recent use is the stimulation of the vaginal mucosa to bring about a cure in vaginitis in young girls.

The following officers were elected: President, James T. Valone, Warren; first vice-president, Charles H. VerMilyea, Russell; second vice-president, John C. Urbaitis, Warren; secretary and treasurer, A. Follmer Yerg, Warren; censors, Jacob F. Crane, North Warren, Christian J. Frantz, Warren, and Ralph Knapp, Youngsville.

Dr. Hamblen C. Eaton, who has served the society as secretary and treasurer for 7 years, resigned owing to the acceptance of the position of clinical director at Polk State School, Polk, Pa.

MICHAEL V. BALL, *Reporter*.

WESTMORELAND

Jan. 9, 1936

The regular monthly meeting was held in Greensburg. The new president, William H. Robinson, was installed and spoke on "The Importance of the County Medical Society." He particularly urged the members to become more active politically, and recalled that 12 years ago the people of Westmoreland County voted to build a tuberculosis hospital, but due to the weak organization of the county society politically, the commissioners never carried out the project. He reviewed the recent radio debate on "State Medicine" and pointed out the fallacies of the affirmative side.

The new secretary, Frank J. Pyle, addressed the society and mentioned the new Mail Package Library now established in the State Society headquarters at Harrisburg for the distribution of various medical literature to those requesting it. He also stated that the annual clinic would be held at the Latrobe Hospital, Thomas St. Clair being appointed chairman in charge of all arrangements.

Due to inclement weather, the principal speakers from New Kensington were unable to be present.

The various members present were called on to express their views in regard to the proposed tuberculosis hospital. All agreed that there is a definite need for it and that every effort should be made to induce the county commissioners to build this hospital as soon as possible. SPURGEON S. DEVAUX, *Reporter*.

WYOMING

Jan. 8, 1936

The meeting of the society and the auxiliary was preceded by a luncheon.

The resignation of William W. Lazarus as chairman of the Emergency Child Health Committee was accepted. President Decker appointed Lorne T. MacDougal to take Dr. Lazarus's place.

The men in our several large towns were instructed to get in touch with the principals of their several

schools relative to supplying material for debates on socialized medicine.

A motion picture, "Novocain Anesthesia in Obstetrics," was shown after which a discussion was held of the methods used.

ARTHUR B. DAVENPORT, *Secretary*.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

As a result of the visits made so far to the auxiliaries, your president has gained a lasting impression that each separate group presents a different picture or personality, as evidenced by the scope and spirit of the individual programs. The character of these programs is shaped by the several needs as reflected by the community interests and by the obligation to work out problems presented to them by their respective county medical societies. Medical benevolence has a large part of their attention, health institutes are either planned or have already been consummated in several counties, *Hygeia* is being placed in rural schools and libraries and subscription campaigns are under way. Hospital work, welfare work, students' assistance funds, and social events are all claiming their place in the winter agenda.

Many find the need of social contact as a method of leading up to a more closely woven auxiliary fabric and the best approach to auxiliary and community work. Basically, however, the methods and aims are the same—to aid wherever and whenever possible the county society which they serve.

The midyear board meeting held in Harrisburg was gratifying both as to attendance and with regard to prompt and efficient handling of the work. Eighteen officers and chairmen attended. Those who were snowbound sent telegrams of regret. This is heartening to a president and conveys to a loyal membership the sense of duty that your chosen leaders manifest in their work.

Mrs. David W. Thomas, chairman of district councilors, reported the results of the first 4 months just to inspire us to greater efforts and to lay a basis for greater achievements in the remaining months.

The president has visited Chester and Schuyl-

kill counties recently. At the former place the auxiliary gave a dinner to the members of the medical society of the county, an annual affair, which has proven a very friendly gesture and sets a brisk pace for the medical men of the county. At Pottsville, in Schuylkill County, we attended the first annual luncheon of this group. This very young auxiliary has all the enthusiasm of youth and is contributing largely towards rounding out its share of the year's program as suggested by the State Auxiliary.

NOTE: The annual meeting of the Woman's Auxiliary to the American Medical Association will be held in Kansas City, May 11 to 15. If you contemplate attending this session, will you kindly notify your president.

The twelfth annual meeting of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania will be held in Pittsburgh the first week in October. Mrs. Herbert E. Woelfel is the chairman. Headquarters will be at the William Penn Hotel, where registration, meetings, and the several functions will be held. Pittsburgh is, as usual, holding out her hospitable hand to you. Do plan to attend and make your reservations early.

This letter goes out as we leave for the city of Chester to attend an evening function of the Delaware County Auxiliary. With each visit we are encouraged to believe that Pennsylvania has truly found the rhythm in which auxiliary work is best done, never forgetting that we are traveling the pathway made by former administrations. Because of the spirit of her women Pennsylvania leads in membership.

MRS. W. BURRILL ODENATT.

IDEALS

Ideals are like stars; you will not succeed in touching them with your hands, but like the

seafaring man on the desert of waters, you choose them as your guides, and following them, you reach your destiny.

CARL SCHURTZ,
American Medicine.

(From the January issue of *Dauphin County Medical Academician*.)

A LETTER OF APPRECIATION FROM YOUR PUBLICITY CHAIRMAN

We are happy to say that the several appeals made for news items have brought prompt and abundant response so far this year.

The following counties have had reports published in the JOURNAL: Allegheny, 5; Berks, 1; Blair, 1; Bucks, 1; Butler, 1; Cambria, 1; Center, 1; Chester, 1; Delaware, 5; Dauphin, 2; Elk, 1; Erie, 2; Fayette, 1; Franklin, 1; Indiana, 3; Lackawanna, 3; Luzerne, 3; Mercer, 2; Montgomery, 4; Northampton, 2; Lycoming, 1; Philadelphia, 2; Schuylkill, 3; Tioga, 1; Warren, 1; Westmoreland, 2; and York, 1.

We wish to call particular attention to the fact that 2 of the auxiliaries have sent a report each month, viz., Allegheny and Delaware.

We have always had the material by the tenth of each month and so far have not had to make any frantic last-minute appeals for news.

We had a splendid article sent to us by our *Hygeia* chairman, Mrs. Cecil F. Freed, which was mentioned in the *Quarterly News Letter*.

We can all be proud of Pennsylvania's activities as printed in this same national *Quarterly*.

Our president, Mrs. W. Burrill Odenatt, has sent out many helpful and inspiring messages through the JOURNAL, and we hope each and every one reads these articles.

Editor Frank C. Hammond has been very kind to us and deletes as little as possible, often giving us more than our allotted 2 pages, and he requests only that we do not ask for names to be printed when mentioning musical entertainments.

We hope to be able to report many more 100 per cent counties at our annual meeting in October.

JESSIE W. (MRS. GEORGE C.) YEAGER.

COUNTY AUXILIARY REPORTS

Allegheny.—The tenth anniversary of the forming of the auxiliary was celebrated on Jan. 28, at the William Penn Hotel, Pittsburgh. After a short business meeting Dr. Alexander H. Colwell, president of the State Medical Society, was presented. He wished the auxiliary many happy years of service and hoped that the doctors' wives would fight against making medical science more of a business than an art. There was instrumental music.

The speaker of the afternoon was Dr. Solomon B. Freehof, who reviewed the following 4 best books of 1935.

The Seven Pillars of Wisdom, by Col. Lawrence of Arabia, reveals why, after the war, he changed his name to Shaw and lived unknown. He knew he had tricked the desert people by promising them an empire. They looked upon him as a king, but he knew he was just the pawn of war's greed.

Paths of Glory, by Humphrey Cobb, is the pitiful story of the soldiers in the French army who were needlessly sacrificed only as cogs in the great machine of war.

It Can't Happen Here, by Sinclair Lewis, deals with another fear of the present-day world—fascism. He pictures fascism reigning in the United States but being overthrown by the innate love of liberty in the American citizen.

Man the Unknown, by Dr. Alexis Carrell. The author accuses science of having failed to understand the human being. The science of tomorrow must concentrate on human values and build a world in which man can be happy.

There was a social hour, at which time Mrs. Walter F. Donaldson called each past president in turn and detailed the outstanding work that was accomplished in her year; a corsage was presented to each one.

During the social hour the members were interested in looking over the unusual medical memorial exhibit arranged by Mrs. David B. Ludwig.

Blair.—A luncheon meeting was held in October, 1935, at the Hotel Penn Alto, Altoona, with the retiring president, Mrs. Wm. R. Brewer, presiding. Since the fiscal year had been changed to correspond with that of the State Society, the following officers were elected: Mrs. David Kaufman, president; Mrs. Arthur S. Brumbaugh, vice-president; Mrs. E. W. Stitzel, secretary; Miss Helen Glover, treasurer. Reports were given by delegates who attended the State Convention at Harrisburg.

At the meeting held Jan. 28, plans were discussed for 1936, including health programs, *Hygeia* subscription drive, and social activities for funds toward the annual Benevolence Fund contribution. Dr. Augustus S. Kech, of Altoona, trustee and counselor of the State Medical Society, gave an address on "Health Insurance."

Chester.—The regular bimonthly meeting of the auxiliary was held on Jan. 21 at the Chester County Hospital. About 20 members were present, with the president, Mrs. Howard Mellor, in the chair. Mrs. Henry Pleasants, Jr., gave a short review of Dr. Robert T. Morris' *Fifty Years a Surgeon*. Mrs. Howard Mellor gave the high lights of Hans Zinsser's book, *Rats, Lice, and History*. The Campus Trio from the State Teachers College entertained.

Clinton.—The auxiliary members were guests of the Clinton County Medical Society at their annual banquet at the Fallon House, Jan. 23. Preceding the banquet the auxiliary held their meeting with the president, Mrs. Edwin C. Blackburn, presiding. Owing to a change in the fiscal year, auxiliary officers will be elected in May. Five members of the Lock Haven Hospital staff of nurses were guests. The speaker was Lieut. J. J. Corbett, who detailed socialized medicine as he has observed it in different parts of the world—Russia, China, and elsewhere. Several card parties were planned for the Medical Benevolence Fund.

Dauphin.—At the January meeting of the auxiliary, Miss Eva Peck, assistant director of WPA projects in Pennsylvania, detailed "Woman's Work," and what they are doing for the family on relief. A musical program followed, after which tea was served.

The fiscal year of the auxiliary now extends from May to May as requested by the State Society.

Delaware.—The auxiliary members were guests of the Delaware County Medical Society at their annual

dinner which was held at the Chester Club, Jan. 9. At the previous business session 3 new members were presented to the auxiliary.

On Jan. 15, a successful card party was held at the home of Mrs. Richard Owen, at which time \$25 was raised for the Medical Benevolence Fund.

On Jan. 17, Mrs. Owen entertained the Executive Board at a luncheon celebrating the birthday of 2 members of the board. Gifts were presented to each.

Indiana.—The meeting of the auxiliary was held Jan. 9, at the home of the president, Mrs. C. Paul Reed. It was in the nature of a "pot-luck" dinner for prospective auxiliary members. The following new members were announced: Mrs. Ralph M. Lytle, Saltsburg; Mrs. Martha Stephens, Indiana; Mrs. Minnie Miller, Indiana. Mrs. Fred S. Shaulis, chairman of the Archives Committee, reported 171 deceased physicians in Indiana County, and asked the co-operation of each member in helping to collect data and articles for the March meeting.

Lehigh.—The auxiliary met at the Woman's Club, Allentown, Jan. 14. The meeting was in charge of the retiring president, Mrs. S. Mann Uhler. The new president, Mrs. J. Treichler Butz, was installed. Mrs. Butz named her officers to serve for the year 1936: Mrs. Joseph D. Rutherford, vice-president; Mrs. Victor J. Gangewere, treasurer; Mrs. Luther H. Kline, recording secretary; Mrs. F. John Di Leo, financial secretary.

Montgomery.—The auxiliary held its regular meeting at the Plymouth Country Club, Jan. 8. The public was invited to hear the guest speaker of the day, Dr. Ezra A. Whitney of the Elwyn Training School in Media; his subject was "The Economics of the Prevention of Mental Deficiency." Officers were elected as follows: Mrs. Joseph M. Ellenberger, president; Mrs. John C. Simpson, first vice-president; Mrs. John D. Perkins, second vice-president; Mrs. John G. Wilson, secretary; Mrs. Donald M. Headings, treasurer; Mrs. J. Lawrence Eisenberg and Mrs. Harry C. Podall, directors.

York.—The meeting of the auxiliary was held in the Professional Building, York, Jan. 9. Mrs. Pius A. Noll, the president, presided. Mrs. William H. Treible was appointed chairman of the Membership Committee; Mrs. T. A. Monk was named to head the Entertainment Committee. Dr. Louis S. Weaver, of York, gave an address on "Cancer and Tumor Clinics in Hospitals." Refreshments were served.

Medical News

Births

TO DR. AND MRS. JOHN J. CONROY, of York, a daughter, Jan. 18.

TO DR. AND MRS. CHARLES K. TREDENNICK, of Johnstown, a son, Dec. 26.

TO DR. AND MRS. HEDLEY E. RUTLAND, of West York, a daughter, Jan. 11.

TO DR. AND MRS. FREDERIC B. DAVIES, of Scranton, a girl, Nancy Elizabeth, on Jan. 11.

Marriages

MISS LOUISE CRIST to Dr. Leo F. Scanlan, both of Philadelphia, Nov. 27, 1935.

MISS ANN LOUISE KEARNEY, of Shamokin, to Dr. Frank H. Cantlin, of Philadelphia, Nov. 30, 1935.

Deaths

MABEL M. ALEXANDER, wife of Dr. I. Hope Alexander, Pittsburgh, Jan. 16.

LOUIS F. ANKRIM, Pittsburgh; College of Physicians and Surgeons, Baltimore, 1886; died Jan. 25. He was a member of his county and State medical societies and a Fellow of the A. M. A.

IDA E. BLACKBURN, Greensburg; Woman's Medical College of Pennsylvania, 1895; aged 73; died Feb. 21. Dr. Blackburn was a member of the obstetrical staff of the Westmoreland Hospital. At one time she had been principal of a Greensburg school for 8 years.

JOHN W. BOWMAN, Lemoyne (Cumberland Co.); Jefferson Medical College, 1877; aged 89; died Feb. 15. Dr. Bowman had been active in the practice of medicine until he suffered a stroke of paralysis in 1934. He was medical examiner for the Cumberland Valley Railroad Company a number of years and was a member of his county and State medical societies and the A. M. A. After serving 4 terms as school director in his home town, he was elected to the Legislature from Cumberland County in 1908 and re-elected 2 years later. He was one of the founders of the old Cumberland Valley Bank of Lemoyne and its first and only vice-president from 1905 until 1911, when it was absorbed by the present Lemoyne Trust Company, of which he served actively as director and vice-president until his health prevented. Besides his widow, by a second marriage, he leaves 2 sons.

DONALD WRIGHT BROADBENT, Philadelphia; Temple University School of Medicine, 1925; aged 39; died Jan. 24. Dr. Broadbent had an operation at the Northeastern Hospital for appendicitis and had returned home but a few hours when he suddenly died. He was associated on the staffs of the Germantown, Episcopal, and Northeastern Hospitals. He is survived by his wife and 2 children.

DON DICKINSON BROOKS, Connellsville; Maryland Medical College, Baltimore, Md., 1910; aged 49; died Dec. 25.

RAYMOND E. BUTZ, York; Medico-Chirurgical College of Philadelphia, 1898; aged 71; died Jan. 22, of chronic heart disease. Dr. Butz was a member of his county and State medical societies and a Fellow of the A. M. A.

WILLIAM CANNON CAHALL, Philadelphia; Jefferson Medical College, 1879; aged 79; died at Allenwood, Pa., Jan. 24. Dr. Cahall retired from practice sometime ago. He is survived by his son, Walter L. Cahall, M.D., of Philadelphia.

WILSON B. CATHCART, Pittsburgh; University of Pittsburgh School of Medicine, 1888; died in Washington, Pa., Jan. 10. He was a member of his county and State medical societies and the A. M. A.

JAMES M. CORNELY, Madera; Jefferson Medical College, 1907; aged 58; died suddenly from an acute heart attack, Feb. 5, while attending a patient after a long walk through deep snow. Dr. Cornely was a member of his county and State medical societies and the A. M. A.

CHARLES RAYMOND DWYER, Broomall; Jefferson Medical College, 1926; aged 35; died Nov. 16, 1935, in the Delaware County Hospital, Drexel Hill, of Hodgkin's disease.

HOWARD K. EAMAN, Bradford; Maryland Medical College, Baltimore, 1910; aged 50; died suddenly, Jan. 22, of heart disease. Dr. Eaman was a member of his county and State medical societies and a Fellow of the A. M. A.

HOWARD L. FARQUHAR, Pittsburgh; University of Pennsylvania School of Medicine, 1916; aged 47; died Jan. 31. He was a member of his county and State medical societies and a Fellow of the A. M. A., also of the American College of Surgeons.

HARRY MOORE FELTON, Pittsburgh; University of Maryland School of Medicine, 1905; aged 54; died Jan. 23. He was a member of his county and State medical societies and the A. M. A.

DANIEL WADSWORTH FRYE, Pittsburgh; University of Pittsburgh School of Medicine, 1897; aged 66; died Feb. 9. Dr. Frye was born in Latrobe, Pa. He devoted his practice to ophthalmology. He was an affiliate member of his county and State medical societies and the A. M. A.

DAVID BRODERICK HANNA, Stoneboro (Mercer Co.); Jefferson Medical College, 1884; aged 75; died Feb. 6. He was not in active practice.

CHARLES M. HEBERTON, Denver, Col.; Medico-Chirurgical College of Philadelphia, 1897; died Feb. 8 from pneumonia. Dr. Heberton practiced in Philadelphia for several years before moving to Colorado.

SMITH A. HOGE, Rice's Landing; College of Medicine and Surgery, Chicago, 1901; aged 67; died Jan. 28. Dr. Hoge was a member of his county and State medical societies and the A. M. A.

WILLIAM HENRY HOPWOOD, Smock (Fayette Co.); Jefferson Medical College, 1877; aged 83; died recently. Dr. Hopwood, who was retired, was a member of his county and State medical societies and the A. M. A.

MICHAEL E. KAPINYA, Pittsburgh; University of Budapest, 1920; aged 43; died Jan. 26. He was a member of his county and State medical societies and a Fellow of the A. M. A.

SAMUEL J. J. KELLY, Philadelphia; Medico-Chirurgical College of Philadelphia, 1899; aged 61; died Jan. 18. He was graduated from LaSalle College and served his internship at St. Mary's Hospital, Philadelphia. For 11 years he was medical inspector for the Board of Health in the parochial schools. Dr. Kelly is survived by his wife and a son.

MORGAN W. KNERR, Coplay; Bellevue Hospital Medical College, New York, 1891; aged 71; died Jan. 13. Dr. Knerr was born at Chapmans on Feb. 19, 1864. He attended public schools in Upper Macungie Township, continuing his studies at Keystone State Normal School, Kutztown, following graduation from which he taught school for 7 years. Upon graduation in medicine he began practice in Breinigsville, Pa., and in 1893 moved to Coplay. He served as health physician of Coplay for many years. He was a member of the Lehigh Valley Medical Association. Dr. Knerr is survived by 2 daughters, a sister, and 2 brothers, one of whom is Dr. Edwin J. Knerr, Wyoming, R. I.

FREDERICK CHARLES KRESS, Johnstown; Jefferson Medical College, 1897; aged 64; died Jan. 25, two weeks after an emergency operation for a ruptured appendix and peritonitis. Before taking up the study of medicine, Dr. Kress spent 2 years at the United States Naval Academy, Annapolis, Md. He was a member of the staff of the Conemaugh Valley Memorial Hospital from 1913 to 1923 and a chief on the surgical staff of the Mercy Hospital from 1913 until his death. He was a member of his county and State medical societies and a Fellow of the American Medical Association and the American College of Surgeons. During the World War he was a member of Draft Board No. 1 in Johnstown. His widow and 4 daughters survive.

FRANK E. LUKE, Chatham (Chester Co.); Trinity Medical College of Toronto, Canada, 1886; aged 72; died Jan. 7. Dr. Luke was born at Decatur, Ill. He

was a member of the Allegheny County Medical Society, the State Society, and the A. M. A.

FOWLER LYONS, Turbotville; Jefferson Medical College, 1891; aged 75; died Feb. 8. Dr. Lyons was a member of his county and State medical societies and the A. M. A.

JOHN LEAMING MCBRIDE, Pittsburgh; University of Pennsylvania School of Medicine, 1906; aged 58; died Feb. 5. Dr. McBride devoted his time exclusively to anesthesia. He was a member of his county and State medical societies, a Fellow of the A. M. A., and a Fellow of the American College of Surgeons.

THOMAS E. MCCONNELL, New Kensington; University of Pittsburgh School of Medicine, 1891; aged 67; died Jan. 26. He was a member of his county and State medical societies and the A. M. A.

GEORGE ALEXANDER MCCracken, Woodville (Allegheny Co.); University of Pittsburgh School of Medicine, 1905; aged 62; died in Pittsburgh, Jan. 24. He was a member of his county and State medical societies and the A. M. A.

FRANCIS JOSEPH MEEK, Shamokin; Jefferson Medical College, 1892; aged 68; died Jan. 24. Dr. Meek was killed as a result of his automobile getting out of control when he struck a snow bank on a Shamokin street. He was hurled against the steering wheel, receiving injuries to his chest which caused his death before medical aid could be obtained. Dr. Meek was a director of the Shamokin Banking and Trust Company and was a member of his county and State medical societies and the A. M. A.

THOMAS RICHARD MORGAN, Windgap (Northampton Co.); University of Oklahoma School of Medicine, Oklahoma City, 1928; aged 37; died recently in the Easton (Pa.) Hospital of spinal meningitis. He was a member of his county and State medical societies and the A. M. A.

HENRY ECKERT MORRET, Wernersville; Jefferson Medical College, 1903; aged 54; died Nov. 21, 1935, of heart disease.

ROBERT DAVIES RHEIN, Bala; University of Pennsylvania School of Medicine, 1901; aged 69; died in the Graduate Hospital, Philadelphia, Feb. 1, following an operation. Dr. Rhein practiced in Philadelphia for a number of years and served on the staffs of the Howard Hospital, American Stomach Hospital, and the Philadelphia General Hospital, and for some time was physician to the Home for Incurables.

He was an affiliate member of his county medical society and State Medical Society. He was also a Fellow of the College of Physicians of Philadelphia. He is survived by 2 sisters.

GURNEY MONROE SCHMINKY, Harrisburg; Jefferson Medical College, 1884; aged 72; died Nov. 8, 1935, in Shamokin, of acute dilatation of the heart.

CLAYTON S. SCHWENK, Fort Washington; Hahnemann Medical College of Philadelphia, 1882; aged 76; died Dec. 6, 1935, in the Abington (Pa.) Hospital, as the result of a fall in which a pair of surgeon's scissors pierced his lung.

ISAAC STARR, father of Dr. Isaac Starr, Jr., of Philadelphia, died Feb. 10, at sea.

HENRY MILLER SULTZBACH, Lancaster; Medico-Chirurgical College of Philadelphia, 1894; aged 67; died Feb. 4. Dr. Sultzbach was born in Philadelphia, a son of the late Harry and Mary L. Sultzbach. When he was age 1, his parents moved to Marietta, where he spent his boyhood. He was graduated from Marietta High School; Philadelphia School of Anatomy, 1893; and the Philadelphia College of Pharmacy, 1894. He was a member of his county and State medical societies and

the A. M. A. He is survived by his wife, 2 daughters, and 4 sons.

Miscellaneous

DR. LEROY E. CHAPMAN, of Warren, has resumed practice after a few weeks' sojourn in Florida.

AT THE NINETIETH ANNUAL BANQUET of the Northern Medical Association of Philadelphia to be held Mar. 16, Dr. David Riesman will be the guest of honor.

DR. HENRY D. REED, of Pottstown, after a service of 30 years, has resigned from the staff of the Pottstown Hospital to become an emeritus member.

DR. IRA A. DARLING, former superintendent of the State Hospital at Warren, has located in Warren and will confine himself to the practice of mental and nervous diseases.

DR. ROBERT C. BASTIAN, of Williamsport, recently returned from Tulane University, New Orleans, where he completed a course of 18 months in ophthalmology and otolaryngology.

DR. J. GIBSON LOGUE, of Williamsport, has been appointed an abstract editor for the *American Journal of Diseases of Children*, a publication of the American Medical Association.

THE ANNUAL DINNER of the Philadelphia Allergy Society was held Feb. 26. The guest speaker was Dr. Robert A. Cooke, of New York, who gave an address on his early work in the field of allergy.

DR. HARRY LOWENBURG, SR., of Philadelphia, has been appointed pediatricist to the Philadelphia General Hospital by Dr. William C. Hunsicker, Director of Public Health.

DR. CHARLES W. BURR, of Philadelphia, was recently elected president of the General Alumni Society of the University of Pennsylvania to fill the vacancy caused by the death of Dr. Barton Cooke Hirst.

DR. JAMES S. HAMMERS, former superintendent of the Pittsburgh City Home and Hospital, Mayview, Pa., has been appointed medical director of the Lancaster County Hospital for Insane, Lancaster.

TUESDAY, MAY 26, has been designated as California Medical Association Day at the 1936 California Pacific International Exposition, San Diego, which opened Feb. 12 and will continue to Sept. 9.

DR. HAMLEN C. EATON has resigned as clinical director at the Warren State Hospital, Warren, to accept a similar appointment at the Polk State School, Polk, Pa. Dr. Eaton was secretary of the Warren County Medical Society for 7 years.

JOHNS HOPKINS HOSPITAL TO RECEIVE HUGE BEQUEST.—The Johns Hopkins Hospital, Baltimore, Md., is to be the recipient of \$900,000, provided for in the will of Albert Marburg, retired tobacco merchant of that city, which may be spent as the hospital's trustees desire.

DR. WILLIAM H. WALSH, formerly of Philadelphia, has been appointed by the United States Government as a special consultant to study the hospital needs in connection with the Institute of Tropical Medicine in San Juan, Puerto Rico.

THE WILLIAM POTTER MEMORIAL LECTURE of the Jefferson Medical College was delivered Feb. 7 by Dean Lewis, M.D., professor of surgery, Johns Hopkins University School of Medicine. The address was "Epochs in the Development of Surgery."

THE ANNUAL R. W. STEWART MEMORIAL LECTURE of the Pittsburgh Academy of Medicine was given on Feb. 11, in the Academy Building, by Dr. Fred W. Rankin, of Lexington, Ky., formerly of the Mayo Clinic. The title of Dr. Rankin's address was "The Evolution of Surgery of the Large Bowel and Rectum."

DR. HUGH S. CUMMING, surgeon general of the United States Public Health Service, retired Feb. 1. Dr. Cumming was appointed surgeon general by President Wilson and served a fourth term. He joined the Public Health Service in 1894 as assistant surgeon. Dr. Cumming's administration is credited with achievements and accomplishments.

THE B. A. THOMAS ANNUAL ORATION of the Philadelphia Urological Society was delivered by Dr. Clyde Leroy Denning, clinical professor of urology, Yale University School of Medicine, New Haven, Conn., on Jan. 27. His subject was "The Gonadotropic Factor as an Aid to the Surgical Treatment of Undescended Testicle."

DR. EDITH MACBRIDE-DENTER, Secretary of Health of the State of Pennsylvania, addressed the Section on Public Health, Preventive and Industrial Medicine, of the College of Physicians of Philadelphia on Jan. 31, in Mitchell Hall. Her subject was "Preventive Medicine and Public Health—A Résumé and an Inquiry."

AT THE MEETING of the Philadelphia Roentgen Ray Society held Feb. 6, Dr. U. V. Portmann, Cleveland Clinic, Cleveland, O. (by invitation), read a paper on "The Effects of Postoperative Prophylactic Roentgen Therapy in the Treatment of Carcinoma of the Breast as Illustrated by Two Similar Series of Cases—One with and One without Treatment."

ON JAN. 29 THE University of Pennsylvania School of Medicine was awarded the residuary estate of the late Dr. Delno A. Kercher, of Philadelphia, amounting to about \$116,000. The will specifies that the bequest is to constitute a loan fund for students in the medical school who have completed their first year, graduate students, and for research workers.

DR. FILIPPO SUNSERI, of Johnstown, has been honored by having conferred upon him the rank of Cavaliere of the Order of the Crown of Italy by His Majesty, the King, through recommendations of the Minister Secretary of Foreign Affairs. This honor was bestowed in recognition of his work in advancing the welfare of the Italian-American citizens of Cambria County.

THE MAYOR OF PHILADELPHIA has appointed the following committee of physicians to make a survey of conditions existing at the Philadelphia Hospital for Mental Diseases and to make recommendations for the improvement thereof: Dr. Wilmer Krusen, chairman; Dr. Frederick H. Leavitt, Dr. George C. Yeager, Dr. Malachi Sloan, Dr. Alfred Stengel, Dr. Frederick H. Allen, Dr. Paul J. Pontius, Dr. Edward A. Steinhilber, Dr. Ruth H. Weaver, and Dr. Dorothy C. Blechschmidt.

THE FOLLOWING OFFICERS were elected at the annual meeting of the Philadelphia Alumni Society, Medical Department, University of Pennsylvania, Feb. 15: President, Dr. George M. Boyd; honorary president, Mr. Thomas S. Gates; first vice-president, Dr. J. Newton Hunsburger; second vice-president, Dr. Harold F. Robertson; third vice-president, Dr. Robert N. Ivy; treasurer, Dr. A. H. Boyer Drake; corresponding secretary, Dr. Stephen E. Tracy; recording secretary, Dr. Myer-Solis Cohen.

THE ANNUAL BANQUET of the Lycoming County Medical Society was held Jan. 10, at the Lycoming Hotel, with 75 members and guests present. Dr. Lee M. Goodman, of Jersey Shore, was toastmaster. Dr. Walter F. Donaldson, secretary of the State Medical Society, of Pittsburgh; Dr. George Morris Piersol, of Philadelphia; Dr. David W. Thomas, of Lock Haven, trustee and counselor for the Seventh Council District, and Rev. James Corbett, district chaplain of the CCC Camps, were guests of the society.

AT A MEETING OF THE MEDICAL CLUB of Philadelphia, held Jan. 17, the following officers were elected: Pres-

ident, Dr. Paul J. Pontius; first vice-president, Dr. Henry B. Kohler; second vice-president, Dr. Walt P. Conaway (Atlantic City); secretary, Dr. William S. Wray; treasurer, Dr. Charles S. Barnes; governor, Dr. Edward J. Klopp; additional directors, Drs. John M. Fisher, M. Fraser Percival, Paul B. Cassidy, George C. Yeager, and Charles E. G. Shannon.

THE FOLLOWING OFFICERS WERE ELECTED at the annual meeting of the Alumni Association of the Jefferson Medical College held Jan. 15: President, Dr. Charles E. G. Shannon; vice-chairman, Dr. Ross V. Patterson; first vice-president, Dr. Robert P. Regester; second vice-president, Dr. Thurman D. Kitchin; third vice-president, Dr. Willis F. Manges; fourth vice-president, Dr. Warren B. Davis; treasurer, Dr. Kenneth E. Fry; recording secretary, Dr. Theodore R. Fetter; and corresponding secretary, Dr. James M. Surver.

THE SIXTH INTERNATIONAL CONGRESS ON Physical Medicine will be held at London, May 12-16, 1936. It will consist of sections on kinesitherapy, physical education, hydrotherapy and climatotherapy, electrotherapy, actinotherapy, radiotherapy, and radium therapy. American participants will sail from New York on May 2 on the *M. V. Britannic* and return on May 31 on the *S. S. Transylvania*. Dr. Richard Kovacs, 1100 Park Ave., New York, is executive of the American committee.

IF THREATENED WITH SUIT.—If you are threatened with suit for alleged malpractice, you should communicate at once with the secretary of your county society, the councilor of your district, or the secretary of the State Society before consulting an attorney.

The State Society will not undertake the defense of any member unless his application is made within 7 days after summons has been served by the court.

EVERY PRACTITIONER of medicine and surgery holding a license to practice in North Dakota is required by law to register annually on or before Jan. 1 with the secretary-treasurer of the board of medical examiners, and at that time to pay a fee of \$5 if a resident of North Dakota or \$2 if a nonresident. A practitioner may not lawfully practice if he has not registered. If he does so, his license may be revoked and can be re-instated on the payment of unpaid fees and 50 cents for each month of default.—*The Journal-Lancet*, Jan. 1, 1936.

THE ALLERGY UNIT AT THE FACILITY, ASPINWALL, PA.—The Medical and Hospital Service of the Veterans' Administration has established an Allergy Unit at the Facility, Aspinwall, Pa., under the direction of Dr. Leo H. Crip. The laboratory department of the Allergy Unit will fabricate all allergens necessary for skin testing and will supply the extracts to the other facilities of the Veterans' Administration. The Allergy Unit will be the center for teaching physicians of the Veterans' Administration the scope, the usefulness, and the limitation of allergy diagnostic and desensitization methods.—*Hospitals*, Feb., 1936.

THE AMERICAN PHILOSOPHICAL SOCIETY has made a grant of \$2,500 to the Woman's Medical College of Pennsylvania, to be used during the next few years in a comprehensive study of the action of various anesthetics on all the systems of the body. The observations made during the anesthesia will be followed by pathologic examination of tissues. The study is to be carried on in the departments of physiology, physiological chemistry, and pathology by the professors in their respective departments and their assistants. Dr. Esther M. Greisheimer will direct the work in physiology, Dr. Marion Fay in physiological chemistry, and Dr. Helen Ingleby in pathology.

THE WOMAN'S MEDICAL ASSOCIATION of the City of New York offers the Mary Putnam Jacobi Fellowship, \$1000 for one year, available for graduate work in the medical sciences.

The fellowship is open to any woman graduate of an

approved medical school. Each candidate must be endorsed by the head of the department in which her previous work has been done. The recipient of the fellowship must give full time to the study of her problem, and this study must be made abroad.

Applications for 1936-1937 should be filed with the chairman of the committee, Annie S. Daniel, M.D., chairman, 105 East Fifteenth St., New York, by Apr. 1, 1936, and must be accompanied by statements as to health, educational qualifications, and proposed problem for investigation.

A report for publication will be required at the completion of the fellowship.—*The Diplomat*, Jan., 1936.

THE TEMPLE UNIVERSITY SCHOOL OF MEDICINE, Philadelphia, announces the following:

The departments of neurology and neurosurgery have been combined, with Prof. Temple Fay as head of the department and Dr. James William McConnell, of the Graduate School of Medicine of the University of Pennsylvania, as professor of neurology. Drs. Edward L. Clemens, Maurice T. Sloane, and Alexander Silverstein have been retained on the staff, and Drs. Samuel B. Hadden and James J. Waygood have been appointed associates in neurology.

The department of pathology has been completely reorganized under the direction of Prof. Lawrence Weld Smith, formerly of Cornell Medical School. Drs. H. C. Lennon and Ernest E. Aegerter have been appointed instructors in this department.

Appointments: Drs. Robert H. Hamilton, assistant professor of physiological chemistry; Francis William Glenn, clinical assistant in orthopedics; C. Howard McDevitt, Jr., clinical assistant in surgery; Harvey A. Price, clinical assistant in proctology; Hubert A. Royster, Jr., clinical assistant in pediatrics; Hugh Hayford, clinical assistant in obstetrics; Edwin J. Fellows, instructor in bacteriology and instructor in pharmacology; Michael Scott, clinical assistant in neurosurgery; Nathaniel Hurwitz, clinical assistant in otology.

Promotions: Drs. Edward Weiss, from clinical professor to professor of clinical medicine; Jacques P. Guequierre, from associate to assistant professor of dermatology and syphilology; Harry A. Bacon, from lecturer to associate in proctology; Chas. Q. DeLuca, from demonstrator to associate in laryngology and rhinology; A. Neil Lemon, from demonstrator to associate in laryngology and rhinology; Reuben Friedman, from demonstrator to lecturer on dermatology and syphilology; Samuel Ringold, from instructor to demonstrator in laryngology and rhinology; C. Kenneth Miller, from instructor to demonstrator in obstetrics; and Franklin D. Benedict, from clinical assistant to instructor in proctology.

THE AMERICAN COLLEGE OF SURGEONS 1936 Sectional Meeting in Buffalo, N. Y., will be held on Mar. 26, 27, and 28. Headquarters will be at the Hotel Statler. Participating states are New York and Pennsylvania as well as the Province of Ontario.

An active Committee on Local Arrangements, with Dr. Thew Wright as chairman, and Dr. Milton G. Potter as secretary, have plans well in hand for an excellent meeting.

The following is a preliminary outline of the entire program:

THURSDAY, MARCH 26

8:00- 6:00	Technical and Educational Exhibition
8:00- 9:00	Registration
9:00-12:00	Operative Clinics
9:30-12:00	Hospital Conference
12:00- 2:00	Medical Motion Pictures
2:30- 5:00	Hospital Conference
5:00- 5:30	Annual Meeting, Fellows of the College
7:00- 8:00	Medical Motion Pictures
8:00-10:30	Scientific Session, General Surgery

- 8:00-10:30 Scientific Session, Eye, Ear, Nose, and Throat Surgery
 8:00-10:00 Hospital Round Table Conference

FRIDAY, MARCH 27

- 8:00- 6:00 Technical and Educational Exhibition
 9:00-12:00 Operative Clinics
 9:00-12:00 Hospital Conference
 12:00- 2:00 Medical Motion Pictures
 2:00- 5:00 Hospital Conference
 2:30- 5:30 Scientific Session, General Surgery
 2:30- 5:30 Scientific Session, Eye, Ear, Nose, and Throat Surgery
 8:00-10:00 Community Health Meeting

SATURDAY, MARCH 28

- 8:00- 4:00 Technical and Educational Exhibition
 9:00-12:00 Cancer Clinic
 9:00-12:00 Fracture Clinic
 9:00-12:00 Operative Clinics, Eye, Ear, Nose, and Throat Surgery
 12:00- 2:00 Medical Motion Pictures
 2:30- 5:30 Scientific Session, General Surgery
 2:30- 5:30 Scientific Session, Eye, Ear, Nose, and Throat Surgery

A cordial invitation to attend this most interesting meeting is extended not only to the fellows and hospitals of the various states included but to the entire medical profession at large.

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

IMMUNOLOGY. Noble Pierce Sherwood, Ph.D., M.D., professor of bacteriology, University of Kansas; pathologist to the Lawrence Memorial Hospital, Lawrence, Kansas. C. V. Mosby Co., St. Louis. Price, \$6.00.

Immunology is an all-important subject in everyday practice and the medical profession at large should be thoroughly conversant with this subject. According to the preface the book is written for those who are interested in the underlying principles involved in infection, resistance, and diagnostic laboratory tests. Hence it is a textbook for the medical student and for others who have had training in pathogenic bacteriology and organic chemistry. It affords a quick reference for the physician's library.

CLINICAL TUBERCULOSIS. Edited by Benjamin Goldberg, M.D., F.A.C.P., F.A.P.H.A., associate professor of medicine, University of Illinois College of Medicine, honorary professor of medicine, National University of Mexico. Formerly director of the City of Chicago Municipal Tuberculosis Sanitarium. Volumes I and II. Illustrated with 640 half-tone and line engravings and 9 full-page color plates. F. A. Davis Company, Publishers, Philadelphia. Price, \$22.00.

This work contains in 2 volumes and 46 chapters a comprehensive and complete presentation of the entire subject of clinical tuberculosis. Every medical library, to be complete, should contain these volumes. Practitioners of medicine and surgery who in their practice care for tuberculous patients either medically or surgically should have these volumes for reference.

Epidemiology, bacteriology, allergic and immunologic conditions, pathology and patho-physiology, diagnosis (both laboratory and physical), to mention only a few chapters, are each dealt with so as to furnish reliable

data to the competent reader, giving a definite basis to form correct judgments. The chapters on collapse therapy or surgical treatment cover the whole gamut of such procedures—artificial pneumothorax, intrapleural pneumolysis, oleothorax, phrenic neurectomy, apical collapse, extrapleural thoracoplasty, again to mention only some of the procedures covered.

Those wishing a "library on clinical tuberculosis" can do no better than place these volumes within reach. The chapter on tuberculin is most complete. It deals with the nature of the tuberculin reaction, its specificity, the sources of error in the clinical interpretation of the reaction, and the technic and value of the test in preventive medicine.

Again we say that these volumes give a comprehensive and complete review of the entire subject of clinical tuberculosis.

THE HUMAN FOOT. Dudley J. Morton, M.D., associate professor of anatomy, College of Physicians and Surgeons, Columbia University, New York City. Columbia University Press, 2960 Broadway, New York City. Price, \$3.00.

The disorders of the human foot are a very important feature in every-day life. The general practitioner frequently overlooks the causes incident to symptoms referable to the human foot, and patients often go from shoemaker to shoemaker. Suggestions of a change in an arch supporter are made with the hope of relieving the patient's suffering. Too frequently a mistake in diagnosis is made. This book is devoted to the evolution, physiology, and functional disorders of the human foot and is recommended to the practitioner as an informative compilation.

PRESCRIPTION WRITING AND FORMULARY.

By Charles Solomon, M.D., assistant clinical professor of medicine, Long Island College of Medicine; associate attending physician and chief of the Medical Clinic, Jewish Hospital of Brooklyn; lecturer in materia medica, Nurses' Training School, Brooklyn. J. B. Lippincott Company.

In many quarters prescription writing has become a lost art. In too many medical schools the art of prescribing and prescription writing does not receive the required attention. This book is recommended to students of medicine and nurses' training schools, as well as to graduates thereof.

THE MODERN TREATMENT OF BURNS AND SCALDS.

By Philip H. Mitchiner, M.D., F.R.C.S. (Eng.), honorary surgeon to the King; surgeon and lecturer in surgery, St. Thomas' Hospital, London, Eng. William Wood and Co., Baltimore, Md. Price, \$2.

There is no condition producing more pain and distress, deformities, hideous scars, and even deaths than burns and scalds, and none more improperly treated. This book of 64 pages very satisfactorily covers the subject. Physicians, nurses, and industrial plants should possess a copy.

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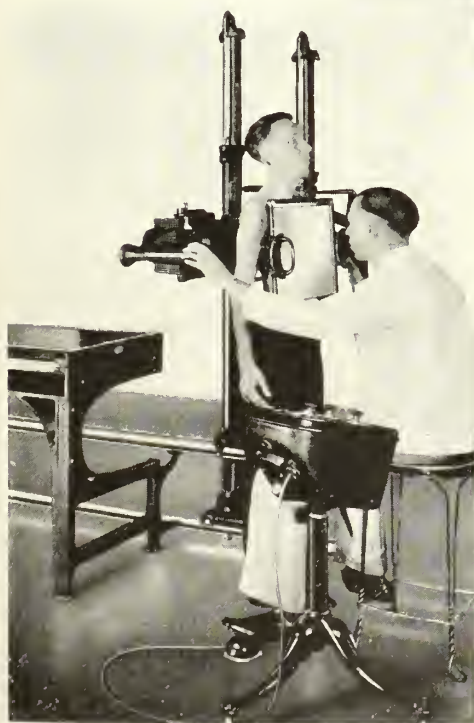
(Concluded on page xiv.)

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RECENT ADVANCES IN SURGERY OF THE PANCREAS*†

ALLEN O. WHIPPLE, M.D., NEW YORK CITY

Since the advent of the aseptic era, surgery of the pancreas has not advanced as rapidly as that of the gastro-intestinal tract, the biliary tract, or the spleen. Surgical attack on this organ has been discouraged because of certain factors which were misunderstood or misinterpreted. These may be summarized as follows:

1. The fear of pancreatitis and the proteolytic digestion of the tissues near and around the pancreas. This does occur if the activating duodenal juices come in contact with damaged pancreas or pancreatic juices, but rarely otherwise.

2. The conviction on the part of physicians and surgeons that the external secretion of the pancreas is essential to life. For this reason removal of the head of the pancreas or ligation of the main ducts has been carefully avoided. But if these structures are severed every effort has been made to anastomose the head of the pancreas or the severed duct into the duodenum.

3. The fear of contamination has deterred surgeons from using silk in pancreatic surgery. Catgut in the presence of pancreatic juices is rapidly digested and leakage from the duodenum, if the pancreas or duct has been implanted into it, frequently follows; and hemorrhage is favored by the digestion of catgut ligatures on the larger vessels.

4. A natural pessimism exists regarding non-emergency surgery, especially tumors, of the pancreas. But not all tumors of the pancreas are carcinoma and not all the carcinomas are equally malignant. The fact that carcinoma of the papilla of Vater is not at all as rapidly growing or infiltrating as is carcinoma of the pancreas proper is not sufficiently appreciated by clinicians. There are cystadenomas and adenomas of the pancreas that are entirely benign.

5. Benign cysts of the pancreas, although operated upon, as a rule cannot be excised. Marsupialization frequently is followed by continuous flow of skin digesting fluid and a persistent pancreatic fistula. This has led many clinicians to take more interest in the diagnosis of pancreatic cyst than in the therapy.

For many years my interest has been centered in the surgery of the upper abdomen. About 5 years ago my enthusiasm in the surgery of the pancreas became manifest, after I had become entirely convinced of the superiority of silk over catgut for use in clean wounds. The use of very fine silk in a case of benign tumor of the pancreas resulted in such a smooth postoperative course and ideal wound healing that since then I have always used silk in pancreatic surgery. This created a new interest and confidence in the subject, and as a result our attack has broadened, the number of cases has increased, and the results have encouraged us to further effort.

The total number of pancreatic cases in any clinic is relatively small as compared with gastro-intestinal or biliary tract lesions. The tabulation of our cases is given in the accompanying table. A brief discussion of the main groups with the methods used in treating them in relation to the deterring factors mentioned in the introductory remarks may be of interest. Since time does not permit of a discussion in detail of the technic of dealing with all of these lesions, only the advances or improvements will be presented.

Within the past 5 years our attitude has become more conservative toward immediate operation in the cases of acute pancreatitis in which diagnosis seems fairly certain. Geza De-Takats, of Chicago, has ably presented the advantages of waiting a few hours until the shock, as shown by hemoglobin and red blood cell concentration determinations, is combated by saline infusion and transfusion. In many instances the

* Read before a Joint Meeting of the Section on Medicine and the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

† From the Department of Surgery, Columbia University.

patient's condition is markedly improved. If within another 6 hours the abdomen has to be opened, the pancreatitis is more localized and the patient passes through the critical postoperative period more safely. In cases in which an acute hemorrhagic pancreatitis is found, attempts to incise the capsule of the organ or make multiple punctures carries greater risk of hemorrhage and added trauma than benefit. A drain down to the damaged pancreas and the release of proteolytic exudate with the least trauma to the inflamed pancreas has given better results. Supportive treatment with drip intravenous infusion of salt solution is essential.

There is one preoperative laboratory examination which we feel is of very definite value in distinguishing between the diagnosis of acute pancreatitis and the other acute abdominal emergencies requiring prompt surgery. This is the blood amylase determination. It has been found that a reading of more than 30 units indicates damage to the pancreas. In some cases of acute hemorrhagic pancreatitis the reading has reached as high as 90. A high blood amylase reading in the presence of an acute upper abdominal lesion is a very valuable differential diagnostic point.

In dealing with the difficult group of pancreatic tumors, the use of fine silk for ligatures and sutures and avoidance of duodenal leakage have been the 2 factors responsible for improved results. We have been fortunate in having referred to us from the Neurological Institute 6 cases of benign adenoma of the pancreas with hypoglycemia and hyperinsulinism. All of these cases have been cured of their distressing and chronic illness and have remained well for periods of 1 to 2 years during their follow-up study. These have been reported in detail with a review of all the reported cases of hyperinsulinism in the June, 1935, issue of the *Annals of Surgery*.

After the diagnosis of chronic hypoglycemia is established and hepatic and pituitary causes have been ruled out, the patient should have a course of medical therapy of 3 to 4 weeks to determine the response of the individual to conservative measures. If it is found that the blood sugar values are continuing to remain low and that the seizures are controlled only on a high carbohydrate intake, an exploratory celiotomy is indicated.

Spinal pantocain anesthesia has given the best operative and postoperative results. Complete relaxation is essential.

A wide transverse incision (Fig. 1), including both recti muscles, provides by far the best

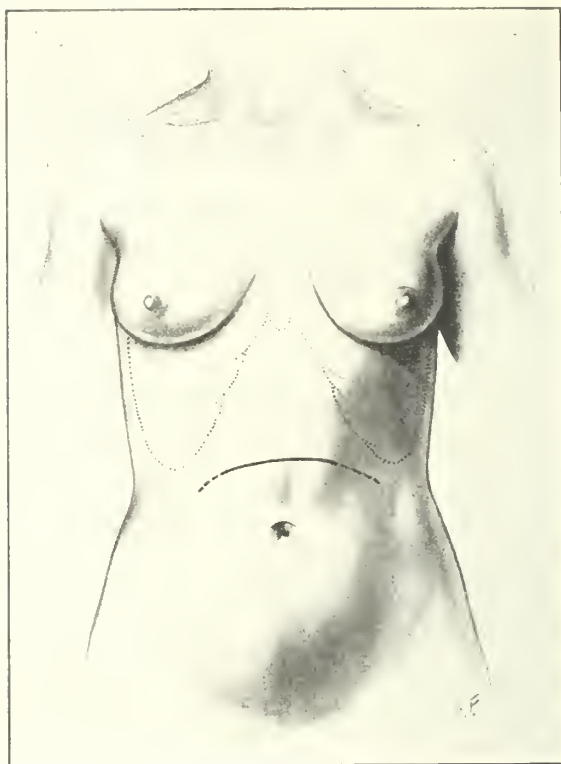


Fig. 1. Type of transverse incision used in pancreatic operations.

approach. A left split rectus fails in the majority of cases to give adequate exposure.

A wide division of the gastrocolic omentum (Fig. 2) exposes the entire pancreas to inspection and palpation—head, body, and tail.

The typical gross appearance of the adenoma is characterized by a purplish-pink nodule 1 to 2 cm. in diameter, usually standing out distinctly from the whiter pancreatic tissue and covered with fine vessels which bleed easily but are readily ligated. The adenoma is usually encapsulated and is shelled out without difficulty after the small vessels have been ligated with the finest of silk ligatures.

If one adenoma is discovered, search should be made for others. If no adenomas are seen on the anterior surface, the pancreas should be mobilized by incising its inferior peritoneal attachment and gently elevated, inspected, and palpated on its posterior aspect. Hemorrhage is most apt to occur around the head.

Adenomas are most frequently found in the tail and body, and should be looked for in these areas first.

If no adenomas can be seen or felt, the next most effective measure is the removal of at least two-thirds of the pancreas—that is, the tail and body—leaving the portion of the head in the curvature of the duodenum. Dr. Thomason in a personal communication says that in his opera-

tion he followed the suggestion of Emil Holman, of San Francisco, who stated that if he had another case to do he would ligate the splenic artery because of the difficulty in dealing with the bleeding of its branches going into the pancreas. Dr. Thomason did this, which of course necessitated a splenectomy as well, but the ligation of the splenic artery rendered the operation practically bloodless, and the mechanical features were greatly simplified. He removed the tail and body, excising the pancreas with a Percy cautery and searing the end very thoroughly. A Penrose drain was used, but there was no discharge and the patient made an absolutely uninterrupted recovery with primary wound healing.

A drain should be placed down to the bed of the pancreas, if the organ is resected, to provide for oozing or a leakage of pancreatic juice. As a rule, the site of an enucleated adenoma does not have to be drained.

Silk technic—the finest grade of silk for ligatures of small vessels and a slightly heavier grade for the larger vessels and the rectus sheaths—has given perfect wound repair.

The test of any therapy is the final result. In the reported cases, including the 6 of our own, there have been no fatalities. All of the patients from whom adenomas have been removed have been cured of their hypoglycemia. In the cases treated medically there has been no proof that the hypoglycemia was due to adenoma of the islet cells. Because of the deep-seated lesions and the important structures involved, the operation should not be attempted by surgeons who are not experienced in the anatomy and surgery of the pancreas.

Benign cystadenoma of the pancreas is relatively rare and is often exceedingly difficult to differentiate from a retention cyst of the pancreas. The relative amount of adenoma and cyst formation determines the pathologic findings. We have had 4 cases of cystadenoma in which the adenomatous elements preponderated. In one case the lesion was limited to the tail of the pancreas, and by excising the tail with the tumor the lesion was entirely removed in a mass measuring 14x11x6 cm. The patient has been followed for a period of 18 months with no sign of recurrence. She has gone through a pregnancy and delivery without complications. The blood sugar determinations and urinalyses have been normal. A second case was marsupialized and the epithelial lining of the cysts treated with acetone. This epithelial lining persisted, and the patient was readmitted and operated upon the second time. However, he failed to rally and died a few days after the second operation. A

third patient, operated upon twice, was cured by the use of potassium hydrate applications to the cyst lining. The fourth case, marsupialized because of the extensive involvement of the body and tail of the pancreas, had a persistent fistula. Several months later the fistula was implanted into the stomach, and the patient now drains the fistula into the stomach.

The cases showing a large single communicating cyst or several smaller ones in which the glandular elements are not so active present an easier problem. Some of these are apparently the result of trauma and are reported by some surgeons as pseudocysts. We have 2 such cases in our group—definitely related to injury caused by severe trauma to the epigastrium. One of these cysts occurred in a hospital employee who was caught in the epigastrium between a truck and pillar. The cyst developed during a period of 3 weeks and was operated upon because of increasing pain and epigastric mass. The second one followed the kick of a horse, the blow striking the epigastrium. In both of these patients the cyst was marsupialized and healed by cicatrization. Some, if not all, of these large cysts are the result of duct obstruction; they are usually slow in developing, and the patients may give a history, as in our most recent case, of

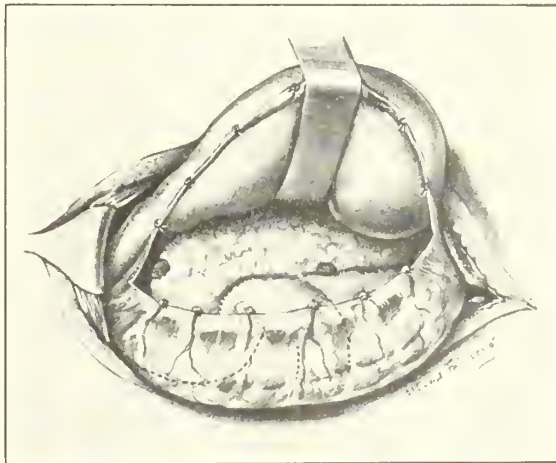


Fig. 2. Exposure of the pancreas after dividing the gastrocolic omentum.

having noted an upper abdominal mass for several years. A most valuable means of differentiating these cysts from such lesions as enlarged spleen, cystic kidney, or retroperitoneal sarcoma is the use of a barium meal and a barium enema given simultaneously for fluoroscopic and film study. A pancreatic cyst most frequently presents through the gastrocolic omentum, pushing the stomach upward and the colon downward.

The majority of these cysts cannot be excised because of the extensive involvement of the pan-

creas. Marsupialization has to be done. The subsequent treatment of these cysts with sclerosing solutions such as are used in the injection of varicose veins has caused a rapid disappearance of the fluid from the cyst lining and has prevented the formation of permanent or long-standing fistulae. The solutions have to be injected cautiously in doses not larger than 2-5 c.c. at a time and not oftener than every other day. We have had 12 cases of these unilocular retention cysts. Two of these were associated with carcinoma of the head. There are 2 measures which are very helpful in dealing with these marsupialized cysts. The first is a properly arranged suction apparatus, the simplest being a small rubber tube fitted into a larger drainage tube attached to a water faucet or gravity suction apparatus. This prevents the end or opening of the small suction tube coming in contact with the cyst wall. Quiet suction can thus be maintained day and night, and wet dressings and irritated skin prevented. The second is the use of sclerosing solutions. At the suggestion of our Varicose Veins Clinic, 2 per cent sodium salicylate and quinine-urethane solutions have been used with excellent results. The solution in 3-5 c.c. doses is allowed to run into the cyst cavity after the cyst fluid has been aspirated. It should not be used more often than every other day, and as a rule 3 or 4 applications are sufficient.

Because of the technic which we used with success in a number of benign lesions of the pancreas, we became interested again in attacking the problem of malignancy of the pancreas and ampulla region. The fact that a large part of the pancreas can be safely excised, and that in animals the main ducts can be ligated as they enter the duodenum without permanent damage to their well-being, suggested a new approach to the problem. This was emphasized after an unsuccessful attempt to remove a carcinoma of the ampulla of Vater by the transduodenal method.

Involved in the previous attempts at radical removal of carcinoma of the papilla of Vater and the head of the pancreas were certain factors which compromised its success and made it such a hazardous procedure as to be prohibitive in the minds of even the ablest surgeons. The first of these was the mistaken belief that the flow of pancreatic juice is essential to life, which led surgeons to attempt to re-establish this flow into the duodenum or jejunum by implanting the resected head of the pancreas or the cut end of the duct into the upper intestine. The activation of the pancreatic ferments by duodenal

contents compromised any type of anastomosis in the human subject, especially around the posterior aspect of the duodenum devoid of peritoneum. Experimentally the operation of pancreato-enterostomy has been done successfully in dogs by L. Suavé, R. C. Coffey, and Joshua E. Sweet. However, in dogs the pancreas is mobile and covered by peritoneum quite in contrast to man. There are 4 case reports in the literature (Halsted, Hirschel, Kausch, Tenani) in which this operation of reimplantation of the head of the pancreas or the duct was successfully carried out after a resection of the carcinoma of the ampulla. Two other patients reported by Koerte and Mayo-Robson died following this procedure. Our patient operated upon in this manner died from leakage around the anastomosis. We can form no idea of the number of un-

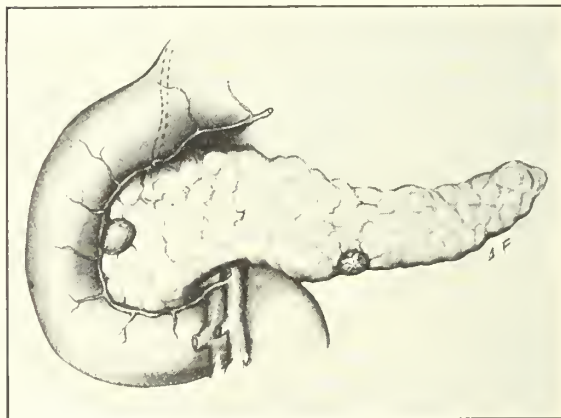


Fig. 3. Appearance of adenoma in the tail of the pancreas as compared to a lymph node in the head of the organ.

published cases in which it has been tried and resulted fatally, but it seems, because of the digestive action of the pancreatic ferments, that the hazard of this operation is too great.

The second factor was the attempt to carry out the excision of these tumors in one stage, whatever the method used. The victims of these tumors are as a rule deeply jaundiced, have a hemorrhagic diathesis, are depleted, undernourished, asthenic, and have severe liver damage. The majority of these patients cannot survive such a major operation until the associated conditions have been relieved. This factor has been recognized in recent years, and a preliminary short-circuiting operation to relieve jaundice has been carried out.

As a result of mistakes which were made in operating on our first 2 cases we developed a technic for radical removal of carcinoma of the papilla or the periamпуляр region embodying the following principles:

1. After resecting the descending limb of the

duodenum with the pancreas wide of the growth, no attempt should be made to re-establish the continuity of the duodenum or of the pancreas with the intestine.

2. The operation should be a 2-stage procedure with definite steps in each stage and with the following technic:

a. Spinal pantocain anesthesia.

b. A right rectus or epigastric midline incision for the first stage, with the following steps (Fig. 4):

(1) Posterior gastro-enterostomy.

(2) Ligation and section of the common duct below the cystic duct after determining the patency of the cystic duct, leaving a long black silk ligature as an indicator on the sectioned common duct. The great difficulty in finding the unsectioned duct in our first case and in dividing it at a sufficiently high level impelled us to divide the duct at the first procedure and to mark it with a clear signpost.

(3) A cholecystogastrostomy to the anterior surface of the stomach well away from the pylorus, using an anastomotic opening at least 2 cm. in diameter, in order to avoid subsequent stenosis and cholangitis.

3. Three to 4 weeks after the first stage the second procedure should be carried out through a transverse incision above the umbilicus through both recti, if necessary, under spinal anesthesia. The steps in this second stage are as follows (Fig. 5):

a. Ligation of the pancreaticoduodenal and gastroduodenal arteries.

b. Resection of the descending portion of the duodenum with inversion of the upper and lower ends, and a V-shaped excision of the head of the pancreas wide of the growth together with the common duct, using the silk ligatures as a guide to the lower cut end of the duct.



Fig. 4. Steps in the first stage of the operation.

c. A ligation of the cut end of the duct of Wirsung—and the duct of Santorini, if present—and the suturing of the 2 cut surfaces with interrupted fine silk.

d. Drainage of the bed of the resected duodenum with cigarette drain.

4. Silk technic for both the first and second stages of the operation, using the finest silk for all but the large arteries.

The operation proposed has certain advantages over those previously described. It carries out the principle of cancer surgery in ex-

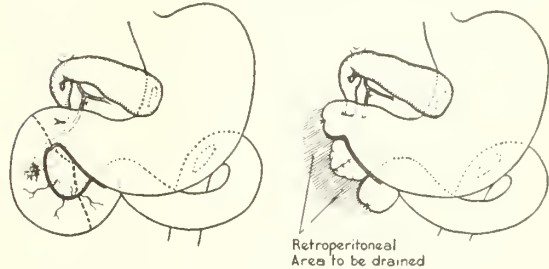


Fig. 5. Steps in the second stage of the operation.

cising *en bloc* tissues wide of the growth. In this particular condition this principle is applicable because extension of the growth from the papilla has been found to be either into the neighboring pancreas or up along the lining of the common duct. The hazard of surgery is reduced by a 2-stage procedure, insuring the relief of jaundice and improvement of nutrition by the first stage and excising the lesion radically when the risk to the patient is minimized. In our first case of radical removal, duodenal obstruction appeared later because of the drag set up against the superior mesenteric vessels. Therefore, we have inserted a gastro-enterostomy as part of the first stage.

There are certain theoretical objections to the removal of a large part of the duodenum and permanent obstruction of the pancreatic ducts.

Hershey and Soskin, and Berg and Zucker noted fatty degeneration of the liver in animals with ligation of pancreatic ducts or with total pancreatectomy.

Joshua E. Sweet described a peculiar translucence and atrophy of the spleen and thyroid in the dog after obstruction of the external pancreatic secretion. In our patient coming to necropsy because of a cholangitis 8 months after the radical operation, none of the above changes was noted in the liver, thyroid, or spleen.

The objection to this procedure on the basis of disturbed fat digestion due to lack of pancreatic ferments was considered, but much to our surprise the utilization of fat in both of our patients several weeks after the radical procedure was remarkably good, 85-90 per cent of the fat intake was absorbed as shown by stool examinations. Furthermore, both patients gained and maintained their normal weight 3 and 7 months after operation.

LESIONS OF THE PANCREAS

Presbyterian Hospital (New York City) Series
1930-1935

	Number of Cases
<i>Malignant lesions</i>	
Carcinoma of the pancreas	32
Carcinoma of the papilla of Vater	6
Sarcoma of the pancreas	1
<i>Benign lesions</i>	
Adenoma	6
Cystadenoma	4
Cyst	10
Acute pancreatitis	17
Chronic pancreatitis	10
<i>Total</i>	86

That there may be a compensatory secretion of fat splitting ferment in the upper intestine is suggested, but it requires further experimental study before any positive statement can be made.

A certain amount of atrophy of the acinar tissue of the pancreas has already taken place in these patients before they come to operation due to the obstruction of the pancreatic duct by the neoplasm. This probably accounts for the small

amount of pancreatic juice leakage after this operation.

Approximately 80 cases of removal of the tumor of the papilla appear in the literature. The method here reported has been carried out in 4 cases, 3 by Dr. Parsons and myself, and one by Robert Janes, of Toronto.

The result in our longest surviving patient is too recent to use as a basis from which to draw definite conclusions. It will have to be tried in more patients over a long period of time before its true worth can be demonstrated. But the method we believe is sound, in that it radically removes the cancer *en bloc*, does not have the hazard of duodenal fistula and pancreatic necrosis, and favors primary healing. Its chief danger is subsequent cholangitis, as a result of too small a cholecystogastrostomy, and the risk of a postoperative pneumonia, which, however, is as great in many radical major resections in the upper abdomen. The details of the operation and the case histories appear in the *Annals of Surgery*.

180 Fort Washington Avenue.

PANCREATIC ENZYME STUDIES*†

A Comparison of Some Methods of Trypsin Estimation

MAURICE I. STEIN, M.D., HARRISBURG, PA.

From the standpoint of diagnosis, disturbances of the normal physiology of the pancreas may be broadly divided into 3 groups. The first group, which may be called the dramatic group, is quite small and is usually characterized by a sudden onset, startling and appalling rapidity in the progress of the condition, and marked severity of symptoms, such as is exhibited in acute hemorrhagic pancreatitis. The second group, and a somewhat larger one, is that in which the changes, although still organic in nature, are much slower in their progress and do not as a rule cause acute discomfort, at least not in the early stages of the process. Carcinoma of the pancreas and chronic pancreatitis are good examples of this group. The third group comprises purely functional disturbances of the organ and presents a symptom picture that is anything but pathognomonic. In the first group the diagnosis seldom remains long in doubt, and although the diagnosis in the second group may

be questionable for a time, it is usually eventually made. These 2 groups constitute actually but a small percentage of the pancreatic disturbances. It is in the third group that the diagnostic difficulties assume greater magnitude and call for keenness of diagnostic discernment, and it is with this group that we are particularly concerned.

There are innumerable cases of vague digestive disturbances, particularly of an intestinal nature, which have defied the best diagnostic acumen and which have been attributed variously to gallbladder disease, appendicitis, unstable colon, *etc.*, that were probably due to functional disturbances of the pancreas. What physician is not familiar with the case of intestinal flatulence that stubbornly refuses to yield to diet, to absorptives, to colonic irrigations, in short to every conceivable form of treatment, and is finally labeled as a neurosis? And what physician is not equally familiar with patients with supposed gallbladder disease or appendicitis who are inconsiderate enough to persist in having the same symptoms postoperatively that they had before the operation? To make the asser-

* Read before a Joint Meeting of the Section on Medicine and the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

† From the Gastro-intestinal Clinic, Harrisburg Hospital, Harrisburg, Pa.

tion that all of these cases are due to disturbances of pancreatic function is of course foolhardy, but until this possibility has been investigated it should not be ignored.

The value of some clinical method of estimating the functional activity of the pancreas is apparent, and this is abundantly corroborated by the fact that, ever since the appearance of Cammidge's original report, there have been innumerable tests proposed for measuring pancreatic function. The very number of these tests has proven the lack of clinical applicability, for it is evident that, to be clinically applicable, any method must have the following essential characteristics: Simplicity of technic, constancy of factors, and ease of interpretation.

In the report of the Enzyme Committee of the American Gastro-enterological Association, given at its meeting in 1934, 22 methods were reported as being used by 27 members of the association. The question was asked, "Is there a sufficient difference in the methods employed in these systems of analysis to conclude that one is better than the other?" The statement was made that the only way this question could be answered was by a comparative study of the methods, using normal duodenal contents. A careful survey of the literature at the time this study was undertaken failed to show that any such investigation had been reported. Since that time a very comprehensive comparative study on diastase estimation has been done and reported by A. C. Ivy, *et al.* Apparently all that each investigator had done prior to this committee's report was to scrutinize closely the work of his predecessors, select the most obvious objection, and then attempt to devise some method of overcoming this objection. Or he would apply some particular method in a series of cases and then, based on his own results, either approve of it enthusiastically or condemn it beyond all salvation. Apparently, the goal sought was one that concerned itself solely with the meticulous accuracy of the end-point determination, and the investigators seemed to have lost sight of the fundamental requirements of such a test, namely, that it should be comprehensible by the practical clinician and that it should have a clinical application.

There seems to be a sound histologic foundation for the belief that only 1 of the 3 enzymes need be used as an indication of the whole pancreatic enzymatic activity since, as A. Bassler states, the pancreas contains only one kind of acinous cell other than the Langerhans cell, it is reasonable to assume that all the ferments come from the same cell, and therefore any change in

the enzymatic activity of the cell would be equally reflected in all 3 enzymes, and not in only 1 or 2 of them. Although there may be some foundation for the theory that the enzymatic cell exerts a selective activity in its enzyme production, depending upon the food type, it does not change the fact that a functionally normal cell will secrete normally, and hence does not upset the contention that only one enzyme need be used as an indicator of the whole enzymatic activity of the organ. Furthermore, Babkin in 1904 and again in 1909, and Sawitch in 1909 established the fact that the 3 principal enzymes of the pancreatic juice are secreted by the pancreas of the dog in parallel concentration, and Wohlgenuth in 1907 in a case of pancreatic fistula in a human subject also proved that trypsin, amylase, and steapsin were secreted by the pancreas in parallel concentration. The selection of trypsin as the enzyme to be studied was based upon the opinion of B. B. Crohn,¹ who stated that "by far the most reliable single index of pancreatic activity is the tryptic activity, as this protease is found uniformly when the ducts are patent." This selection was still further substantiated by the work of Stewart Baxter,² who reached the following conclusion: "Therefore, it seems that the determination of trypsin in the duodenal contents is the most reliable method for the estimation of the external secretory function of the pancreatic gland."

Four tests for trypsin were selected, 2 tests that were recommended by the Enzyme Committee of the American Gastro-enterological Association, and 2 others, as follows:

1. The Fuld-Goss method as described by Hawk was not recommended by the Enzyme Committee but was selected because of its simplicity of performance and ease of interpretation.

2. The Leuders *et al.*, method was recommended by the committee and is more complicated than the Fuld-Goss method, but still relatively simple.

3. The McClure *et al.*, test, also recommended by the committee, is more theoretically accurate but more complicated than the preceding tests and more time-consuming.

4. The Willstatter titration method, not recommended by the committee, is even more complicated and time-consuming than any of the other 3 tests.

All 4 methods are based upon sound, though varying, principles. Although each of these methods enjoyed a certain measure of confidence with a few followers, they had no common meeting ground and an attempt was made to

provide one. If all 4 tests are accurate, as claimed by their originators, a relative constancy should exist in the results by all 4 methods, although differently expressed. And if this is true, the simplest and least complicated of these tests is just as valuable as the most highly technicalized and theoretically accurate one, and there remains only to be established an index of normal pancreatic activity, as expressed by its external secretion. Although this normal index, based on the findings in normal individuals—or persons proven to be free from any demonstrable organic lesion of the digestive tract—is an arbitrary one, it will at least be valuable as a starting point in arriving at some knowledge of the pathologic dysfunction of the pancreas as expressed in terms of pancreatic external secretory activity.

In selecting the fraction of duodenal contents to be used, as representing the greatest amount of pancreatic secretion, the evidence, as expressed in the reports of B. B. Crohn, J. Martin, D. N. Silverman, George M. Piersol and Henry L. Bockus, A. Bassler, and J. V. Wentworth and A. H. Aaron, was carefully considered, and the "B" fraction was chosen. The question of stimulant was also carefully considered, and, based on the work of Wentworth and Aaron and a personal communication from McClure, oleic acid was selected as the stimulant probably giving the closest similarity to the stimulation normally present in the duodenum of the human subject. The material was obtained by duodenal intubation with a Levin catheter-tipped duodenal tube, and every precaution was exercised. The stomach was carefully lavaged until clean, and the position of the tube tip in the second portion of the duodenum was checked by fluoroscopic observation in each case before any stimulant was given. Only such bile fractions as were

definitely conceded to be "B" bile, black-brown in color and alkaline to phenolphthalein, were used. Although it is impossible to eliminate completely the possibility of gastric dilution, it appears that the material used represented as nearly pure a specimen of pancreatic secretion as could be obtained. To overcome the factor of possible loss of enzymatic activity, each fraction was immediately subjected to all 4 tests simultaneously.

Duodenal contents from 17 subjects, all completely normal or at least free from demonstrable organic gastro-intestinal disease, were subjected to the 4 tests, and the findings are summarized in the following table. In the performance of the various tests, the technic as outlined by the originators of the respective methods was carefully and scrupulously followed to the minutest detail, and quite a number of each of the tests were performed before the results were recorded.

SUMMARY

1. The McClure *et al.*, method is probably the most accurate, constant, and dependable of the 4 methods studied. From the available evidence it is physicochemically correct and scientifically exact, hence accurate. The procedure can be performed in any office laboratory and requires only the simplest of apparatus. The colorimetric reading can be made with some of the simpler and comparatively inexpensive colorimeters now on the market. A Vim-Sheftel colorimeter was used in this study, and when the results were checked with the more elaborate type of colorimeters used in the hospital laboratory they proved absolutely accurate. The total time consumed by the test is barely an hour, at least half of which is occupied by incubation, which re-

A COMPARATIVE STUDY OF TRYPSIN ESTIMATION

No.	Name	Sex	Age	Diagnosis	Fuld-Goss	Leuder (minutes)	Willstatter (units)	McClure (mg. N)
1.	C. R.	M	47	Neurogenic colitis	10.0	2:35	20	4.90
2.	E. J.	F	27	Neurosis	1.1	3:53	105	4.38
3.	D. C.	M	42	Syphilis	1.4	4:30	70	2.49
4.	W. D.	M	44	Normal	2.0	24:00	20	2.17
5.	E. H.	F	43	Normal	10.0	2:27	140	2.53
6.	R. W.	M	48	Chronic nephritis	10.0	2:15	178	3.09
7.	M. L.	M	48	Neurogenic colitis	1.6	1:05	180	4.57
8.	C. G.	F	34	Normal	1.2	3:35	80	3.21
9.	C. K.	F	42	Asthma	1.0	.....	130	3.39
10.	M. H.	M	36	Normal	1.6	2:05	105	3.23
11.	M. E.	F	40	Normal .....	....	2:32	135	1.75
12.	E. B.	M	27	Spastic colitis	10.0	3:14	48	1.50
13.	B. B.	M	35	Normal	1.1	0:52	112	5.17
14.	D. M.	F	26	Normal	2.0	2:55	48	5.47
15.	S. S.	F	24	Normal .....	....	1:10	130	6.09
16.	J. M.	F	38	Menopause .....	....	1:45	140	4.05
17.	J. C.	F	48	Colon stasis	5.0	1:27	130	2.55

quires very little attention. Duplicate and triplicate analyses by 2 workers on the same specimen showed so narrow a margin of difference that the probability of error can be disregarded, and the factors of constancy and comparability are definitely emphasized.

2. The Willstatter test, although based on sound chemical principles, is open to several objections that have to be considered from the standpoint of practicality. Primarily, it is extremely time-consuming, taking about 2 hours to complete even though a considerable portion of this time is taken up in incubation. Secondly, the test depends upon 2 color end-points, which must be determined without any standard for comparison, one of them being made in boiling alcohol, which, with its changing concentration of the hot, highly volatile fluid, makes a definite color end-point difficult to attain and requires no inconsiderable experience. Finally, it involves the individual factor because everybody does not see color shades alike. This apparently trifling factor can make for considerable disparity of results. It is not beyond the realm of probability that some of the high figures obtained in this test were due to the lack of certainty about the color end-point. It will be noted in the table that there is a considerable disparity in the results obtained, both from the standpoint of the test itself and in its relative comparison to the results obtained by the McClure method.

3. The Leuders *et al.*, method, although apparently simple in its technic and based on correct principles, has some very definite and valid objections. Primarily, it was found impossible to maintain a constant neutrality of the gelatin emulsion. At first it was thought to be due to some error in the technic, but this was not the case. Several batches of the emulsion were made up, carefully following the technic laid down by the originators of the method, and all the enjoined precautions were observed, namely, sterile vessels, toluene covering, refrigerator storage, *etc.*, and with every batch, after a relatively short time, from 0.3 c.c. to 2.5 c.c. of normal NaOH were required to bring the emulsion to neutrality. In the actual performance of the test, the color change took place so rapidly as a rule that even with a split-second stopwatch the time recorded in the table was determined with a considerable feeling of doubt. The results obtained by this test, except in 1 or 2 instances, did not show too much disparity in themselves if these readings can be accepted. Although the Leuders method did not show the marked disparity of results with the McClure method as was shown by the Willstatter test,

there was sufficient disparity to indicate that, in combination with the other factors cited, it was not as dependable as the McClure method.

4. The Fuld-Goss method, although it has in its favor the greatest simplicity of performance, showed an even greater inconstancy and disparity of results in its relative comparison with the McClure method than did either the Leuders or the Willstatter methods, a fact that is very apparent from the results shown in the table. The apparent lack of enzymatic activity might be due to the relatively short period of incubation of the duodenal contents with the casein solution. Although this may seem to be a valid objection, it is considerably weakened by the fact that in 4 or 5 cases very definite proteolytic activity was shown under standard conditions. Further work with this method, using longer periods of incubation, is planned, as the technic in this method makes it very intriguing.

CONCLUSIONS

1. Functional disturbances of the pancreas present definite diagnostic difficulties.

2. A dependable and clinically applicable test for pancreatic enzymatic activity is an admitted necessity.

3. Only one enzyme need be used as the index of the whole enzymatic activity of the pancreas.

4. The study was confined to trypsin, because the evidence available indicated that the proteolytic enzyme was the most constant index of pancreatic enzymatic activity.

5. The McClure *et al.*, method appears to be the most logical one and fulfills the requirements of a clinically applicable test in that:

(a) From the available evidence it seems to be constant in its factors, physicochemically correct, and scientifically accurate.

(b) It makes use of the familiar principles of blood chemistry examination.

(c) It utilizes solutions and apparatus present in any laboratory or very easily obtainable.

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ABSTRACT OF DISCUSSION

THOMAS A. JOHNSON (Drexel Hill): Pancreatic enzymatic tests constitute the *bête noire* of gastroenterologists. At the present time there is no single test for pancreatic enzymes that merits unqualified approval. Unfortunately, most of the proposed methods are indirect.

A consideration of the value of any proposed enzy-

matic test that has duodenal intubation as its basis must not overlook the fact that the duodenal contents to be tested for pancreatic enzymes may be a mixture of stomach and duodenal food contents, stomach secretions, duodenal secretions, bile, and pancreatic juice in constantly varying proportions. To assume *a priori* that testing the so-called "B" fraction of bile for pancreatic enzymes constitutes an entirely satisfactory measure of pancreatic functions seems unwarranted on the basis of present knowledge.

There is by no means a universal agreement that all 3 of the principal pancreatic enzymes (i.e., trypsin, amyllopsin, and steapsin) are always excreted in equal concentrations. McClure and his co-workers believe that there is to some degree a specificity of response of trypsin, amyllopsin, and steapsin depending on whether or not the stimulus in the duodenum is predominately protein, carbohydrate, or fat. It has not been demonstrated that functional disturbances of the pancreas may not be evidenced by a lessening of the secretion of any one of its enzymes.

Before any test for pancreatic function is accepted, the following factors should be considered:

1. The limits of normality of the test should be definitely established.

2. Repeated tests on the same individuals should give relatively constant results.

3. There should be pathologic confirmation of the results of the tests on abnormal cases; as a corollary, there should be a better understanding of the relation of the extent of the pathologic lesion in abnormal cases to the percentage variation of the test from normal.

To date there has been no work that completely fulfills these requirements. Until the above requirements are satisfied, the accuracy of any test for pancreatic function is questionable and the clinical application one of conjecture.

In general, we agree with Dr. Stein that the McClure method offers some promise as a test for tryptic activity. Our experience does not coincide with that of Dr. Stein in the matter of the uncertainty of the endpoint in the Willstatter test. At the Graduate Hospital in Philadelphia we are in the process of collecting a group of pathologic pancreatic cases which we hope to report.

THE RÔLE OF INFECTION AND OF DISTURBED CHOLESTEROL METABOLISM IN GALLSTONE GENESIS*†

HENRY L. BOCKUS, M.D., JOHN H. WILLARD, M.D., AND HARRY N. METZGER, M.D., PHILADELPHIA

Since the work of L. Aschoff and Bacmeister in 1909, the single radiate cholesterol gallstone has been considered to be the result of a disturbance in cholesterol metabolism. Likewise, there are some who believe that the formation of the more common mixed or calcium bilirubinate-cholesterol stone may depend in some measure upon an underlying cholesterol diathesis. However, infection of the gallbladder seems to be more frequently accepted as the usual predisposing, if not the actual exciting, factor in the genesis of the mixed stone. A review of the literature fails to disclose the actual manner in which the common stone is routinely formed and leaves a doubt concerning the relative importance of primary infection, a lipemic disturbance, an endocrine disorder, or an hepatochemical abnormality.

For a number of years the authors have had available a source of material coming to operation which could be thoroughly investigated, permitting an exhaustive analysis of all clinical and laboratory data which might have a bearing on the relative importance of the factors which are considered pertinent to the genesis of the more common types of gallstones.

One hundred and fifty-six cases have been included. Twenty-three cases or 14.8 per cent were radiate cholesterol stones, 128 cases or 82.0 per cent were of the mixed or calcium bilirubinate-cholesterol variety, and 5 cases or 3.2 per cent were pure pigment stones. The relevant statistical data in each group will be discussed.

CHOLESTEROL STONE CASES

Contrary to the original concept of Aschoff, the radiate cholesterol stone does not always occur singly. A single stone was found in each of 17 patients; 3 had 2 stones each; 2 had 3 stones each; and one had 4 stones. All patients were females except one, and only one Negro was encountered. The average age was 42, and the habitus was either hypersthenic or sthenic in 94.3 per cent of the cases. Seventy-four per cent of the women had borne children; 43 per cent of these related the onset of their gallbladder symptoms to pregnancy. A history suggestive of some relationship between the occurrence of symptoms and the menstrual function was elicited in 50 per cent. A history of typhoid fever was not obtained in any case. Basal metabolic studies carried out on 13 patients showed 84.6 per cent to be normal and 15.4 per cent low (below minus 15). The blood cholesterol levels are of

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TABLE I
GENERAL ANALYSIS OF CASES BY STONE GROUPS

	Number of cases	Percentage of cases	Female (per cent)	Average age	Hypersthenic or sthenic habitus (per cent)	White (per cent)
Cholesterol stone group	23	14.8	95.7	42.4	94.3	95.7
Mixed stone group	128	82.0	84.4	41.8	80.0	96.6
Pigment stone group	5	3.2	100.0	43.0	100.0	100.0
Entire group	156	....	86.5	....	83.0	96.6

interest.¹ Twenty-three and five-tenths per cent were under 180 mg., 11.8 per cent were between 180 and 199 mg., and 64.7 per cent were over 200 mg. The average level for the group was 215.3 mg.

Either cholesterol crystals or calcium bilirubinate pigment crystals were seen in the bile pre-operatively in 15 cases. In 9 instances or 60 per cent cholesterol crystals were recovered. Pigment crystals occurred in only 13.3 per cent of cases, and both cholesterol and pigment crystals in 26.7 per cent of cases. It is of significance to record that gallbladder function was impaired in 60.9 per cent of cases of which it was actually absent in 30.4 per cent. Normal function was maintained in only 39.1 per cent of cases.

Gallbladder cultures were planted at operation in 12 cases with the recovery of a pathogenic organism in 1 case (8.3 per cent)—a *Streptococcus viridans*. Cultures were taken from the center of the stone in 5 cases. Pathogenic organisms were not found.

In 11 of the 23 cases gross evidence of inflammatory change was noted in the gallbladder. A pathologic diagnosis of simple chronic cholecystitis was made in 7 cases, and the remaining 4 cases had either common or cystic duct stone in addition. A cholesterosis of the gallbladder was found in 3 patients, an incidence of 13 per cent.

PURE PIGMENT STONE

Too few cases of pure pigment stone were encountered for purposes of analysis. It is of interest to note that pigment crystals without cholesterol crystals were recovered from the bile in 4 of 5 cases.

CALCIUM BILIRUBINATE-CHOLESTEROL
(MIXED) STONES

This common variety occurred in 128 patients or 82 per cent of the total number. Eighty-four and four-tenths per cent of the group were of

the female sex. The average age was 41.8 with an age range from 18 to 68. Previous pregnancies were recorded in 86.3 per cent of the women, only 11 of whom were primipara. The onset of symptoms was related to a pregnancy in 39 of the 58 women whose histories were considered sufficiently reliable on this point for acceptance. The relationship of symptoms to menstruation was obtained accurately in 47 cases. In 17 per cent symptoms occurred in relation to the menstrual epoch, and in 28 per cent they followed the menopause.

Accurate information from 96 patients revealed an incidence of typhoid fever in 17 cases or 17.7 per cent and of streptococcal infection in 6 cases or 6.3 per cent. Only 20 per cent of the entire group were of the asthenic or slender build.

Basal metabolic studies in 45 cases showed normal rates in 84.4 per cent, low rates (below minus 15) in 11.1 per cent, and high rates (above plus 15) in 4.4 per cent.

Blood cholesterol figures (excluding all cases with jaundice) were available in 92 cases. Thirty-eight per cent were normal (under 180 mg.), 11 per cent borderline high (180 to 199 mg.), and 51 per cent high (over 200 mg.). The average for the group was 192.0 mg. In 82 cases crystals were recovered from the bile pre-operatively. Seventeen per cent showed only cholesterol crystals; 17 per cent revealed only pigment crystals; but in 66 per cent both cholesterol and calcium bilirubinate crystals were found.

The gallbladder had ceased to function in 60 cases in this group. These cases may be pathologically classified as follows: Subacute cholecystitis (cystic duct block), 8; cystic duct obstruction (some degree of hydrops), 13; common duct stone (jaundice previously), 9; common and hepatic duct stones, 3; cholelithiasis following previous cholecystostomy, 1; simple chronic cholecystitis (thickened or contracted, adhesions frequent), 26. In 43 of these cases with non-functioning gallbladders, cultures were planted from the gallbladder contents or wall. A streptococcus was recovered in 7 cases, a colon bacillus in 4 instances, and both colon bacilli and streptococci in 3 cases, giving an incidence of 32.6 per cent with positive cultures in the nonfunctioning

1. A. G. Keller of the Graduate Hospital laboratories performed the cholesterol determinations, using the method which is essentially that of Myers and Wardell with oxalated blood. One c.c. of oxalated blood is mixed with 5 grams of plaster of paris and is dried for one hour at 105° C. The mixture of blood and plaster of paris is then extracted with chloroform for 1½ hours. An aliquot part of chloroform extract is treated with acetic anhydride and sulphuric acid, and matched in the colorimeter with a standard similarly prepared. The normal concentration of cholesterol in the blood ranges from 140 to 170 mg. per 100 c.c. of blood.

gallbladder group. In 30 per cent of 20 cases in this group in which the stones were cultured, a growth of either a streptococcus or colon bacillus or both was reported.

In 48 of the mixed stone cases the gallbladder was considered to be functioning partially but inadequately, based upon roentgen, biliary-drainage, and operative findings. These cases were classified pathologically as follows: Simple chronic cholecystitis, 31; common or hepatic duct stones or both (jaundice), 10; jaundice without common duct stone, 2; subacute cholecystitis, 4; advanced hepatitis, 1. In every instance some degree of inflammatory reaction in the gallbladder was noted. Cultures from the contents and wall of the gallbladder in 26 cases of this subgroup showed an incidence of 19 per cent with streptococci, colon bacilli, or both. Twenty-two per cent of stone cultures showed either a streptococcus or colon bacillus or both.

Gallbladder function was considered to be normal in only 17 cases. They were pathologically classified as follows: Simple chronic cholecystitis, 10; slight cholesterosis, 1; subacute cholecystitis, 1; cystic duct stone, 1; common duct stone, 1; normal gallbladder, 3. Eight of the normally functioning cases were cultured and all were sterile.

When the bacteriologic study is analyzed on the basis of degree of gallbladder function, it will be noted that the highest percentage of positive cultures is obtained in the nonfunctioning group and that the percentage of positive cultures is inversely proportional to the degree of gallbladder function (see Table 6).

In the entire mixed stone group, pathogenic organisms were recovered from the gallbladder contents or wall in 19 of 77 cases or 24.7 per cent and from gallstones in 25 per cent of 32 cases.

COMPARISON OF THE RADIATE CHOLESTEROL STONE GROUP WITH THE MIXED STONE GROUP

The differences can be seen at a glance by consulting Fig. 1. The factor of infection seems less evident in the cholesterol group—a history of typhoid fever was not obtained, and only 8.3 per cent of cases yielded pathogenic organisms on gallbladder culture. In the mixed stone group a history of typhoid fever was obtained in 17.7 per cent of cases, and pathogenic organisms were recovered from the gallbladder in 24.7 per cent of cases. There was a higher incidence of gallbladder dysfunction in the mixed stone

group, which may be due to a greater likelihood of the smaller mixed stone obstructing the cystic duct. It is possible that the larger percentage of positive cultures in the mixed stone group as compared with the cholesterol group may depend on the higher incidence of gallbladder dysfunction in the former.

In comparing those factors which may be considered relevant to some underlying cholesterol diathesis, it is noted that differences between the 2 groups do exist but they are not great. The incidence of hypercholesterinemia and the average cholesterol level is slightly greater in cholesterol stone. Female sex predominance in the entire group is comparable to other series of cases, but the cholesterol stone group shows 11 per cent higher incidence in the female sex than the mixed stone group. Similarly, in the 2 groups the incidence of the sthenic and hypersthenic habitus is high, but it is greater in the cholesterol group. The tendency to low metabolic rates in both groups was not noteworthy although the occurrence of low rates was greater in the cholesterol group. The incidence of pregnancy and the frequency with which the onset and recurrence of symptoms were related to pregnancy were higher in the mixed stone group. A striking difference was found in the type of crystalline debris recovered from the bile. Only cholesterol crystals were recovered in the majority of the cases with pure cholesterol stones, whereas in the mixed stone group the bile microscopy revealed a mixture of both cholesterol and pigment crystals.

TABLE 2

ANALYSIS OF CASES WITH REGARD TO PREGNANCY, MENSTRUAL FUNCTION, AND TYPHOID FEVER

	Women who had been pregnant (per cent)	Onset or recurrences related to pregnancy (per cent)	Relation of symptoms to menstrual function (per cent)	History of typhoid fever (per cent)
Cholesterol group	74.0	43.0	50.0	....
Mixed group ..	86.3	67.0	45.0	17.7
Pigment group ..	80.0	66.6	....	20.0
Entire group ..	83.8	62.7	43.0	14.5

THE RÔLE OF INFECTION IN THE GENESIS OF GALLSTONES

The greatly increased incidence of typhoid fever in the mixed stone group as compared with the cholesterol group may be considered to favor infection as a more frequent cause of the mixed stone. No one questions the occasional case in which the typhoid bacillus is harbored in the gallbladder (A. L. Walton), but it is rarely recovered from the gallbladder at operation or from gallstones (D. P. D. Wilkie). Cholecystitis is an infrequent complication of typhoid fever (William Osler; H. Rolleston and J. W. McNee; Webb-Johnson). I. Holscher found pathologic changes in the gallbladder in only 5 of 2000 ne-

2. The data on incidence of the *Staphylococcus albus* was not recorded. In most instances in which this organism was recovered from the gallbladder, cultures planted from a cotton applicator applied to the serosa resulted in a growth of the same organism, obviously a contaminator.



Fig. 1. Factors of metabolism and infection in radiate cholesterol stone cases as compared with common mixed stone cases.

crospied cases of typhoid fever. These statistics suggest that the rather frequent late development of stones in patients who have had typhoid fever may depend upon some factor other than the implantation of infection.

Many investigators have reported the recovery of from 10 to 66 (E. C. Rosenow) per cent of pathogenic organisms from the gallbladder in cholelithiasis. Streptococci and colon bacilli are more frequently recovered. E. C. Rosenow, D. P. D. Wilkie, and A. J. Watson believe that infection arrives via the blood stream, the former incriminating distant foci and stressing recovery from the wall rather than the contents of the gallbladder. Both W. A. Mackey, and B. Williams and D. G. S. McLachlan reported the recovery of organisms from the contents of the gallbladder just as often as from its wall or from the cystic duct gland. Their studies suggest the bowel, rather than distant foci, as the origin of the organisms because of the high recovery of the colon bacillus and an enterogenous type of streptococcus. B. Moynihan, John B. Deaver, and E. R. Graham have favored primary in-

volvement of the gallbladder wall rather than the mucosa in the development of cholecystitis. Our operative findings do not support this viewpoint. In most instances pathologic changes were more marked in the mucosa than in the serosa, but in many the involvement was so advanced that it was impossible to get any idea of the site of primary invasion. Concomitant hepatitis, so commonly used as an argument favoring primary serosal involvement, was not found in any instance in which it could not have resulted from mechanical obstruction or acute cholecystitis. A diffuse hepatitis must be exceedingly rare in simple cholelithiasis in the absence of obstructive jaundice or acute cholecystitis.

The finding of living bacteria in gallstones (21 per cent in our series) does not prove their responsibility for the stones nor the presence of a pre-existing cholecystitis. We believe from extensive experience with nonsurgical bile drainage that the colon bacillus and probably the streptococcus may be recovered from the bile by biliary drainage when they are really in transit, as in

TABLE 3
ANALYSIS OF CASES WITH REGARD TO BASAL METABOLISM AND BLOOD CHOLESTEROL

	Basal Metabolism			Blood Cholesterol (excluding jaundice)			Average mg.
	Normal (per cent)	Hypo- (per cent)	Hyper- (per cent)	Normal (per cent)	high (per cent)	High (per cent)	
Cholesterol group	84.6	15.4	....	23.5	11.8	64.7	215.3
Mixed group	84.4	11.1	4.4	38.0	11.0	51.0	192.0
Pigment group	100.0	....	....	....	75.0	25.0	204.5
Entire group	84.6	11.9	3.4	34.5	13.3	52.2	....

many of these cases no previous or subsequent findings justified a diagnosis of cholecystitis.

One of the reasons for the recent trend favoring a subserosal rather than mucosal implantation of infection in gallbladder disease has been the difficulty experienced by experimentalists in inducing cholecystitis by the injection of bacteria into the gallbladder. It has been found necessary to damage the gallbladder or to interfere with its drainage before an experimental cholecystitis will develop. Reverting again to Table 6, it will be seen that the recovery of pathogenic organisms from the gallbladder at operation was inversely proportional to the degree of gallbladder function. If this finding is confirmed by other observers, it will constitute a strong argument against the infectious origin of most stones. It seems probable that infection and associated inflammatory changes within the gallbladder in many cases of cholelithiasis result from and are secondary to interference with gallbladder function brought about by mechanical blockage of the biliary ducts by the calculi. Damage to the mucosa by the constant irritation of the stones likewise constitutes a likely cause of secondary infection and cholecystitis.

As a result of a careful review of the literature, as well as a critical analysis of our clinical material, it has been concluded that there is insufficient evidence at present to assign to gallbladder infection or cholecystitis a primary rôle in the genesis of the majority of gallstones.

THE RÔLE OF CHOLESTEROL METABOLISM IN THE GENESIS OF GALLSTONES

The solitary radiate cholesterol stone contains from 98 to 99 per cent cholesterol (M. Pickens, G. O. Spanner, and L. Bauman). A. A. F. Peel found from 80 to 98 per cent cholesterol in all types of gallstones. All agree that a large proportion of the more common varieties of cholelithiasis consists of cholesterol. A considerable number of the mixed stones in our series may have been formed in the same manner as the radiate cholesterol stone of Aschoff and Bacmeister, since many of them had a sizeable nucleus of radiate cholesterol columns.

Although the blood cholesterol level is not constantly high in cholelithiasis, our findings are in accord with those of previous reports (F. D. Gorham and V. C. Myers; Stanley P. Reimann and J. A. H. Magoun; T. G. Schnabel; V. C. Myers; R. H. O. B. Robinson) that the average level in patients with gallstones is higher than in controls of the same age and sex. The predisposition toward cholelithiasis in the female sex, 86.5 per cent in this series, favors the

existence of some disturbance other than infection which may be playing a major rôle in pathogenesis. Women have a higher average blood cholesterol level than men and are subject to cycles of wide variation in the concentration of circulating cholesterol. These cycles are related to the childbearing function. In this series 83.8 per cent of the women had borne children.

There seems to be no doubt of the tendency toward elevation of the blood cholesterol level during the latter end of pregnancy. However, there is no such unanimity of opinion concerning concentration of cholesterol in bile during pregnancy (W. Schaeffer, E. E. Pribram).

Another important link in the chain of evidence favoring the metabolic genesis of calculi

TABLE 4
BILIARY DRAINAGE

	<i>Cholesterol crystals only (per cent)</i>	<i>Calcium bilirubin crystals only (per cent)</i>	<i>Calcium bili- rubin and cholesterol crystals (per cent)</i>
Cholesterol group . . .	60.0	13.3	26.7
Mixed group	17.0	17.0	66.0
Pigment group	0.0	80.0	20.0
Entire group	22.6	19.7	57.7

is the observation of A. H. Aaron and others that gallbladder function is disturbed during pregnancy. Administration of tetraiodophenolphthalein frequently fails to cause gallbladder visualization, and emptying of the viscus following the ingestion of a fat meal is often absent or inadequate. In this connection mention should be made of the relationship which gallstone attacks bear to pregnancy. Over 60 per cent of women in our series who had borne children acknowledged such relationship.

The onset of gallstone symptoms just preceding or during menstruation, noted in our cases and by others, finds some explanation in the experimental laboratory as Moynihan, and Ruth Okey and Ruth Boyden have noted high blood cholesterol levels just preceding the onset of menstruation.

The existence of some abnormality in cholesterol metabolism in patients with cholelithiasis is suggested by the observation of J. M. McEachern and C. R. Gilmour that the feeding of cholesterol caused an average maximum increase in blood cholesterol of 16 per cent in patients with cholelithiasis as compared with 8.3 per cent average increase in controls. The inability to metabolize fats normally may constitute a diathesis in gallstone bearers. This could account for the frequency with which the ailment occurs in the obese. Several investigators (G. Luden and others) have reported an elevation of the blood cholesterol level in animals after chole-

terol feedings, and Dewey produced cholesterol stones in rabbits in this way. Another evidence of a disturbance of fat metabolism in gallstone genesis is the development of initial symptoms in some patients in our series following a prolonged fast in order to reduce weight rapidly. Conflicting results have been noted concerning the effect of fasting on the blood cholesterol level in the experimental animal, although W. R. Bloor, C. W. Greene and W. S. Summers, M. A. Rothchild, and W. G. Lennox have recorded some tendency to elevation in the fasting animal. In diabetes the disturbance in fat metabolism and hypercholesterinemia have been held responsible for the increased tendency to cholelithiasis (D. B. M. Gross; H. M. Hunt and J. S. DeFrates; Collins; Joslin; C. M. Jones *et al.*). Even the high incidence of typhoid fever in cholelithiasis has been explained on a metabolic basis by Chauffard. He felt that the hypercholesterinemia, which is common during convalescence from typhoid fever and results from rapid wasting incidental to fasting and increasing metabolism, accounts for the deposition of stones.

Experiments to date have not established a constant relationship between the concentration of cholesterol in the blood and in the bile, and the mechanism responsible for the varying ratio is not clearly understood. The relative concentration of bile acids and bile cholesterol is thought to be of considerable importance in gallstone genesis (L. Lichtwitz, E. Andrews *et al.*, Michaud, and others). Cholesterol is held in suspension by the bile acids. A decrease in bile salts or an increase in bile cholesterol may cause the cholesterol to precipitate with stone formation. Andrews, *et al.*, report that, if the ratio

TABLE 5				
CULTURES AND GALLBLADDER FUNCTION				
	Percentage of positive cultures at operation		Abnormal gallbladder function	Gallbladder function absent
	Gallbladder	Stone	(per cent)	(per cent)
Cholesterol group ..	8.3	0.0	60.9	30.4
Mixed group	24.7	25.0	84.0	46.0
Pigment group	33.0	0.0	60.0	20.0
Entire group	20.6	21.0	80.3	43.6

of salts to cholesterol falls below 1 to 13, precipitation of cholesterol begins. These workers give the normal ratio in man as 1 to 20 or 30. A higher concentration of bile cholesterol has been noted in fasting dogs (J. M. H. Campbell and P. D. McMaster) as well as in dogs subjected to cholesterol feedings (A. Wright and G. H. Whipple). Evidence has recently been supplied by E. Andrews *et al.*, and C. Riegel *et al.*, that inflammation or infection of the gallbladder may be associated with a decrease in bile salt concen-

TABLE 6
BACTERIOLOGIC FINDINGS IN THE MIXED STONE GROUP
SEGREGATED ACCORDING TO DEGREE OF
GALLBLADDER FUNCTION

Percentage of Recovery of Pathogenic Organisms				
Cultures from	Nonfunctioning gallbladder (per cent)	Partial functioning gallbladder (per cent)	Normal functioning gallbladder (per cent)	Entire group (per cent)
Gallbladder ..	32.6	19.0	0.0	24.7
Stone	30.0	22.0	....	25.0

tration and possibly with precipitation of cholesterol. There are undoubtedly many factors—alimentary, metabolic, hepatogenous, and infectious—which influence this ratio, and much remains to be done before this important phase of gallstone genesis is thoroughly understood.

A discussion of the metabolic aspect of gallstone genesis would be incomplete without further mention of the part played in a disturbance of function of the endocrine glandular system. The establishment of a fairly constant relationship between blood cholesterol levels and basal metabolic rates in hypo- and hyperthyroidism by G. Luden, A. A. Epstein and H. Lande, L. M. Hurxthal *et al.*, and H. L. Blumgart *et al.*, suggests hypothyroidism with its associated hypercholesterinemia as a possible underlying cause of gallstones. It was for this reason that we were particularly anxious to have basal metabolic and blood cholesterol figures on a large series of cases of pure cholesterol and mixed types of gallstones. The figures do show a slight trend toward low metabolic rates in both types of stones, but the tendency is not sufficiently striking to establish hypothyroidism as an important factor in gallstone genesis. Both the adrenals and the hypophysis exert some influence over cholesterol metabolism (C. Maranon, L. Aschoff, A. S. Warthin, J. M. Munoz, and others), but the exact mechanism of their action in this respect is not settled.

In addition to the endocrine system and the many other factors already mentioned, further consideration must be given to the reticulo-endothelial and hematopoietic systems as well as to an avitaminosis or a disturbance of the acid-base balance, as they are likewise capable of influencing cholesterol metabolism. Possibly more attention paid to the systems presiding over cholesterol metabolism and their influence on bile chemistry may lead to a better understanding of the problem than has the tremendous amount of work in the past devoted to the study of gallbladder infection and inflammation.

SUMMARY

The clinical and laboratory data which could be considered pertinent to the genesis of the

common types of calculi in 156 cases of proven gallstone disease have been analyzed. The cases have been segregated into 3 groups, depending upon stone types: Pure radiate cholesterol stones, calcium bilirubinate-cholesterol (mixed) stones, and pigment stones.

A comparison has been made between the findings in the first 2 groups, particular attention being paid to an analysis of those factors bearing on infection and disturbed cholesterol metabolism in gallstone genesis. The rôle of infection has been reviewed in the light of our findings with the conclusion that gallbladder infection and cholecystitis probably do not play an important rôle in the genesis of the common mixed stone. Our findings, however, justify the viewpoint that associated infection is more commonly observed in the calcium bilirubinate-cholesterol stone group than in cases with the pure radiate cholesterol stone. Evidence is given which suggests that the concomitant inflammation of the gallbladder so frequently encountered results from rather than causes the deposition of stones.

A mobilization of all available information fails to establish the mechanism by which a disturbance of cholesterol metabolism is responsible for the deposition of cholecytic calculi. However, the data submitted suggest that an alteration in cholesterol metabolism plays an important rôle in the genesis of both the pure cholesterol and the ordinary mixed gallstone.

Note—The authors wish to express their appreciation to Dr. James F. Monaghan for supplying them with the detailed information on a number of cases from the Bryn Mawr Hospital.

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ABSTRACT OF DISCUSSION

WALTER ESTELL LEE (Philadelphia): The authors have failed to find any proof of the generally accepted belief that infection plays the primary rôle in the genesis of gallstones, but rather that infection is probably secondary to the presence of gallstones. The findings seem to show definitely that infection is more commonly observed in multiple calcium bilirubinate-cholesterol stones than in the pure radiate cholesterol type, and that infection is practically always present when drainage of the bile from the gallbladder is obstructed.

Evidence has been presented that an alteration in cholesterol metabolism plays a very important rôle in the genesis of both the pure cholesterol and the ordinary mixed stone. There is no explanation at the present time of the mechanism by which this cholesterol metabolism is responsible for the deposition of the cholecytic calculi, but it seems probable that, if in the future more attention is paid to the endocrine system presiding over cholesterol metabolism and its influence on biochemistry, a better understanding of the problem may be obtained than has resulted from the enormous amount of work devoted in the past to the study of gallbladder infection and inflammation.

In the careful development of this thesis on the genesis of gallstones the authors have unearthed many interesting facts, among which the following are the most striking.

1. Contrary to the original concept of Aschoff that the radiate cholesterol stones always occur singly, Dr. Bockus and his collaborators have not found this true in their group, for in several instances there were multiple cholesterol stones.

2. In the comparison of the radiate cholesterol type of stone with the mixed type, the authors summarize the differences very clearly in Fig. 1: (a) Infection was less frequent in the radiate cholesterol group; (b) a history of typhoid fever was not obtained in any patient with this type of stone; (c) in only 8.3 per cent of cases in the cholesterol group were pathogenic organisms found in the gallbladder. In the mixed stone type he found a history of typhoid fever in 17.2 per cent of the cases, pathogenic organisms from the gallbladder in 24.7 per cent, and a higher incidence of gallbladder dysfunction in the gallbladders containing stones of the mixed type.

3. The very small percentage of cases in which it was possible to obtain a history of typhoid fever in this group of 158 cases is remarkable considering the fact that many of the patients lived in Philadelphia, where in the past the morbidity in typhoid fever has been as high as, if not higher than, that of any of the other American cities. Chaufford believes that the former high incidence of gallstones in typhoid fever may be explained by the hypercholesterinemia, which is common during the period of convalescence in this disease and results from the rapid wasting incidental to fasting and increased metabolism. The feeding of typhoid patients instead of starving them as in the past may have some bearing on his low incidence.

4. The authors have called attention to the work of L. Lichtwitz, A. Chaufford, and others, demonstrating that the relative concentration of bile and cholesterol is to be considered in gallstone genesis. They claim that cholesterol is held in suspension by the bile acids and that a decrease in the bile salts or an increase in bile cholesterol may cause the cholesterol to be precipitated and gallstones to form. E. Andrews and his associates have demonstrated that, if the ratio of bile salts to cholesterol falls below 13, precipitation of cholesterol begins. E. Andrews gives the normal ratio in man of bile salts to cholesterol as 1 to 20 or 30.

5. The incidence of pregnancy (86.3 per cent) and the association of gallstone symptoms with the menstrual cycle (45 per cent) was found to be definitely higher in the mixed stone group. Cholesterol crystals were recovered in the majority of cases of the pure radiate cholesterol stones, whereas in the mixed stones the gallbladder bile revealed cholesterol and pigment crystals.

Perhaps one of the most valuable contributions which Dr. Bockus and his associates have made to the subject of the diagnosis of cholelithiasis has been his calling attention to the significance of the presence of these crystals in the gallbladder bile obtained by nonsurgical drainage. In no patient operated upon by us for Dr. Bockus, in whom he has preoperatively obtained crystals of cholesterol, calcium bilirubinate and cholesterol, or pigment, have we failed to find gallstones at operation. We have come to look upon this finding of crystals in the gallbladder bile as pathognomonic of cholelithiasis.

The amount of work and time which this statistical

and clinical study represents is not shown by this presentation. I doubt if any one would be able really to appreciate it unless they should undertake a similar task. My greatest disappointment, as a small contributor to the clinical phase of the work, was in finding what a relatively small number of the total cases operated upon have been used in this final report. The authors found that most of the records were not sufficiently complete for statistical analysis. They have stated that they had requested the surgeon to make the

following observations at the operating table: (1) The status of the gallbladder function, (2) the gross pathology of the gallbladder, and (3) the type of stone found. They also requested that cultures be made from the serosa, mucosa, gallbladder contents, and gallstones. All of these requests were reasonable and entirely practical. If surgeons would routinely make such observations and carefully record them, in a very short time there would be a sufficient amount of reliable statistics available.

THE INDICATIONS FOR SURGERY IN GALLBLADDER DISEASE*

DAMON B. PFEIFFER, M.D., PHILADELPHIA

The liver is the greatest gland in the body, both in bulk and function. Although a derivative of the intestinal tract, it does not exist solely for the purpose of furnishing a secretion to the intestine.

The bile, the ducts which convey it, and the gallbladder, which stores and concentrates a part of it, derive their importance not so much because of the digestive functions of bile, which are neither indispensable nor too well understood, as because of the profound effects upon the liver and the general condition produced by stoppage, diversion, or chronic or acute infection of the bile passages. In spite of speculation and experiment, the bile channels have not been shown to have, nor does it seem probable that they do have, essential functions of their own except those which minister to the welfare of those manifold metabolic activities of which the liver is the keystone. It is difficult to understand, therefore, why anyone should regard lightly the presence of acute or chronic disease of the bile passages or the gallbladder. Such disregard is possible only because nature has so endowed the biliary system with factors of safety that the bills for imprudence are usually presented in later years, thus allowing plenty of time and opportunity for fads and follies and the sowing of wild pathologic oats.

Great gain has accrued to medicine and the population in recent years through appreciation of the rôle of infective foci within the body in producing toxic and infective effects upon organs at a distance and the body as a whole. The infected gallbladder is one of the major offenders. Years ago Babcock, of Chicago, insisted upon the causal relationship of chronic gallbladder infection to degenerative disease of the heart. Many clinicians of great experience

have agreed with him, and recently Thomas Fitz-Hugh, Jr., and Charles C. Wolferth have brought forth electrocardiographic confirmation of the marked improvement of cardiac function in certain cases following cholecystectomy. It takes years to accumulate this sort of personal experience. A short time ago I was consulted by a woman in her early sixties who had a cancer of the breast. I had seen her last about 10 years previously in consultation with the attending physician. She was then in the midst of an acute attack of cholecystitis with palpable gallbladder, extreme tenderness, and marked prostration. Operation was advised after treatment to induce subsidence of the acute process. She improved and, abetted by her physician, refused operation. To her great satisfaction she escaped surgery. But she continued to suffer from digestive disturbance, deteriorated in health, and at this time had auricular fibrillation which prevented the radical operation she should have had for cancer of the breast.

One of my recent patients—a man, age 55—died on the eleventh day after operation. His symptoms began 12 years ago. At that time his physician and a competent surgeon advised operation. Unfortunately he consulted an eminent diagnostician, who took a light view of gallbladder disease, and thus reinforced in his natural dislike for operation, he declined it. His attack finally subsided and for a number of years he considered himself well. Then 5 years ago a severe attack with jaundice occurred. Again he temporized and improved. Again he got along fairly well with occasional attacks of indigestion and pain. Finally about 7 weeks ago a very severe seizure came on with fever and jaundice, and by the time he came to operation his general state was desperate. He had stones in the gallbladder and common duct, and the streptococcus was recovered from the bile.

* Read before a Joint Meeting of the Section on Medicine and the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

He died from a combination of myocardial damage with kidney and liver insufficiency.

Recently my uncle underwent a dangerous operation because of stones in the common duct. Twenty-five years ago, while I was still an intern, he was admitted to the Lankenau Hospital on the service of John B. Deaver. He had serious digestive disturbance with signs of subacute cholecystitis. He decided against operation, which Dr. Deaver advised, and consulted Dr. Einhorn, of New York, the Nestor of gastroenterologists. He improved under treatment and thought for a long time he had avoided surgery. Of late years he has had considerable digestive disturbance, and finally came the attack which would have terminated his life except for surgery. Many patients are probably now being tided over the acute attacks only to sustain organic damage and enter the period of the more serious complications which come as a rule in later years.

How much has the therapy of gallbladder disease actually advanced in recent years? Will the present wave of enthusiasm for tubes and new drugs go the way of the spas and diets and drugs of yesteryear? In dealing with a disease, the natural history of which normally is that of quiescence alternating with activity, how cautious should the clinician be in evaluating the results of palliative therapy? "You say you cured him," exclaimed a wise old physician. "If he dies, will you say you killed him?" If potentially progressive pathologic involvement is allowed to remain, there should be no talk of cure. Blackford, King, and Sherwood in 1933 reported a 5 to 15 year follow-up on 200 cases of gallbladder disease treated medically and not operated upon within 6 months of the original attack. On a medical régime 34 per cent got along satisfactorily, but 48 per cent had come to operation or should have done so. What is needed is more medical follow-up series to determine the actual hazards of medical treatment. Many such series have been collected by surgeons so that the mortality and end results of surgical treatment are much better known.

It is probable that the concealed morbidity and mortality from chronic biliary disease exceeds that of the more dramatic seizures. In this latter category fall the acute colics, the acute infections with or without gangrene or perforation, biliary and suppurative peritonitis, chronic and acute pancreatitis, gallstone obstruction of the bowels, and the more common obstruction of the cystic and common ducts by stones. It is in the latter type of cases that surgery is most often invoked and in a large proportion of instances

only after repeated attacks or in the presence of actual catastrophe. It is well known that many patients go along with slight or occasional inconvenience though they may harbor stones and the evidence of previous infection in the gallbladder. The difficult question is to determine what sign or signs indicate the advisability of surgical intervention and when. How much can medical treatment influence the occurrence of acute attacks or palliate the effects of chronic disturbance? Is it wise to encourage subsidence of acute attacks in the hope that such a case will re-enter and remain in the large group of relatively innocuous gallbladder cripples? Obviously to attempt to lay down rules which will settle once and for all the course of action in any individual case is futile. Observations must be piled upon observations, and personal experiences must be exchanged.

For the purposes of this paper, 137 consecutive cases were collected in the past 5 years in my service at the Abington Memorial Hospital. This period was selected largely to determine if the teachings and practice of medical gallbladder therapy had produced any effect upon the type of cases now referred to surgery. Six of these patients died after operation, a mortality of 4.37 per cent. The youngest person in this fatal group was aged 38. She had a long-standing history of gallbladder indigestion punctuated by acute attacks. There were stones in the common duct as well as the gallbladder. Death occurred on the twenty-seventh day of a creeping peritonitis, probably streptococic. The remaining deaths all occurred in patients over age 60. The oldest, age 82, had an acute perforation of the fundus of the gallbladder due to stone, and a cholecystectomy was done the following day. There had been high blood pressure and cardiac attacks for several years, and while apparently doing well on the fourth day she collapsed suddenly. Similarly a woman, age 64, with a history dating back 20 years and severe attacks during the previous 5 years, following cholecystectomy for stones and chronic cholecystitis collapsed suddenly the day after operation. A man, age 66, with symptoms for 25 years, had always dreaded and avoided operation. Finally he had an attack due to stones in the common duct and gallbladder with acute inflammation and jaundice. He died a cardiac death on the eleventh day. A woman, age 63, who had long-standing indigestion and painful attacks for 7 years, with stones in both gallbladder and common duct, died 2 months after operation of *Staphylococcus aureus* blood-stream infection following postoperative parotitis. Finally, a

man, age 67, with a history of indigestion extending for years and previous acute attacks was admitted with a subacute perforation of the gallbladder and died of pneumonia following operation. During the same period 2 patients died of acute pancreatitis, apparently a complication of a calculous gallbladder. One other patient barely escaped death from intestinal obstruction due to a large gallstone which had ulcerated into the duodenum and become impacted in the ileum.

Surely there can be no difference of opinion concerning these cases. All had abundant warning. All had advanced pathologic involvement. All except one had entered the late period of declining physical vigor and increased liability to serious complications.

As to the remaining 131 patients, many of these also were in the older age groups. The oldest was age 76. He had an acute perforation but fortunately recovered. The youngest was age 16. The average age however was 44 as contrasted with about 64 in the fatal cases. The duration of symptoms prior to operation varied from acute cholecystitis without previous symptoms to 40 years. The average was 5 years and 3 months.

A further interesting point is found in the fact that the severest cases, comprising those which showed at operation suppurative, gangrenous, or perforative lesions of the gallbladder, were patients who had been ill on an average of more than 5 days before being sent to the hospital. Apparently there is little fear of gallbladder disease or an overly optimistic view as to the efficacy of expectant treatment. Approximately 60 per cent of the cases had stones, and 40 per cent showed chronic cholecystitis with or without pericholecystic adhesions. There were 199 cholecystectomies, 8 cholecystotomies, and 12 choledochostomies.

Follow-up data were obtained on 119 cases. Two had died of heart disease 1 year and 2 years after operation, respectively. Seventy patients with stones all reported good results though 2 had required cholecystectomy for continued symptoms after cholecystostomy. Eighty-eight per cent of the total number of cholelithiasis patients, therefore, are known to have a satisfactory result. Not a single traced patient in this group reported an unsatisfactory result.

Forty-three of the stoneless cases were followed. The poor results were all in this group, as has been noted by other observers. One patient is in fair health. Two are unimproved. One of these was neurotic, and it was an error to attempt to cure her by cholecystectomy. Two

patients were unimproved for a considerable time but now report themselves well. The stoneless gallbladders, therefore, register 72 per cent of known cures. It does not seem improbable that some of those who could not be reached were well so that the results in this group are distinctly higher than those commonly reported in operation upon the stoneless gallbladder. If the results in this group are not so brilliant as in the calculous cases, it is also noteworthy that none died of operation.

These results are reported with the obvious criticism that many cases are recent. As time goes on, certain patients will again have some form of indigestion or other trouble and will report themselves as less satisfied. But taken with many other follow-up reports from reliable clinics, they help to erect the incontrovertible fact that not only is the gallbladder not necessary to health but that the diseased gallbladder is a liability without which the individual is better off.

This experience points again to the fact that the mortality of surgery for biliary disease under proper conditions runs directly parallel to the age and condition of the patients and the extent and severity of the pathologic involvement. The low mortality at the earlier ages and in the absence of high-grade lesions places a heavy responsibility upon those who temporize with active and recurring pathologic processes. It should be our aim to cure the patient of his disease rather than relieve him temporarily of his symptoms.

If this principle is granted, it becomes a matter of diagnosis—of determining the kind and degree of pathologic involvement present. This is the great difficulty. Nothing can ever supplant a thorough familiarity with the clinical behavior of gallbladder disease and those conditions which simulate it, such as certain diseases of the kidney, stomach, duodenum, appendix, and colon, and general infective and nervous states. These confusing conditions should be thought of and eliminated. We are in a more fortunate state in the verification of gallbladder disease since the development of modern cholecystography. This is not conclusive in itself however. In this series a cholecystogram was made in 64 cases. In 9 cases the gallbladder was visualized. In 6 of them, however, stones were seen and found at operation. In the remaining 3 operation was carried out on clinical evidence; in 2 stones were found and in the remaining case a chronic cholecystitis. In 1 case stones were reported but were not present. In several cases not included in the

series, the gallbladder was not visualized but was normal at operation, another lesion being responsible for the symptoms. In 55 cases the gallbladder shadow was not seen and a pathologic gallbladder was found. In 29 of these, stones were present but were seen by roentgen ray in only 3 cases.

Similarly the findings by duodenal intubation are helpful but far from conclusive. The clinician who demands roentgen-ray or laboratory proof of gallbladder disease will miss many cases. Tenderness, jaundice, palpable gallbladder, icterus index, the examination of the stools all have their place in the synthesis with the clinical history in the making of a diagnosis.

Once the diagnosis is made, bear in mind that the patient does not belong in the group so often described as the symptomless gallbladder or silent gallstones. If this were the case, he would not be visiting a physician. He is consulting his physician because some sort of pathologic process is in motion, resulting in the symptoms of which he has become conscious. He has a right to expect a cure, and many early cases can be cured by proper handling of hygiene, diet, habits, infections, and medication. I have no quarrel with the conscientious modern gastroenterologist, nothing but admiration for the excellent work which he has done in investigating and devising improved plans of treatment. My difference is with those, whether specialists or general practitioners, who dawdle when action is indicated or become obsessed with the virtues of some favorite plan to deal with disease which is ineradicable by measures other than extirpation. The average span of life has been greatly lengthened in the past few decades largely by elimination of those infective diseases which destroy the young. Let us give the older groups a chance by nipping such destroyers of vitality as biliary tract disease in earlier stages. It is my belief that gallbladder surgery is indicated in

1. All cases of gallstones producing symptoms.

2. All severe acute infections unless contraindicated by the general state, as in typhoid fever. Mild primary infections should be treated medically and the matter of subsequent treatment determined by later developments. A surgical opinion should be secured in all such cases.

3. Recurring biliary colic with or without evidence of associated infection.

4. Persistent or recurring indigestion traceable to gallbladder disease.

In short, major inflammatory or obstructive manifestations always constitute the indications for surgical treatment of gallbladder disease, as

do also minor but definite chronic or recurring symptoms in spite of medical treatment. Patients should not be tided over from attack to attack or treated symptomatically for chronic gallbladder indigestion in the fatuous hope that the disease can be controlled and serious seizures prevented.

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ABSTRACT OF DISCUSSION

HARVEY F. SMITH (Harrisburg): We should all be interested in a paper discussing ways and means for the reduction of mortality and morbidity in cholecystitis. Dr. Pfeiffer has again raised the question of whether or not both can be decreased by a change in the prevailing medical and surgical attitude toward this disease. Has our management become somewhat dogmatic because a regression of acute symptoms seems to be the natural course of events? However we may differ on various aspects of this problem, we will all agree with Dr. Pfeiffer when he urges earlier operation in chronic cholecystitis. If earlier operations were the accepted practice in these cases, the mortality would be negligible and there would be a higher percentage of symptomatic cures because of less damage to the heart and associated organs in the biliary system. In addition, there would be very few cases of acute suppurative cholecystitis. This is the group that carries a 15 to 20 per cent mortality. According to Dr. Pfeiffer's figures, there would be a 24 per cent mortality. This is the group that Dr. Pfeiffer has classed as the dramatic group of cholecystitis and to which he had time to refer only briefly; therefore, I shall limit my discussion to this one particular group, this dramatic group that carries the high mortality.

The treatment of patients with acute suppurative cholecystitis has been a subject of much controversy for several years. The divergence of opinion is on the time of operation. I subscribe to the early operation as a sound surgical principle. The present status is that the delayed or interval operation is a matter of necessity in the majority of these cases, because they are not seen by the surgeon during the first week of their illness.

No routine surgical procedure can be adhered to in all cases. Some of the factors controlling the surgeon's choice of time of operation are in the hands of the physician who first sees the patient. He is the key man. An early definite diagnosis and prompt hospitalization are the first steps in early surgical treatment.

The clinical picture must be our guide. It is not unusual for 2 days to elapse from the time of onset of symptoms before either the experienced internist or surgeon can distinguish between the more common acute exacerbation of chronic cholecystitis and the rarer acute suppurative type. In both cases the cystic duct is obstructed. In the former the obstruction is partial or relieved before circulatory changes occur. Clinical symptoms subside upon relief of the duct obstruction. In the latter the obstruction is complete and persistent. Then follows the pathologic sequence of edema, circulatory impairment, local areas of mucosal necrosis or possibly actual gangrene, and perforation. The clinical symptoms persist or increase in severity. If it were always possible to interpret correctly the clinical picture and visualize accurately the existing pathologic process, this problem of operative management would

be simplified. If every acute case subsided, as some would have us believe, it would be quite safe and satisfactory to plan for the interval operation. But my experience has shown that about 15 per cent fail to regress. Patients in this group come to the surgeon in serious condition for a late operation and an associated distressingly high mortality. It is not possible in these cases to diagnose definitely the severity of the infection or the character of the gallbladder pathology. Consequently, we are forced to the conclusion that routine delay is neither safe nor satisfactory.

The safest management of acute cholecystitis is to hospitalize all cases which do not subside in 24-48 hours. Essential clinical and laboratory data can then be obtained, liver function checked, and sugar metabolism stabilized. This may require an additional 24-48 hours. If acute symptoms abate, operation can be done with or without delay with equal safety. If, however, the clinical symptoms persist or increase, immediate operation should receive serious consideration. If this plan of management is followed, the patient has the advantage of a brief and usually sufficient period of preoperative treatment, a surgical judgment improved by hospital observation, and the decreased mortality and morbidity of an early operation.

During the past 4 years we have operated upon 16 cases of acute suppurative cholecystitis from 1 to 4 days after onset of symptoms without a death. In 2 the gallbladder was drained; in the remaining 14 it was removed. The convalescence was smooth and free from a disturbing peritonitis. Technical difficulties were met but not more frequently than in the delayed or interval operation.

My experience leads me to believe that cholecystectomy is in the majority of cases a safe procedure. The danger from dissemination of infected material is exaggerated. There is no need to fear the early operation if the patient is promptly hospitalized and given a short period of observation and preoperative treatment. This plan of management offers better results.

MOSES BEHREND (Philadelphia): I cannot understand why Dr. Pfeiffer has operated upon so many cases in this group with perforation. It must be due to the fact that these patients are not hospitalized quickly enough and taken off all food. The only method of treating an acute gallbladder is not to allow any food, not even a drop of water, to enter the mouth, providing fluids by means of intravenous injection, hypodermoclysis, and proctoclysis.

These acute cases should be seen early, but they should not be regarded as acute operative cases. The mortality will be much higher if they are considered as emergency cases.

I was impressed with the fact that in Dr. Pfeiffer's series of some 130 cases there were only 76 with stones. It seems that the pancreas should be examined more carefully, because there are many cases of chronic pancreatitis that give exactly the same symptoms as those gallbladder cases that show no stones. In those patients, instead of removing the gallbladder, it is very much better to do an anastomosis between the gallbladder and the stomach or the gallbladder and the duodenum. This will give much better results so far as relief of symptoms is concerned than removing the gallbladder.

THE DIAGNOSIS OF A NEUROGENIC BLADDER BY MEANS OF THE CYSTOMETER*†

MAURICE MUSCHAT, M.D., PHILADELPHIA

In the course of clinical work the problem of a neurogenic bladder is frequently encountered. The actually proven presence or absence of a neurogenic bladder makes a given clinical diagnosis certain or eliminates it entirely. Such a finding is an important clue and directs the internist or neurologist toward the proper diagnosis. Occasionally there are cases in which, because of the absence of any urinary symptoms, the question of a neurogenic disturbance of the bladder is not considered. Yet such a disturbance may exist in spite of the absence of any urinary complaints. The neurogenic disturbance of the bladder, because of the process of compensation, does not give any subjective symptoms until the late stages. As the disease progresses, the compensatory mechanism having failed, the patient begins to have symptoms of improper drainage—frequency and residual

urine. Since these symptoms are also present in vesical neck obstructions, the neurogenic cause of such symptoms may be frequently overlooked. The urologist is then called upon to determine whether the pathologic involvement is neurogenic or obstructive. What are the means of the urologist to enable him to find the proper answer? The only method available is cystoscopy.

Actually there are 2 varieties of neurogenic bladder—the hypertonic and the hypotonic. The hypertonic bladder is small because of the increased muscle tonus and relaxed sphincter, causing true incontinence. The hypotonic bladder is just the opposite. It is large because of the relaxed musculature and spastic sphincter, the overflow of retention simulating incontinence. The cystoscopic sign to look for in the hypertonic bladder is the relaxed sphincter and in the hypotonic bladder the very fine trabeculation of the bladder wall.

Although diagnosis by the cystoscope is quite

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

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hypertonic in the advanced stages it is of no value in the early and progressive stages of a neurogenic bladder, for the relaxed vesical neck is not found in the hypertonic type and trabeculation of the bladder wall is not found in the hypotonic type. In such cases a correct answer cannot be given by the cystoscope. A neurogenic disturbance of the bladder is usually suspected because of the absence of an obstructive lesion. Diagnosis by elimination is the rule. The same difficulty is encountered in diagnosing cystoscopically a neurogenic bladder complicated by an obstruction at the vesical neck. The enlarging

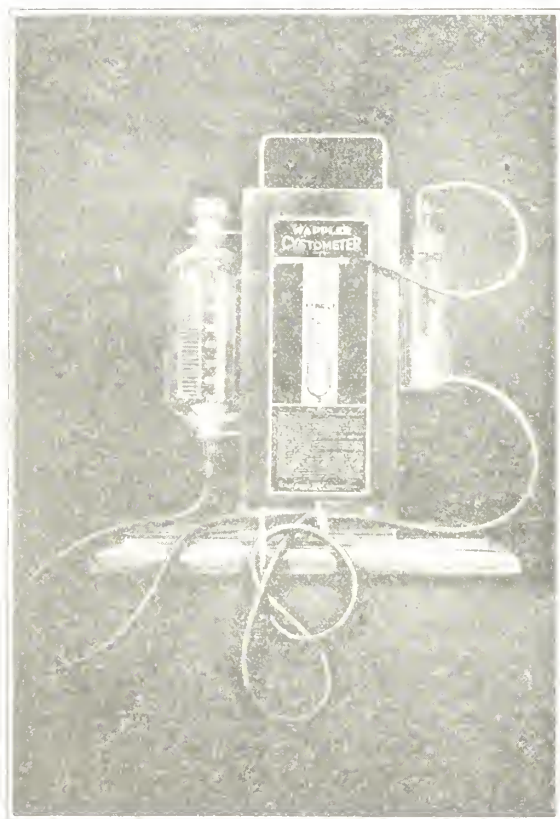


FIG. 1. Cystometer.

prostate enlarges the bladder wall musculature to hypertrophy, obliterating the fine trabeculations seen in the hypotonic bladder. In the hypertonic type the enlarged prostate fills in and tightens up the relaxed vesical neck due to relaxation of the sphincter, thus eliminating the cystoscopic sign of a relaxed sphincter. The 2 requisites for a cystoscopic diagnosis of a neurogenic bladder are thus removed, and diagnosis by the cystoscope becomes impossible.

The cystoscopic method of diagnosing a neurogenic bladder is possible only in the well advanced stages and fails to be of value in the early and progressive stages of the disease. An

other method is needed that will give the desired answer correctly at all times in each and every stage of the disease.

Such a method must include a component of the bladder mechanism, the physiologic status of which becomes markedly altered early in the disease. If it were possible to note correctly such alterations, a correct diagnosis could be made very early. Such a component of the bladder, affected early in neurologic disease, is the bladder wall musculature or the detrusor. The normal tonus of the detrusor depends upon normal nerve impulses over clear nerve pathways. Once such pathways are disturbed by disease the tonus of the detrusor is altered. In neurologic diseases the tonus of the detrusor may be stimulated or depressed. If stimulation occurs the tonus will be greatly increased, producing a small bladder with a little capacity; if depression supervenes, the tonus will be lessened and a large bladder due to a relaxed detrusor will be found. These 2 possibilities of a hypertonic or hypotonic detrusor are both indicative of neurogenic disease of the bladder.

To determine such a changed tonus, the cystometer is employed. (See Fig. 1.) It is an apparatus designed to record the response or tonus of the detrusor to a gradual filling of the bladder with water. The bladder pressure during the process of filling is observed and plotted on a chart. A pressure curve is thus obtained which reveals the actual behavior and response of the detrusor. The cystometer is simple in construction and operation. A cystometric study consists of passing a catheter into the bladder, connecting it with the cystometer, gradually filling the bladder with water, and noting the changing pressures. A very important factor in this study is the determination of the point of the first desire to void. The patient should be instructed to note the slightest initial urge to urinate. After the bladder is filled to capacity, the patient is instructed to force it out against the manometer, thus recording another important factor—the maximal voluntary bladder pressure. Three factors are thus obtained: (A) First desire to void, (B) the pressure curve, (C) maximal voluntary pressure.

The normal curve rises slowly with each 100 c.c. of filling, becoming more acute after 500 c.c.

THE 3 CYSTOMETRIC FACTORS

Average Values in Normal, Hypertonic, and Hypotonic Bladders

	Normal	Hypertonic	Hypotonic
(A) First desire to void	100-200 c.c.	100-200 c.c.	100-200 c.c.
(B) Pressure curve	Normal	Normal	Normal
(C) Maximal voluntary pressure	Normal	Normal	Normal

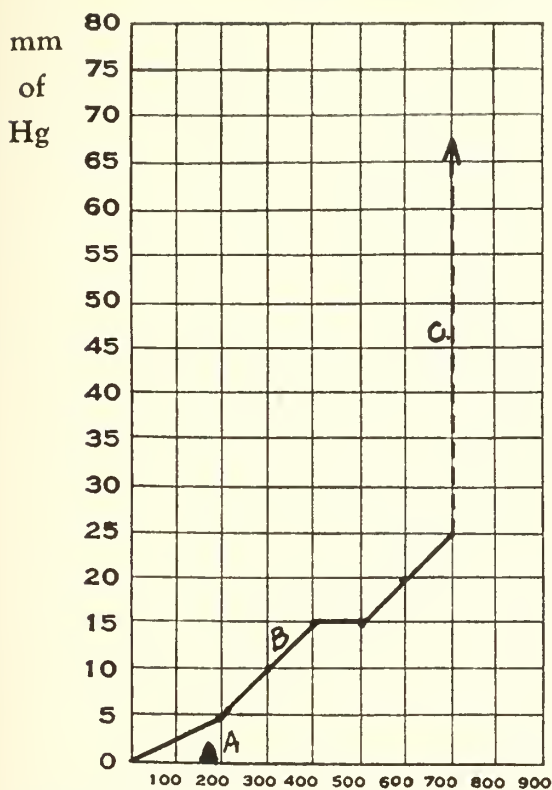


Fig. 2—Normal cystometrogram. A—first desire to void; B—pressure curve; C—maximal voluntary pressure.

have been introduced. The normal first desire to void is between 150 and 250 c.c. The maximal voluntary pressure is between 40 and 60 mm. The variations in the normal are given in Fig 2.

The hypotonic curve is entirely different. It is flat. Instead of a gradual increase the bladder pressure remains low and continues to remain low even after 500 c.c. of filling. The initial low pressure may remain unchanged in extreme cases even after 1000 c.c. of water have entered the bladder. The first desire to void is greatly delayed, appearing at 350, 500, or 800 c.c. of filling. The maximal voluntary pressure is low, always under 40 mm.

The hypotonic bladder, therefore, is the one with a low curve, shift of the first desire to the right, and low maximal voluntary pressure. (Fig. 3.)

The hypertonic curve has just the opposite character. It is more acute than normal. The pressure rises rapidly after each 50 to 100 c.c. of filling; the first desire occurs at 50 or 100 c.c., the maximal pressure being extremely high, over 60 mm.

The hypertonic bladder, therefore, is the one with an acute curve, shift of the first desire to the left, and very high maximal voluntary pressure. (Fig. 4.)

In making the final diagnosis of the presence or absence of a neurogenic bladder all 3 factors obtained must be taken into account, namely, first desire to void, the pressure curve, and the maximal voluntary pressure. Alteration of one factor alone is not sufficient for diagnosis. The evaluation of the curve alone does not suffice. The tonus of the detrusor differs in the normal ranging from low normal to high normal. Therefore, all 3 cystometric factors must be considered. *The definite alteration of at least 2 factors is obligatory evidence of a neurogenic bladder.* (See accompanying table.)

There are pathologic states of the bladder that will simulate the hypertonic or hypotonic bladder. Acute and subacute cystitis, stone in the bladder, and tumor give an acute hypertonic curve; a cystocele, diverticulum, renal reflux, and postoperative or postpartum dysfunctions simulate a flat hypotonic curve.

These possibilities can be eliminated by a proper urologic examination, which should always follow every cystometric study. It is better to examine the bladder by the use of instruments after the cystometric study has been made rather than before as the irritability caused by cystoscopic instrumentation may change the actual untouched picture of the neurogenic bladder.

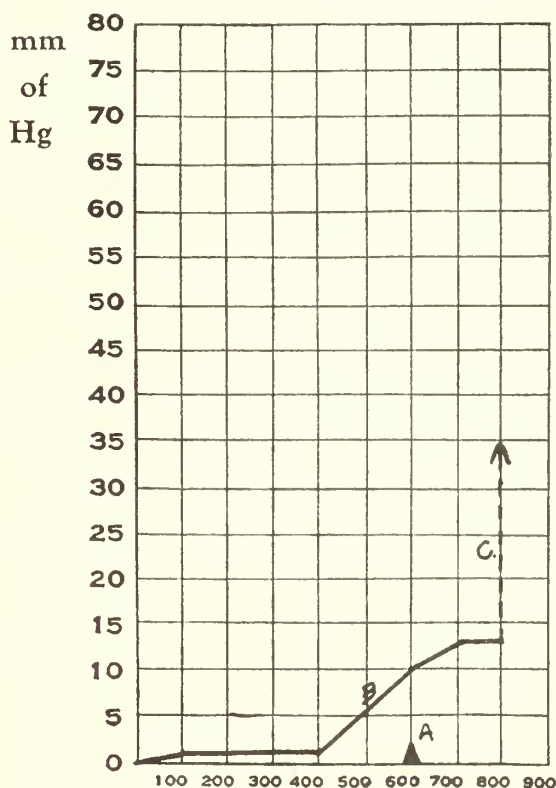


Fig. 3—Cystometrogram of a hypotonic bladder. A—first desire to void; B—pressure curve; C—maximal voluntary pressure.

Hypertrophy of the bladder musculature, such as seen in obstructions at the bladder outlet, does not simulate any neurologic disease. Although the curve is more acute and higher than normal, the first desire and maximal voluntary pressure remain normal.

The possibility of a psychic factor altering the true picture of a cystometric study has been considered. Such a subjective psychic factor has no effect upon the ultimate diagnosis. The 3 factors obtained in a cystometric study are so constant and interdependent in the normal that the change of one factor must bring about an alteration of the other. If a reading is obtained with

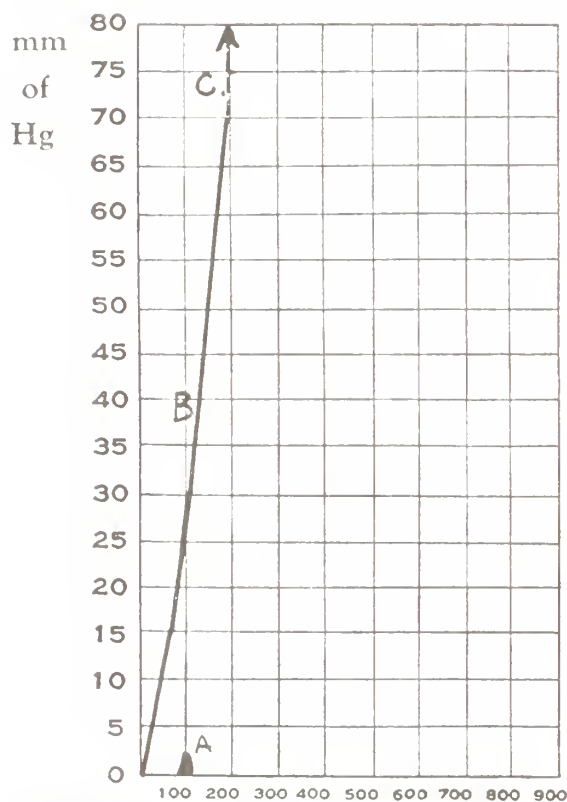


FIG. 4. Cystometric curve of a hypertonic bladder. A, first desire to void; B, pressure curve; C, maximal voluntary void.

only one factor changed, improper technique or simulation by the patient should be suspected. A restudy will invariably bring out the truth as no one can possibly reduplicate the combination of all 3 factors at the same time.

The cystometer often discloses a neurogenic bladder without any urinary symptoms whatsoever as shown by J. C. Watts and C. A. W. Uhle in 5 cases of brain tumor. An asymptomatic neurogenic bladder, therefore, must be suspected in every case of a possible brain tumor.

The clinical applications of cystometry are manifold. As time goes on, more and more in-

stances are found in which the cystometer gives much desired information, answering many puzzling questions of diagnosis and treatment.

The cystometer has been found indispensable in the following instances:

1. In diagnosing a neurogenic bladder without urinary symptoms.
2. As a means of follow up of improvement or regression of bladder dysfunction, especially in treating diabetic cases.
3. In recording permanently disturbances of bladder function resulting from injuries and proving or disproving malingery (medicolegal).
4. In establishing the proper time for the removal of an indwelling catheter, especially in neurosurgical work.
5. In pharmacodynamic studies of the bladder (C. Jordan.)
6. In studies attempting to localize tumors of the brain (Watts and Uhle) and various neurologic lesions of the motor pathways (L. G. Lewis, O. R. Langworthy, and J. E. Dees).

(Continued from Page 495)

ABSTRACT OF DISCUSSION

MAXIM L. RUBIN, M.D. (Philadelphia). The urologist developed the cystoscope, which opened avenues of diagnosis and treatment, and clarified many puzzling diagnostic problems that arise daily. Cystometry is another advance. Some years ago, when Dr. Muschat was seen using a rather crude apparatus for estimating urine pressures on our patients, we looked at it with amusement. Later, when we were acquainted with its purpose and the clear graphic chart of the results of cystometry, our opinion changed and our respect for this additional method of diagnosis has increased to such an extent that we solicit these examinations for patients more frequently.

Of the outstanding cases at Mt. Sinai Hospital in which Dr. Muschat was extremely helpful was one of encephalopathy in a man. The attending physicians were quite puzzled because of the indefinite signs pointing either to neoplasm or vascular disease. Fortunately Dr. Muschat was asked to do a cystogram and diagnosed neurogenic bladder. Because of symptomatic improvement the patient left the hospital but was subsequently operated upon for a fairly large pituitary tumor.

Another case was that of a diabetic man who, following a nasal operation, had a cystometric examination revealed neurogenic bladder which proved later to be due to a thrombosis of the spinal cord's internal artery.

Often, when we are confronted with the differential diagnosis of an intraspinal lesion, especially when Dr. Muschat's reports are available, especially when sound findings are confirmed.

With reference to the use of the cystometer, I wish to disagree with Dr. Muschat's statement that cystometry should be used as an arbitrary cystoscopic examination by a trained urologist and by the interest of neurologists, urologists, and others to be placed on the interpretation of the examination.

In our own experience, confirmed by the recent observations of Watts and Uhle, the cystometer is a distinct addition to our armamentaria.

ALEXANDER RANDALL (Philadelphia): The cystometer is an instrument of simplicity, accuracy, and value. Watts and Uhle reported cystometric readings in 5 cases of brain tumor in which there were no

symptoms whatever of urinary disturbance although each of these cystometric readings proved the existence of hypertonicity of the bladder. I agree with Dr. Rubenstone that this is work for a specialist to interpret. When properly interpreted, it proves to be a most valuable adjunct to diagnosis in cases that are difficult to differentiate.

THE ETIOLOGY, DIAGNOSIS, AND TREATMENT OF HYDRONEPHROSIS*

JOSEPH C. BIRDSALL, M.D., PHILADELPHIA

Hydronephrosis or uronephrosis is a condition characterized by distention of, and retention of urine in the kidney pelvis and its calices. According to various writers on this subject, the normal capacity of the renal pelvis varies from 3 to 15 c.c. and any increase in this amount constitutes a degree of hydronephrosis which may be classified according to size as small, moderate, and large. In the Musée Dupuytren in Paris there is a hydronephrotic kidney which is said to have had a capacity of 25 liters. The largest amount observed in the literature was in a case which Samuel Glass found at necropsy. This remarkable hydronephrotic sac contained as much as 30 gallons.

Hydronephrosis may be present in one or both kidneys, may be congenital or acquired, permanent or intermittent, and partial or total in character. In the partial type there is obstruction of one or more calices. Total hydronephrosis is brought about by any one of the many causes which produce obstruction at the uretero-pelvic outlet or of the urinary tract below. The retained urine in the renal pelvis may be sterile or infected. If the urine is infected, the condition is differentiated from pyonephrosis by means of a uniform disappearance of the renal parenchyma brought about by pressure resulting from increased intrarenal tension and interference with the blood supply and nutrition. In pyonephrosis there is cavity formation and actual destruction of the parenchyma due to the action of the invading organisms. It is usually a sequela of a progressively advanced pyelonephritis. In pyonephrosis there can be no return of function, whereas in hydronephrosis this is possible if the obstruction is corrected before complete atrophy of the renal parenchyma has taken place.

This presentation comprises a study of 163 cases of hydronephrosis observed in the services at the Presbyterian and Graduate Hospitals.

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

The paucity of cases of lower urinary tract obstruction in this series may be due to a neglect on our part in routinely visualizing the kidneys in the absence of any localizing renal symptoms.

ETIOLOGY

The etiologic factors concerned in the production of this common and most interesting condition include all the causes, congenital and acquired, mechanical and neurogenic, which produce obstruction or stasis, partial or complete, of the urinary outflow in the upper or lower urinary tracts.

TABULATION OF CASES OF HYDRONEPHROSIS WITH RESPECT TO CAUSE

Nephroptosis	90
Ball-valve calculus in renal pelvis	14
Ureteral calculus	12
Anomalous vessels	8
Stricture of ureter	7
Bands—uretero-pelvic	6
Prostatic hypertrophy	5
Hypertrophy of vesical neck	3
Unilateral ureteral duplication	3
Bilateral ureteral duplication	2
Horseshoe kidney	2
Crossed ectopia	2
Solitary cyst of kidney	2
Chronic prostatitis	2
Polyp of urethra	1
Intraligamentary cyst	1
Hypospadias	1
Stricture of urethra	1
Diverticulum of ureter	1

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It may be impossible at times to draw a sharp line of distinction between the congenital and acquired types as the 2 conditions may coëxist. It is of far more importance, however, for the urologist to be able to make an accurate differentiation between the many forms of mechanical obstruction and an adynamic or neurogenic stasis. Inasmuch as obstruction or stasis of urine is one of the commonest characteristics of disease of the urinary system and inasmuch

as the great majority of urinary infections are definitely amenable to such conditions, it is consequently most important to make a proper (diagnostic) determination for their successful eradication.

Considering the complexity of the embryologic development of the urinary tract and the pathologic conditions which develop in the tract, it is not surprising that so many causes of obstruction should be present throughout the whole system. Since an obstruction at any part of the tract may lead to a definite hydronephrosis and infection, it is evident that this pathologic condition should receive the greatest attention in our study and search for a persistent cause of obstinate urinary infection.

PATHOLOGY

The term hydronephrosis, partial or complete, as applied to distention of the renal pelvis and calices and retention of urine in these structures, but always sooner or later there is an associated condition of atrophy of renal parenchyma. Pressure, intrapelvic and secretory, is undoubtedly the primary factor in the development of atrophy. Backflow, tubular reabsorption or a tubulovenous condition, is the secondary and controlling factor. The pelvis becomes dilated, secondarily the tubules become dilated, and each tubule produces a certain amount of pressure on the surrounding venous blood radicles causing congestion. These combined pressure factors finally diminish the amount of arterial supply, and atrophy of renal parenchyma on account of faulty and poor nutrition consequently takes place.

Hinman has accurately described 3 types of atrophy which take place in partial or complete obstruction. Primary atrophy is used to designate the condition which sometimes follows a complete obstruction, but without dilatation or distention of the pelvis and tubules of the kidney. There is no backflow, and amnia develops. Here is the condition which occurs when a ureter has been purposely or accidentally ligated. However, it has been shown after extensive experimental work on animals that primary atrophy practically never takes place. The pathologic picture presented in each case is that of hydronephrotic atrophy. A. F. Belt collected 17 cases in which one ureter had been ligated and the kidney later explored, and in 11 cases of uretero-hydronephrosis had taken place.

The common type of hydronephrosis with intrapelvic distention and atrophy of parenchyma occurs after any one of the many causes of obstruction, a degenerated hydronephrotic atro-

phy. There is a continued secretion of urine in the presence of obstruction. Following a primary or a hydronephrotic atrophy many secondary changes take place due to bacterial invasion, degeneration, and disuse, and this final picture is best described as secondary atrophy. The first change to occur in the kidney is a dilatation of the collecting tubules. As the process advances, all portions of the kidney tubules become involved. The dilated tubules compress the peritubular capillaries, the circulation of the kidney as the condition advances becomes greatly impaired, and degeneration of the tubular epithelium occurs. Eventually in the late stage practically the entire kidney structure is replaced by fibrous tissue, and the medulla and cortex of the kidney are stretched and thinned out to a layer only 2 to 3 mm. in thickness. The important and essential fact to bear in mind is that the pathologic end results of obstruction brought about in the kidney are fundamentally the same whether the obstructing lesion is supravescical, vesical, or infravesical.

SYMPTOMS

Hydronephrosis may not present any definite symptoms unless there is a sufficient amount of urine retained to produce a distinct tumor mass, which may be apparent to the patient. Occasionally the patient discovers such a condition and notes that it increases and decreases in size and that there is at times an associated polyuria or polydipsia. Such a condition is usually noted in cases of hydronephrosis due to nephrotosis and is an intermittent form of symptom of the disease. During the stage of block there is a sense of weight and dragging, attacks of pain resembling kidney colic, and this is due to sudden increase of intrapelvic tension. In hydronephrosis due to a ball valve acting calculus, the symptoms of kidney colic may be pronounced. In one of our cases the condition occurred in a patient with a single kidney. The patient promptly went into uremic coma. A history of recurrent attacks of pain was elicited from the patient's family. A ureteral catheter was passed with difficulty, dislodging the calculus upward into the pelvis. There was a steady flow of urine per catheter, and in a few hours the patient recovered from the coma. Subsequent roentgen-ray examination and pyelogram demonstrated a small calculus in the renal pelvis which was the seat of a large hydronephrosis. In a consideration of the etiologic cause of hydronephrosis it is quite apparent that each one may give rise to symptoms characteristic of its respective entity.

CLASSIFICATION OF CONDITIONS CAUSING HYDRONEPHROSIS (HINMAN)

I. MECHANICAL

<i>Anatomic location</i>	<i>Congenital types</i>	<i>Acquired types</i>
Lower tract urethra	Phimosis Atresia Stricture—meatus Urethrocele Diverticulum Hypospadias Abnormal openings and anomalies	Phimosis Stricture Urethrocele Diverticulum Stone Tumor Fistulae
Urethra vesical	Posterior urethral valves Hypertrophied verumontanum Contracture of the neck Hypertrophy of the neck	Prostatism Hyperplasia Cancer Contracture or median bar Cysts
Vesical	Anomalies	Tumor Stone Diverticulum Hypertrophy of interureteral ridge
Upper tract ureteral	Anomalies— Form Number Caliber Valves, folds Strictures Ureterovesical cyst Atony Anomalies of division Anomalies of termination	Ureterovesical conditions— Tumor Stricture Ureteritis—peri-ureteritis Seminal vesiculitis Pregnancy Valves Folds—angulation Pressure
Pelvic and renal	Anomalies— Form Number Size Position Vascularization	Uretero-pelvic conditions— Stone Tumor Ptosis

II. NEUROGENIC

1. Lesions of the central nervous system—
cerebral and spinal
2. Lesions of the peripheral nerves

Obstruction is usually of such slow development that the condition of retention is painless and symptomless until infection makes its appearance. Pain is very common, and if associated with nausea, vomiting, and eructation of gas, it is indicative of nephroptosis.

When infection occurs, urinary symptoms arise. Pyuria and hematuria are also fairly common and demand a prompt and thorough search for their cause and origin.

DIAGNOSIS

This procedure should consist of assembling all the data which can be derived from the clinical history and physical examination, and the adoption of a routine method of determining the diagnosis of hydronephrosis per se as well as

ascertaining accurately its underlying cause. The successful result of conservative surgery of hydronephrosis, dependent as it is upon the complete elimination of obstruction or stasis, is accomplished by establishing and maintaining a free and a proper outflow of urine from the renal pelvis. All the infravesical and vesical causes should receive first consideration, and this is particularly important as it is very easy to overlook a lower urinary tract cause unless a careful cysto-urethroscopy is performed. In lower urinary tract lesions, cystography is often extremely valuable in establishing a positive diagnosis of unilateral or bilateral hydro-ureter and hydronephrosis. In children with vesical neck hypertrophy and loss of tonicity of the

ureterovesical valves, permitting reflux, this procedure has been of the greatest aid.

The passing of a ureteral catheter into the renal pelvis and obtaining a continuous flow of urine is highly indicative of pelvic distention. Visualization of the pelvis and calices by ureteropyelography, however, establishes the diagnosis of hydronephrosis, and if it is preceded by a roentgen-ray examination of the kidneys and ureters and followed by a ureteropyelogram in the upright position, the degree of hydronephrosis and its etiologic cause are more accurately determined.

HYDRONEPHROSIS WITH NEPHROPTOSIS AND COMPLICATIONS

Bilateral—hydronephrosis with ptosis	28
Right kidney—hydronephrosis with ptosis	43
Left kidney—hydronephrosis with ptosis	19
Hydronephrosis infected	35
Hematuria	23
Calculus	10
Calculus—bilateral	4
Tumor of kidney	2
Pyelonephritis	1

Nephroptosis in our series has been found to be the underlying cause in 90 cases of hydronephrosis. It is a well-known fact that not all cases of ptosis of the kidney produce hydronephrosis. There must be associated some additional cause for producing a kinking of the ureter in the form of an anomalous vessel, band, or adhesion. If the normal conformity and relationship of the renal pelvis to the ureter are maintained in ptosis there is no hydronephrosis. A complete urologic examination is routinely carried out. Cysto-urethroscopy, the renal function test, ureteral catheterization, and ureteropyelography in the prone and upright positions are all performed in one so-called cystoscopic examination and in a well-equipped examining room, all in the space of a few minutes. The modern combined cystoscopic and pyelographic table, with adjustable Bucky diaphragm attached, roentgen-ray tube stand, and motor for raising and lowering the table for different positions, is a wonderful timesaver and facilitates the carrying out of all these necessary steps with a minimum amount of discomfort to the patient.

TREATMENT

Adequate relief of hydronephrosis due to lower urinary tract conditions and with sufficient renal parenchyma remaining as determined by tests of renal function should be accomplished by removal of the obstructive cause. Usually this is sufficient unless secondary factors such as tortuous hydro-ureters have developed, which,

because of their elongation and tortuosity, produce the formation of sharp angulations and volvulus-like twists. In some cases it is surprising to note with what rapidity a distended renal pelvis will return to nearly normal limits, in regard to both size and function. In one case of bilateral hydronephrosis with a urethral stricture as the obstructive cause, cystography very clearly demonstrated reflux of the opaque medium, outlining bilateral hydro-ureters and hydronephrosis. In a few weeks after the stricture was incised and dilated to normal, no reflux could be demonstrated by cystography, showing an early return of tonicity of the so-called ureterovesical valves. In another case in which the renal pelvis held several ounces of urine and there was no renal output of indigo carmine for 30 minutes, severance of the anomalous vessel and bands producing the obstruction established free pelvic outflow. In 3 months the hydronephrotic sac was nearly normal in size and function.

This last case illustrates very well what may be reasonably expected if sufficient parenchyma remains and the obstruction is completely relieved. This is in keeping with the results obtained by Walters. Recently Bidgood's work has proven that the kidney, once the seat of hydronephrosis but having the obstruction completely removed, will return to practically normal function as determined by an estimation of the percentage amount of elimination of phenol-sulphonephthalein.

It is quite obvious, of course, that the treatment applicable in any case will be dependent upon the particular cause of the obstruction. If the hydronephrosis is due to nephroptosis with ureteral kinking or angulation, to a ball-valve calculus in the renal pelvis, ureteral calculus, anomalous vessel, or to a peripelvic or peri-ureteric band, *etc.*, the proper correction should be instituted. It should always be borne in mind that ptosis of the kidney may be the underlying factor and the calculi secondary, or that the vessel and bands formed kinks in the ureter in the descensus of the kidney. Nephropexy has to be considered in every case. If the vessel is fairly large and arises from or supplies the lower pole of the kidney, heminephrectomy has to be considered, or the ureter should be reimplanted into the pelvis at a point in which no possible pressure could be received from the anomalous vessel.

Quinby, von Lichtenberg, and Wildbolz have reported excellent results from ureteropyeloneostomy, the transplantation or reimplantation of the ureter into the pelvis, in cases in which an anomalous blood vessel, too large and important

to sever, caused obstruction and in cases of stricture at the uretero-pelvic junction. In 6 of my cases in which an anomalous vessel was the cause of uretero-pelvic obstruction, the vessel in each case supplied perinephric fat and could be sacrificed. Also, in each case no contracture due to subepithelial fibrosis could be demonstrated. In one case it was necessary to perform heminephrectomy, as it seemed impossible to reimplant the ureter in a dependent position and be sure it would give a free outflow of urine.

Fenger used the Heineke-Mikulicz pyloroplasty type of operation to obtain an increase in diameter in uretero-pelvic contractures, a longitudinal incision being made through the involved wall of the ureter and then sutured transversely. Various good and bad results have been reported from the use of this procedure. Recently Bidgood has reported excellent results in this type of case from the use of the Rammstedt operation, which consists in making a longitudinal incision through the area of contracture and through all coats of the ureter except the mucosa of the ureter, great care being taken to leave this layer intact. David M. Davis applied the principle of the Rammstedt operation, used in constrictions of the pylorus, to similar conditions at the uretero-pelvic junction, and in one case made several longitudinal incisions through the contracted area with excellent result. No attempt is made to apply sutures in the Rammstedt operation.

RÉSUMÉ OF TREATMENT—90 CASES OF HYDRONEPHROSIS WITH PTOSIS

Nephropexy with relief	36
Nephropexy—failed	1
Nephropexy—bilateral	9
Nephrolithotomy and nephropexy	4
Pyelolithotomy and nephropexy	3
Ureterolithotomy and nephropexy	1
Palliation with relief	14
Palliation without relief	25
Palliation without relief, then nephropexy with relief	6
Nephrectomy	15

In 36 cases of unilateral and in 9 cases of bilateral hydronephrosis due to nephroptosis, with angulation of the ureter, nephropexy performed after the method described by Kelly and Broedel has given most excellent results. The kidney and its new intended bed is freed of all perinephric fat; the ureter is also freed of all periureteric fat and bands. Great care is then taken to place the supporting sutures so that the kidney may be suspended in as normal a position as possible.

1900 Spruce Street.

ABSTRACT OF DISCUSSION

LORENZO F. MILLIKEN (Philadelphia): It is my privilege to have intimate knowledge of many of the cases which have just been discussed. Practically every variety of pathologic involvement found in this condition was noted.

That one man should be able to report 160 cases of hydronephrosis from his service in 2 hospitals is incontrovertible evidence that this subject needs to be brought forward again and again, for many of these cases should have been discovered before they reached the stage of advanced pathologic involvement. The development of hydronephrosis is an insidious affair. Many of these patients must have presented early symptoms which, if they had been correctly interpreted, might have led to much earlier correction.

It is interesting to note the very frequent coincidence of hydronephrosis and nephroptosis, and it is especially significant that a high percentage of the cases reported today had nephroptosis as an apparent etiologic factor. Something besides mere nephroptosis is always present in the causation of hydronephrosis. This was well exemplified in a case in which the patient had recurrent attacks of most violent renal colic on the right side. Pyelograms in the recumbent position showed both kidneys in perfectly normal position, whereas another in the upright position showed both kidneys lying as low as they could possibly be in the pelvis near the bladder. Although the right kidney showed beginning hydronephrosis, the left appeared perfectly normal and evidently its extreme mobility had not yet caused any blocking of the ureter. Nephropexy on the right side completely relieved the patient, and although that was 8 years ago there has been no symptomatic evidence of the ptosis on the left side.

At the last meeting of the American Urological Association in San Francisco, Dr. Birdsall reported 150 cases of nephroptosis and the present paper appears in logical sequence. The medical profession as a whole is not yet fully apprised of the practically perfect results that follow the operation of nephropexy if it is performed with flawless technic. There seems to be an impression that the results of the operation are generally not favorable. As a matter of fact, no other operation gives a higher percentage of complete cures than does that of nephropexy if it is correctly performed. Nearly all of Dr. Birdsall's cases have been checked by pyelography one or more years after operation, and the excellence and the permanence of the results have been verified.

That a large number of hydronephrotic kidneys can be saved and worth-while function restored by the various operative procedures mentioned in this paper is attested to by the fact that only 15 nephrectomies were done in all the cases presented. This is certainly an achievement of conservative surgery most gratifying in character and a tribute to those who have labored to improve surgical technic in cases of this type.

It is perfectly evident that all cases of hydronephrosis are surgical cases, and in most instances cure or relief can be expected only from surgical measures. It is interesting to note in Dr. Birdsall's résumé of treatment that 13 patients in this group had palliative treatment with relief and that 25 had palliative treatment without relief. How many of these cases, I wonder, had palliation at the instance of some one not competent to advise?

ELMER HESS (Erie): I must disagree with Dr. Birdsall on 2 or 3 points because I cannot secure the

results that he does with nephropexy. I have not found it necessary to do nephropexies. Occasionally, if this operative procedure is done, there will be much trouble afterward. Having the kidney hooked high up in the renal fossa as demonstrated by a postoperative pyelogram does not mean anything if the patient still has pain. If a nephropexy is done, a sympathectomy should likewise be done. It is peculiar that if a sympathectomy with a thorough ureterolysis is done, there is no necessity for a nephropexy. I have had 75 or 80 cases of hydronephrosis in ptotic kidneys in which sympathectomy alone relieved the patient. If this result is obtained, I do not care what the position of the kidney may be.

I wish to raise another point, not particularly in disagreement, but there is a part of the operative procedure in this particular case which to my mind is unnecessary—heminephrectomy. The aberrant vessel which causes the hydronephrosis supplies a part of the lower pole of the kidney. If there is no infection, all that is necessary is to cut and ligate this vessel. True, all that portion of the kidney supplied by this vessel will atrophy but will not become infected unless infection already exists. A heminephrectomy merely opens up fresh avenues for infection. In an experience of 15 years I have never seen such a kidney become infected following simple ligation. Therefore, it is unnecessary to remove this section of the kidney. Also, it is unnecessary to put a tourniquet around the pedicle because the moment this vessel is clamped off, even though a heminephrectomy is to be done, there will be little, if any, bleeding in that portion to be removed supplied by the ligated vessel. Both of these procedures add immeasurably to the length of time that it is necessary to have the patient on the table.

HENRY SANGREE (Philadelphia): Complete bilateral duplications are not common. Last year I investigated about 1700 necropsy reports and found only 3. The unilateral duplications are not uncommon. We average about 1 to 100 pyelograms. We take issue, of course, with those who regard nephropexy as a poor procedure. We have many patients on whom we put belts; we do not perform nephropexies on all patients. I have a patient, a child, who has never had a nephropexy done. We put a belt on her and made it tight. She has been in excellent condition. In those cases which need it we still contend that nephropexy is the method of choice for the alleviation of symptoms.

DR. BIRDSALL (in closing): I do not consider, as Dr. Hess suggests, that it is logical or necessary to perform denervation for the relief of pain in cases of hydronephrosis with nephroptosis, as our patients do not have a continuation of pain after they have had a proper suspension of the kidney. In regard to doing a heminephrectomy in a case with an anomalous vessel at the uretero-pelvic junction and arising from the lower pole of the kidney, I am sure that Dr. Hess would agree with us if he had had our experience. This case—and one is enough—in which there was an anomalous vessel which was the cause of obstruction at the uretero-pelvic outlet with formation of 3 calculi, I operated upon and first compressed the vessel and noticed whether the part of the kidney that the vessel supplied became blanched. It did not. Therefore, I thought it safe to sever the vessel. Then the calculi were removed. The patient promptly exhibited an increase in temperature, developed necrosis of the lower pole of the kidney, pyelonephritis, septicemia, and died. A necropsy was performed. The patient died because of the tremendous infection of the kidney. Therefore, I am not severing vessels without doing a heminephrec-

tomy. If possible, as Quinby has so admirably shown, implantation of the ureter in another part of the hydronephrotic sac and well away from the vessel is to be considered. That not all cases of nephroptosis have an associated hydronephrosis is a well-known fact. It occurs only in those cases in which the kidney, when it undergoes descensus, produces a kinking or angulation of the ureter. In those cases of ptosis in which the normal conformity and relationship of the kidney pelvis and the ureter persist, hydronephrosis does not occur. I contend that if you do a denervation and do not do a suspension in a kidney which is the seat of hydronephrosis and nephroptosis, you have not done the best for your patient. He has been left with a potentially morbid condition, a kidney which later is apt to become infected. The kidney should be suspended and the patient freed from all possible future trouble. Nephropexy is a comparatively safe procedure. I have not lost a patient. They recover nicely, and the end result is uniformly most satisfactory.

We do not advise suspension in all these cases. In ptosis of a first degree we first try a belt or corset, and that in many cases has given relief. Many of these cases also have an infection which is most difficult to cure. Stasis anywhere in the urinary tract is a favorable site for the development of infection and also aids in making it obstinate to treatment when once developed. This factor is a sound argument for suspending these kidneys. An infected ptotic kidney treated palliatively with a binder is most difficult to cure. Recurrence of infection is frequent. Suspend the kidney, cure the infection, and it almost invariably remains so.

DON'T LET DIABETIC CHILD GO HUNGRY, DOCTOR WARNS

Dr. Henry John, of Cleveland, Ohio, declared before the American Dietetic Association that it is no use for physicians to prescribe a low diet, insufficient to satisfy the diabetic child's hunger. So keen is the child's misery that either his mother will feed him snacks to be rid of his continuous complaining, or else the child will desperately steal food. The proper diet prescribed should be ample to satisfy hunger.

Dr. John drew a bright picture of the diabetic child's fate today, in contrast to the grim course of the disease in days before insulin was discovered. Before insulin, the diabetic child starved to death, crying for the food that could not be increased for fear of hastening the end. Insulin, which has given diabetic children not merely existence but active and happy life, was pronounced by Dr. John "one of the most triumphant and thrilling stories in all the history of medicine."

No longer a living skeleton, the diabetic child today is likely to be indistinguishable from nondiabetic youngsters. In fact, those who receive a properly regulated diet, with suitable injections of insulin to supply the deficit that the body fails to manufacture, often appear better nourished than their normal playmates. Admitting that taking insulin injections several times a day is no fun, Dr. John stressed the fact that diabetic children gain valuable lessons by the self-discipline and persistence they have to practice.

In feeding diabetic patients, Dr. John warned the dietitians against indiscriminately giving doses of insulin half an hour before meals. If the patient's blood sugar chances to be high, no harm is done. But if it is low, the lapse of time may result in an insulin reaction setting in. The child is then reduced to a dazed state of extreme artificial hunger. He gulps his food wolfishly, getting no pleasure, and digestive processes may be disturbed.—*Science News Letter*, Nov. 23, 1935.

EDITORIALS

MOTHER'S DAY

Mother's Day has taken on added significance during the past few years because of the movement to bring to the attention of the nation the needless waste of life of mothers in childbirth and to develop better maternity care.

A special effort is being launched for the sixth time this year through the Maternity Center Association, New York City, with the keynote: *Early and adequate care reduces the risks of motherhood; father plays a leading rôle.*

Experts state that more than one-half of the maternal mortality of 15,000 a year in the United States could be prevented. In 8000 homes last year mothers died who did not need to die. They were homemakers of 8000 families, in many of which were children.

It is needless to point out the social consequences of these deaths. Broken homes with their attendant problems help to fill the delinquency courts, to bring family strife and disaster to many young lives.

The crime of it is that although we know enough to prevent these deaths, they are not being prevented. The general death rate never was lower. Diphtheria and tuberculosis are on their way out as public health problems. We know enough to reduce maternal mortality as much as tuberculosis has been reduced during the past quarter of a century, but the death rate among mothers has remained nearly stationary since there have been statistics in the United States.

It is also interesting to note that maternal deaths last year were nearly half as numerous as automobile fatalities, about which the nation is so thoroughly aroused. There were 15,000 known maternal deaths compared with 36,400 automobile deaths.

It also does not redound to our credit that the maternal mortality rate in the United States is one of the highest in the world. While this statement has been questioned from time to time because of the different methods of classification of deaths in various countries, the United States Children's Bureau in a recent study of the subject declared that "No matter what method of procedure is used, the United States retains an exceedingly high rate as compared with other countries."

If these deaths are preventable, how can they

be prevented? The mortality rate can be reduced by a 6-fold program:

1. A complete medical examination early in pregnancy.
2. Regular and frequent medical supervision of prospective mothers.
3. An aseptic delivery under the supervision of an obstetrician.
4. Supervision, care, and instruction until the mother is able to resume her work.
5. Examination of the mother at 6 weeks, 3 months, 6 months, and one year after the baby is born.
6. Arrangements for continuous medical supervision of the baby.

Upon whom does the responsibility rest? First, *upon the prospective parents themselves.* One of the purposes of this special Mother's Day effort is to advise expectant mothers what care they should have. The late Dr. Whitridge Williams, of Johns Hopkins University, said: "When the women of America realize the value and need for maternity care, they will demand it. Then and only then will they get it."

Second, *upon the medical profession* generally and each member of that profession who cares for pregnant women. This group as a whole is struggling virtually unaided in many communities.

Third, *the social and health agencies*, public and private. The duty of this group is to find mothers in early pregnancy and to direct them to places where adequate care is given.

Do not allow another Mother's Day to pass without taking the first step in your community toward making maternity safe.

The Maternity Center Association, 1 East 57th Street, New York, upon request will gladly supply suggestions for the conduct of special Mother's Day educational efforts in local communities.

ON THE NATURE OF LIFE

While it is true that a great deal is known concerning the objective manifestations of life, there is very little definite knowledge concerning the original source of the force responsible for these manifestations, although many speculations have been made and theories and philosophies presented. Such speculations regarding the source of the force responsible for life as-

time a wide range—from that of energy, broken up into electrons, *etc.*, to the breath of the Divine.

Ancients interpreted these manifestations as those associated with the physical and mental make up of the individual, while religious philosophy attributes them to the soul or spirit and contends that certain other manifestations are the works of the devil. In modern time we still speak of the physical, the mental, and the spiritual. The devil seems to have been overlooked, and instead those things once attributed to him are being recognized as uncontrolled instincts, passions, and desires that run contrary to well-established codes of morals.

Psychologists regard man's highest emotional instincts as those of a spiritual nature. Psychologists, likewise, state that life is dynamic and purposeful, set in motion by inherent instincts and desires. But they do not tell us of what, basically, the desire consists, whether energy or electricity. The source of these desires is designated as psychic, physiobiologic, and environmental. Older writers thought in terms of a metaphysical force.

We conjecture that theologians claimed their beginning as a breath of the Divine (and God blew the breath of life into him). This answer seems nondebatable, for life in the beginning did not just happen.

Theories of spontaneous generation have long since been discarded. Some writers feel, however, that there is a close relationship between animate and inanimate things. Life as we first see it has already begun. Cells in the formative period are alive. The spermatozoon and the ovum are vitally active. Back of this visibility the veil has not been lifted; hence, mortal eyes have not yet been able to see beyond it.

As to the things necessary to life much is known. Scientists, physicians, and psychiatrists are fortunate, indeed, to have such an intimate working knowledge of what to the layman still remains mysterious. As to the manifestation of the living in health and reactions to disease, this is the field in which they are privileged to study and explore further. Physicians are familiar with the vital relationship of heat, light, ventilation, food values, nerve energy, circulating lymph and blood, secretions and excretions to life itself, and the parts, equipment, and appendages through which flows the stream of life. Like nurses, they know that conduct and behavior are but the functions of man as a whole and that death, which is inevitable, is due to exhaustion of cellular life (at 3 score and 10) or precipi-

tated by the destruction of cell life through disease.

The study of life, its prolongation and the prevention of disease, is one of the most fascinating things in reality. The interpretation of life, its objectives, the living of a life, the evaluation of life and immortality, lures one into that pleasing philosophic field which, while treacherous to the science that rightfully belongs to youth, is a delightful pastime for those in the shadow of mature years and those who have lived a life and know fully its real meaning. But as to its beginning and end (death or immortality) one, regardless of age, scientifically speaking knows little, even though Faith and Hope be our guiding stars.

DISTRESS IN THE FLOODS

On Mar. 17-18, down from the 3 great watersheds of Pennsylvania there rode on the far-flung waters, death, famine, disaster, and disease. Large and populous areas of this State, Maryland, and West Virginia had become a welter of flood waters.

Children and grandchildren of victims of the catastrophic "Johnstown Flood" of 1889 had dire reminders of that ordeal which killed more than 2200 persons and caused it to be known as the worst disaster of the country's history.

At the time of this writing, Mar. 22, 1936, 13 eastern states had experienced the fifth day of devastating floods. There were more than 100 deaths in Pennsylvania and a similar number of people unaccounted for.

Through the appeal of Mayor Wilson of Philadelphia, the equipment, outfitting, and dispatch of 5 motor busses on the night of Mar. 18, carrying supplies and workers for first aid to the centers of districts as far west as Lewis town on the Juniata and north to Sunbury at the forks of the Susquehanna was a piece of humanity that deserves more than passing credit for the men and women who planned and directed the effort, for the several hospital groups who volunteered for the service, and for anyone who contributed to it. The enlistment of physicians and nurses, together with other volunteer workers and the gathering of necessary supplies required much more time, effort, and ingenuity than may be suspected by reading the narrative after the work has been done and expeditions have been hours on their way and have reached their destinations.

Governor Earle has won deserved credit for his prompt recognition of the critical situation and his determined effort by plane, by motor

car, by boat and oars, and by sturdy bucking of the floods on shanks' mare to reach the center of things and give personal aid and direction for relief.

National Guardsmen were on patrol duty where needed to enforce all emergency regulations.

The medical profession again showed its service to humanity by rendering every aid possible under existing conditions, although in many instances the physicians' own homes and offices were in ruins.

The ebbing of streams has left behind tragedy and devastation in hundreds of Pennsylvania cities and towns—the dead, the homeless, the sick; property damage in the millions; all ordinary facilities of everyday routine paralyzed or crippled.

Now comes the urgent demand for relief and rehabilitation. Under the former is the immediate care of the homeless and destitute, medical attention for the sick, steps to prevent epidemics of disease, adequate provision of food, water, clothing, and shelter for all. Under rehabilitation comes the gigantic task of digging out of the wreckage left by the floods, and rebuilding on the ruins.

There will be no lack of substantial aid for the stricken areas so that everyone may be cared for and public health safeguarded.

The needs for rehabilitation will be stupendous. A gigantic task confronts the involved areas. But there is a greater problem than the immediate urge. What about the future? How are future occurrences to be prevented? Prevention is the keynote of the hour. How are the by-products of floods to be obviated? It will be necessary to include in the budget for rehabilitation funds to construct walls, reservoirs, and other flood-control projects.

The following article appeared in the *New York Times*, March 28, 1936:

The disastrous floods centering in the Connecticut, Ohio, Susquehanna, Monongahela, and other river basins east of the Mississippi, with their staggering tolls in lives and property, have awakened new interest at Washington, D. C., in long-delayed plans for a national flood-control policy.

The National Resources Committee, it was announced this week, will transmit to President Roosevelt before Dec. 1 a long-range "national water plan."

No nation-wide water-control program has ever been undertaken. The outlines of such an assault have, however, been laid down in the reports of 2 New Deal agencies—the Mississippi River Committee and the National Resources Board. These reports, submitted in the fall of 1934, are now receiving new attention.

The Mississippi Valley Committee, under the chairmanship of Morris Llewellyn Cooke, recommended "uniform state flood-control laws, federal legislation to expedite interstate compacts, and a permanent policy

of federal participation based on accurate estimates of the benefits to be derived."

The National Resources Board, presided over by Secretary Ickes, and since reorganized as a permanent planning body under the title of the National Resources Committee, recommended a complete survey of the water resources of the United States, the adoption of a policy of water-control demonstrations in selected areas, and a number of specific projects on rivers, including the Connecticut, Ohio, Mississippi, Missouri, Arkansas, Yazoo, Sacramento, and San Joaquin.

Opinions of experts as to the best way of controlling floods are at variance. There is agreement, however, that flood control should be made a national policy, carried out with the co-operation of localities, states, and perhaps groups of states bound together in compacts for the purpose. Definite plans for such control exist and a considerable body of information has been accumulated.

For years the army's corps of engineers has been surveying and estimating the probable cost of flood protection in the very areas so recently overwhelmed. But it took a major disaster to bring the problem home to Congress and the people. Now the lawmakers can be expected to act.

Fortunately, the best plans for control are ready. Beginning in the East, the first problem is the basin of the Connecticut River, New England's most important stream. This is a long, narrow watershed about 280 miles long, extending from just over the Vermont-Canadian line to Long Island Sound. The area drained approximates 11,320 square miles, of which all but 115 square miles are in the States of Vermont, New Hampshire, Massachusetts, and Connecticut. The basin is mountainous in the north and level in the south.

At present there is practically no flood-control system in the Connecticut Basin. However, a plan has been worked out for the construction of 10 reservoirs in Vermont and New Hampshire which, when completed, would materially lessen flood heights all through the valley and probably make unnecessary the erection of levees or other protection in the lower parts of the area. It has been estimated that these reservoirs would cost about \$13,000,000. Their exact location is yet to be definitely decided.

The next major river basins in the East are those of the Hudson and the Delaware. In neither instance is a grave flood menace involved. The construction of 14 storage reservoirs above Troy has been proposed by the New York State Water Control Commission; if built, they would increase the flood control of the Hudson to an appreciable extent.

The Susquehanna Basin comes next, and here the problem appears to be largely one of levees, of which there are now practically none worth the name. The Susquehanna, with a basin of 27,400 square miles, is the largest river entering the Atlantic from the Eastern United States. There are more than 3,000,000 people in the basin, of whom about 1,300,000 are in rural districts. In this basin the reservoir system is not considered feasible, because there are few sites available.

A retarding basin to protect York, Pa., has been suggested, but in general the flood-control system proposed for the Susquehanna has the levee as its backbone. It is a problem strikingly like that of the Mississippi north of New Orleans. The levee projects which are now under consideration would safeguard Harrisburg, Wilkes-Barre, York, Hanover, Nanticoke, Bloomsburg, Sunbury, Exeter, West Pittston, and scores of smaller places. The estimated cost of such levees is

\$13,775,000. The soil-erosion problem also is one of major importance in this basin, and its solution will have an important bearing on effective flood control.

The Allegheny and Monongahela River areas, next in order, present a most serious problem. Flood control of these rivers is not only vital to the protection of Pittsburgh but has a direct bearing on the control of floods of the Ohio River, into which these tributaries feed, and also of the Mississippi, which receives the Ohio River waters.

Reservoirs are the answer on the tumultuous rivers feeding into the Ohio, the total number needed to protect the entire Ohio River system being 53, including 14 now under construction as an Ohio State-WPA project in the Muskingum River. Eight reservoirs which are considered necessary to safeguard Pittsburgh and the upper Ohio River section will cost, if they are built, about \$52,000,000.

Engineers say that when and if a general flood-control plan for the Ohio system is implemented, 16 of the proposed reservoirs should be given priority. These include the principal reservoirs for the protection of Pittsburgh, the Kanawha River reservoirs in West Virginia, and works at principal strategic points along the Ohio above Cincinnati. It is estimated that this phase of control would cost about \$118,000,000. Levees will also play a part, but a less important one, in working out the Ohio system problem. Whether such a huge-scale plan will be undertaken remains for Congress to decide.

AUTOMOBILE TRAFFIC DEATHS

According to the *Associated Press* as of Feb. 27, the first month's report of traffic deaths since the inauguration of a 5-year nation-wide campaign to reduce accidents showed a 4 per cent increase over January, 1935, but a 9 per cent drop from 1934.

The National Safety Council states that there were 2570 deaths in January against 2470 a year ago, but cited the all-time January high of 2807 in 1934. There were 532,720 accidents in 1935; 125,840 of the drivers involved did not have the right of way, and 121,400 were exceeding the speed limit.

Council spokesmen laid the increase in the death rate to hazardous driving conditions which prevailed in most states following rain, snow, and sleet storms and reiterated their belief that the drive to reduce the fatalities 35 per cent by 1941 would succeed.

The movement began Jan. 1, 1936, after the automobile death toll reached a peak of 36,400 in 1935.

One hundred and twenty-five million dollars' worth of accident prevention will be built into the nation's highways this spring and summer.

Uniting in the countrywide effort to cut down motor deaths, federal and state governments have earmarked one-fourth of the cost of a record road improvement program to safety measures.

Of an estimated total expenditure of \$600,000,000, \$125,000,000 will go toward cutting down automobile crashes by eliminating railroad grade crossings, installing warning signals at danger points, widening "shoulders" of highways, broadening or eliminating curves, leveling concrete headwalls of culverts, increasing highway widths, flattening slopes, laying dustless road surfaces and increasing sight distances in order to remove mental as well as physical hazards of motorists.

Several states plan special highway safety programs. Pennsylvania will paint yellow lines through the middle of mountain roads to guide drivers through heavy fog.

What is being done in the meantime to penalize the thoughtless and careless, and drunken drivers?

CLOSER CO-OPERATION BETWEEN DENTISTS AND PHYSICIANS

It has been with the greatest amount of satisfaction that we have witnessed the closer co-operation between dentists and physicians, not only in legislative matters but in the diagnosis and treatment of cases that come within the sphere of both professions. There is a feeling on the part of many that it would be timely for the medical school to have a dentist give a course of lectures on matters pertaining to the diagnosis and treatment of cases that come within the sphere of both professions, and further that a physician should give a course of lectures to the dental students with the same idea in mind.

It is interesting to note that at a combined medico-dental meeting held last December, Dr. Maurice O. Magid, past president of the Bronx County Medical Society, presented the report of a study of curricula in dental and medical schools in this country and Canada for a consideration of the first and second district dental societies, which cover the New York metropolitan area.

The committee decided that since the curricula of the schools are already overcrowded with courses, it would be best for the present not to suggest any radical departure from the existing methods.

Instead of altering materially the present curricula, the suggestions of the committee were aimed at utilizing available hours to emphasize the relation between the teeth and general health.

In a second part of the report dental schools were urged to incorporate in their programs more clinical observation as a supplement to courses in general pathology and to make provisions wherever possible for dental students to

reside for at least a week in hospitals where they could come in close contact with hospital procedure.

THE NEW SURGEON GENERAL OF THE UNITED STATES PUBLIC HEALTH SERVICE

In the *New York Times*, Mar. 25, 1936, there appeared an editorial entitled "The New Surgeon General." It pays quite a tribute to Dr. Thomas Parran, Jr., who was recently appointed surgeon general of the United States Public Health Service to fill the vacancy caused by the retirement of Dr. Hugh S. Cummings. This editorial is a reassurance to the medical profession and the lay public of the competency of Dr. Parran to fill the post so honorably and ably occupied by Dr. Cummings. The medical profession also will be reassured in the reference made by Dr. Parran, and his viewpoint regarding socialized medicine.

The New Surgeon General

Even in the best of times the appointment of a new Surgeon General of the United States Public Health Service is a grave social responsibility. Today much of the country north of the Potomac is flooded. Water supplies are cut off. The drainage systems of a hundred communities are impaired. There is real danger of epidemics. In addition we have the burden of the unemployed, many of them undernourished and a prey to disease. If ever the Public Health Service called for direction by a man of fine training and administrative ability it is now.

Physicians and sanitary engineers will applaud the President's nomination of Dr. Thomas Parran, Jr., to a post so honorably and ably occupied by Dr. Hugh S. Cummings. Though only 44, Dr. Parran has spent 19 years in administrative public health work. When President Roosevelt became Governor of New York and east about for an expert to reorganize the State's health department, Dr. Cummings recommended Dr. Parran. A faithful service of 5 years as State Commissioner of Health confirmed the wisdom of the choice. Dr. Parran enters upon his new duties enriched by a valuable experience and supported by the public confidence which he has built up through his achievements.

The populated areas that now lie under water will make immediate demands on the new Surgeon General's resourcefulness, knowledge, tact, and authority. Later will come the problem of what is called socialized medicine. The President's social ideas being what they are, there is every reason to suppose that the selection of Dr. Parran was dictated by something more than considerations of administrative efficiency and professional competence. A social point of view in harmony with the administration's was probably a requisite.

Physicians as a class set their faces against socialized medicine. If we may judge from his past utterances they will have nothing to fear from Dr. Parran. "I am convinced that an integrated plan of public health, public medical service, and private practice is preferable to health insurance," he said recently. By this he

meant that the poor should receive all the official aid that can be rendered so far as diagnosis, medicaments, and nursing service are concerned, but that the traditional relation of private physician and patient should not be disrupted. Here we have a constructive plan which, if carried out, should remove the major economic hazards of illness below the job insurance level. The man who can thus make it possible for the physician to give his impoverished patients the individual attention that means so much in sickness and at the same time assure them state assistance in lightening their heaviest financial cares displays a kind of social imagination which eminently qualifies him to meet the exigencies of the important office of Surgeon General.

THE A. M. A. AT KANSAS CITY

Have You a 1936 Fellowship Card?

No doubt a number of members of our State Society who are subscribers to the *Journal of the American Medical Association* will travel to Kansas City for the 1936 A. M. A. Session, May 11 to 15, 1936, only to be confronted at the registration window with the statement that they are not eligible to register because they are not Fellows of the A. M. A.

All members of our county and state medical societies are members of the American Medical Association, *but only those who have made formal application for Fellowship and paid the subscription price for the Journal of the A. M. A. are Fellows.*

Any member who is not a Fellow may make use of the application blank published elsewhere in this issue of the JOURNAL, forwarding it at once to Secretary Olin West, 535 N. Dearborn St., Chicago, Ill.

THEODORE LeBOUTILLIER, M.D.

Dr. Theodore LeBoutillier, of Philadelphia, aged 60, died at the University Hospital, Mar. 4, following an operation. Dr. LeBoutillier devoted his practice to pediatrics. He was a graduate of the University of Pennsylvania School of Medicine, 1898.

Dr. LeBoutillier was born in Philadelphia. Subsequent to his graduation in medicine he took special courses in pediatrics in Paris, London, and Edinburgh. He was on the staff of the pediatric department of the Philadelphia General Hospital and the Philadelphia Hospital for Contagious Diseases, and was a former clinical professor of pediatrics at the Woman's Medical College of Pennsylvania.

He served in the World War, having been advanced to the rank of lieutenant-colonel in the Medical Corps and was assigned as chief of Base Hospital No. 57, at Lycee, France. The late

Georges Clemenceau decorated him with a French Legion of Honor medal for his "intelligent and most devoted services."

Since the war he has been active in the Reserve Officers' Association, at one time serving as vice-president for the Army Third Corps Area.

He was a member of his county and State medical societies, and a Fellow of the A. M. A. and the Philadelphia Pediatric Society.

He is survived by 3 children, 2 sons and a daughter. His wife died in 1934.

McCLUNEY RADCLIFFE, M.D.

Dr. McCluney Radcliffe, of Philadelphia, aged 81, died Feb. 28, at his home from heart disease, after an illness of 3 weeks.

Dr. Radcliffe was born in Lewistown, Pa., on June 6, 1854, the son of McCluney and Sarah Cunningham Radcliffe. He attended Kishacoquillas Seminary near his home town. In 1877 he was graduated from Lafayette College with the degree of A. B., and was awarded an A. M. degree in 1880 by the University of Pennsylvania. He was graduated from the University of Pennsylvania School of Medicine in 1882 and began general practice in Philadelphia, eventually limiting his work to ophthalmology. He continued to practice until his last illness.

He served an internship at the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases, and the Germantown (Philadelphia) Hospital 1882-1883.

In 1890 he was appointed a clinical assistant at the Wills Eye Hospital, Philadelphia, in 1898 was advanced to assistant surgeon, and from 1901 to 1924 was attending surgeon. From 1924 until the time of his death he was consulting surgeon to this hospital.

From 1914 to 1922 he was visiting ophthalmologist to the Presbyterian Hospital of Philadelphia, and since 1923 he served as consulting ophthalmologist. Dr. Radcliffe was consulting ophthalmologist to the State Hospital, Norristown, Pa. He served for a long period as a United States examining surgeon. During the World War he was a member of the Volunteer Medical Reserve Corps.

For 36 years he was a member of the board of trustees of Lafayette College. The honorary degree of doctor of laws was conferred upon him by Gettysburg (Pa.) College, and the honorary degree of doctor of science by Lafayette College.

He was a member of his county and State medical societies and a Fellow of the American Medical Association; a member of the Ameri-

can Ophthalmological Association, and the American Board of Ophthalmology; the Oxford, England, Ophthalmological Congress; the College of Physicians of Philadelphia; and a past president of the Medical Club of Philadelphia. He was a contributor to medical journals.

Dr. Radcliffe was married to Miss Mary E. Funk in 1885, who with a married daughter survives.

CULVIER L. CLOVER, M.D.

Dr. Culvier L. Clover, of Knox, Clarion County, aged 70, died at his winter home in Orlando, Fla., Feb. 22, from arteriosclerosis. Dr. Clover was born in Salem township, Clarion County, on July 29, 1865, a son of the late Dr. and Mrs. William M. Clover.

He was graduated from Bellevue Hospital Medical College, New York City, 1891, following which he went abroad to take graduate work at the University of Vienna, and later at London, looking forward to devoting his practice to diseases of the eye, ear, nose, and throat. Upon his return to America he maintained offices in both Clarion and Knox.

He was a member of his county and state medical societies and a Fellow of the A. M. A. He served several times as president of the Clarion County Medical Society. He was a director of the Clarion County National Bank of Knox.

Dr. Clover was married on Dec. 21, 1914, to Miss Freda Moore of Knox, who with 2 sons and a sister survive.

Dr. Clover was one of Clarion County's most prominent members of the medical profession.

HENRY WARE CATTELL, M.D.

Dr. Henry Ware Cattell, aged 73, died Mar. 8 at Mt. Alto (Pa.) Veterans Hospital. Dr. Cattell was born in Harrisburg, Pa., Oct. 7, 1862, a son of the late Reverend William C. (president, Lafayette College) and Elizabeth (McKeen) Cattell.

He was graduated from Lafayette College in 1883, receiving the degree of Bachelor of Arts, and in 1886 Lafayette conferred upon him the degree of Master of Arts. In 1883-84 he was doing graduate work in the University of Leipzig, and in 1887 was graduated from the University of Pennsylvania School of Medicine.

He was demonstrator of morbid anatomy at the University of Pennsylvania from 1892 to 1897; director of the Ayer Clinical Laboratory, Pennsylvania Hospital, 1899-1901; and pathol-

ogist at different times to the Philadelphia and Presbyterian Hospitals.

He served in France as a major in the Medical Corps of the United States Army 1918-1919, having charge of the necropsy records of the A. E. F., and was pathologist to Base Hospital No. 17 and to the Central Medical Department Laboratory. On Oct. 13, 1935, he was graduated from the Medical Field Service School, U. S. A., Carlisle, Pa., and was a lieutenant-colonel in the Medical Reserve Corps, United States Army (retired).

He was editor of the *International Medical Magazine*, 1894-97, and the *International Clinics*, 1900-03, 1910-16, and continuously since 1922. He was a delegate of the United States to the Fifth International Congress of Military Medicine and Pharmacy, London, 1929.

He was a Fellow of the Academy of Medicine of New York City; a member of the Philadelphia Pathological Society, and the Association of Military Surgeons of the United States. He was formerly a member of the Philadelphia County Medical Society, but when he moved to Burlington, N. J., in 1929, his membership was transferred to the Burlington County Medical Society.

Dr. Cattell was an extensive contributor to the literature. He was the author of *Postmortem Pathology* in 1903, with editions in 1905-06, and edited Lippincott's *Medical Dictionary* in 1910, and the third edition in 1913. He was a translator of Ziegler's *Special Pathological Anatomy*, 1896-97. He has contributed articles on instruments of precision in the practice of medicine.

Dr. Cattell's home was in Burlington, N. J., and he maintained an office for some time in Philadelphia.

Dr. Cattell was unmarried.

FORTIETH ANNIVERSARY OF THE DISCOVERY OF THE ROENTGEN RAY

A Suggestion for Dramatizing This Modern Weapon

The year 1936 is the fortieth anniversary of Wilhelm Konrad Roentgen's public announcement of his discovery of the roentgen ray. Complete details will be found in the pamphlet, "Roentgen's Ray," by Elizabeth Cole, reprinted from the *Journal of the Outdoor Life*, December, 1933. As explained in this publication, "a preliminary communication was given Dec. 28 to the physical medical society of Wurzburg and it was published under the title 'A New Kind of Ray' in the annals of the society for 1895. Then after the Christmas holidays he spoke publicly before the society in Wurzburg on Jan. 23, 1896." Therefore, for the purpose of the Early Diagnosis Campaign, we may call attention to 1936 as the fortieth anniversary of the public announcement of the discovery, which is considered to-

day to be "the most important aid in finding and healing of tuberculosis."

As suggested for the Koch anniversary in 1932, it would seem possible to stimulate observances of the discovery of the roentgen ray by state and local medical societies, scientific societies in high schools and colleges, science classes of schools generally, tuberculosis sanatoria and hospitals, etc. Demonstrations of the roentgen ray and fluoroscope might be arranged for junior high school, high school, and college students by means of go-and-see trips to sanatoria, hospitals, or clinics. Science classes and English classes might devote a period to discussion of the roentgen ray or the writing of an essay.—*Pennsylvania Tuberculosis Society*.

From Joke to Landmark

Forty years ago this spring jokesmiths and humorists were making the world laugh at an amazing news item from Wurzburg, Germany. A professor of physics at the University there had announced the discovery of a ray which permitted him to see through solid objects!

When he was asked what it was he said he didn't know—it was invisible. He had proved it was not light, yet it would take a photo. He frankly called it an "X" (unknown) ray. The local scientific society voted that the new ray should be named after its discoverer. So today it is called either the X-ray or the roentgen ray, after Wilhelm Konrad Roentgen.

From raw material for jokesmiths it is considered today, even by laymen, to be one of the epochal discoveries of science, and while it has many industrial uses it also is regarded as one of the most valuable items in the modern armory of medicine. In fact tuberculosis specialists rate it as the most important aid in the diagnosis of that disease.

The importance of the roentgenograph in the diagnosis of tuberculosis is apparent when it is known that tuberculosis in its early form has no symptoms and that curative treatment must begin as soon as possible because there is no specific cure for the disease. The only successful method of treatment consists of rest in bed, good food, and fresh air under the direction of a competent physician.

How then is it possible to discover this disease that has no symptoms in its early stages? The National Tuberculosis Association answers this question in the Early Diagnosis Campaign it is sponsoring throughout the country Apr. 1-30. The slogan of the campaign is "Fight Tuberculosis With Modern Weapons."

"In this campaign," says the association, "we are urging that boys and girls of high school and college age be examined routinely for tuberculosis with the tuberculin test and the roentgen ray, which are the modern weapons referred to in the slogan. By means of these 2 diagnostic aids it is possible to discover not only whether the germs of tuberculosis are in a person's body but, if so, how much damage, if any, has been done to the lungs.

"The reason for emphasizing the importance of examining all young persons in this way is that the germs of tuberculosis are usually implanted in the body early in life. There they lie dormant until the strain of adulthood and the responsibilities of maturity weaken physical resistance sufficiently for them to gain control of the body and begin to break it down by the process we call consumption or tuberculosis.

"By means of the tuberculin test—a harmless skin test—it can be determined within 48 hours whether any tubercle bacilli are in the body. The fact that the test is positive does not necessarily mean the person has

the disease. A roentgen-ray picture of the lungs must be taken to determine this.

"In effect, the tuberculin test is a sieve through which boys and girls are screened. Those that pass through may dismiss from their minds any suspicion that they have tuberculosis. Of those that do not pass through, only a small percentage will be found upon examination with the roentgen ray to have actual disease. But thanks to the discovery of Roentgen, this small percentage is discovered in time to give them life-saving treatment while they are still easily curable."

—*Pennsylvania Tuberculosis Society.*

PENNSYLVANIA TUBERCULOSIS SOCIETY ANNUAL MEETING

The 1936 conference and forty-fourth annual meeting were held at Allentown Feb. 25-26.

Dr. William Devitt, founder of Devitt's Camp for the tuberculous, located near Williamsport, was elected president of the Pennsylvania Tuberculosis Society. He succeeds Dr. C. Howard Marcy, medical director of the Tuberculosis League of Pittsburgh, who had been president 4 years.

Dr. Marcy was elected secretary of the board succeeding Dr. Ward Brinton, who had held that office for 30 years until his death recently. Officers re-elected were Dr. Henry R. M. Landis, Philadelphia, and R. S. Knapp, Easton, vice-presidents; Milton D. Reinhold, Philadelphia, treasurer; and Thomas Raeburn White, Philadelphia, solicitor. Two new directors were elected, Dr. Robert G. Torrey, Philadelphia, and Dr. Clarence R. Phillips, Harrisburg. They fill the unexpired terms of Dr. Thomas McCrae and Dr. Ward Brinton, who died during the year.

The following physicians were re-elected directors for 2 years: Dr. Charles R. Essick, Reading; Drs. Charles J. Hatfield and H. D. Lees, Philadelphia; Dr. Wesley F. Kunkle, Williamsport; Dr. Charles H. Miner, Wilkes-Barre; Dr. Joseph P. Ritenour, State College; Dr. Laurie D. Sargent, Washington; and Dr. Fred B. Wilson, Beaver.

Provision of more beds for the tuberculous was strongly urged in a resolution adopted by the society.

The resolution declares that "there is a constant serious shortage in Pennsylvania of available hospital or sanatorium beds for tuberculosis patients. Adequate hospital beds for placing every diagnosed case of tuberculosis promptly under treatment is an imperative necessity in the effective prevention and control of the disease."

It is stated that the waiting list recently for the state sanatoria numbered 933. The following 3 steps to remedy this situation were suggested:

"That the society urge the responsible officials in large counties in which there have been favorable votes of the citizens on the question of building tuberculosis hospitals to proceed under the authority given them.

"That the society reaffirm the position taken by the American Medical Association, the National Tuberculosis Association, and the Pennsylvania Tuberculosis Society in favor of the provision in general hospitals of wards or departments for the treatment of tuberculosis.

"That the State Secretary of Health and the Governor be urged to make provision in the budget of the Department of Health for the next biennium for the building of a fourth state tuberculosis sanatorium."

A resolution was adopted whereby the society expressed appreciation of the modern position of the state

in maintaining in the Department of Public Instruction the Division of Health and Physical Education, with a well-trained, experienced, and competent specialist as director, and urged upon the Superintendent of Public Instruction the imperative necessity, for the welfare of the school children of Pennsylvania, of keeping the Division of Health and Physical Education on a high plane of efficiency by continuing in charge of it a director with the special training and proven competence required for this important educational service.

Another resolution was adopted, stating that in the light of modern knowledge and experience concerning the prevention of tuberculosis the meeting approved the tuberculin test, with roentgen-ray examination of reactors, for all employees in the public schools who come in contact with children.

GRADUATE CONFERENCE AT MERCY HOSPITAL, WILKES-BARRE

The following program will be conducted as a graduate conference at the Mercy Hospital, Wilkes-Barre, Apr. 23. All members of the State Society are welcome. There is no registration fee.

OPERATIVE SURGERY

8-10:45 a. m. Operating Rooms, Fourth Floor

UROLOGIC CLINIC

8-10:45 a. m. First Floor

Dr. Peter P. Mayock, Dr. Francis P. Judge,
Dr. James B. Purcell, Dr. Charles W. Letcher

MEDICAL WARD ROUNDS

9-10:45 a. m. .. Woman's Medical Ward, Second Floor
Dr. Angelo L. Luchi

MEDICAL ESSAYS

11 a. m.-1 p. m. Auditorium, Nurses' residence
(Seven minutes each)

Dr. Gerald N. Fluegel, "The Injection Treatment of Hemorrhoids"

Dr. Abram Dattner, "Melena Neonatorum"

Dr. Joseph F. Dolphin, "The Diagnosis of Mastoiditis"

Dr. Leo C. Mundy, "The Medicolegal Aspects of Hernia"

Dr. Patrick F. McHugh, "Acute Perforation of Peptic Ulcer"

Dr. William J. Doyle, "Traumatic Shock"

Dr. Peter P. Mayock, "Conservatism in Renal Surgery"

(One hour)

Dr. J. Arnold Bargaen, Mayo Clinic, "The Common Causes of Diarrhea and Their Management"

LUNCHEON

1-2 p. m. Nurses' residence

MEDICAL ESSAYS

2-5 p. m. Auditorium, Nurses' residence

Andrew J. Hourigan, Esq., President of the Board of Trustees of Mercy Hospital, Address of Welcome
Dr. Claude S. Beck, Cleveland, Ohio, "The Heart as a Surgical Organ"

Dr. Frank Lahey, Boston, Mass., "The Diagnosis and Management of Carcinoma of the Colon and Rectum"

Dr. Irving W. Potter, Buffalo, N. Y., "The Technic of Elective Version"

THE DOCTOR'S BILL

At a time when there is so much loose talk about state medicine it is good for us to have as sound a discussion of the factors involved in medical economics as Hugh Cabot gives us in *The Doctor's Bill*.^{*} Beginning his book with a delightful chapter on medical practice in 1890 and 1930, Dr. Cabot, in the salty phraseology which we associate with him, proceeds to analyze the chief features of medical practice today. In this study, which is satisfactorily thorough as to the facts presented and is interspersed with the author's comments on these facts, Dr. Cabot includes the requirements of modern medical diagnosis, our medical resources (the training of medical students and of nurses and the development of hospitals), the relation of specialism to general medicine, various types of group health services, workmen's compensation acts, the ability of the public to pay for medical services, and a résumé of the methods employed by other countries, notably Great Britain and Germany, in meeting the situation.

Following his presentation of the principal factors involved in the problem, Dr. Cabot suggests various ways in which medical practice in the United States might depart from its present status. His own attitude may be inferred from the following quotation: "It should be remembered, however, that the decision as to what pattern medical practice will gradually assume will not be made, in the long run, solely upon the opinion of the profession. In this field physicians have no exclusive rights to the expression of authoritative opinion. The problems are economic and social, rather than technical and professional. In the long run, the decision must remain with public opinion, since, after all, it is the public, and not the profession, which is most vitally concerned. I cannot subscribe to the view that any group in the community has any rights which the public is bound to respect, if they can be shown to be opposed to the public interest."

That this attitude is essentially sound seems to us to be obvious. The logical conclusion is that if any measure can be found which will provide better medical care for a larger number of people, this measure should be incorporated in the practice of medicine.

Dr. Cabot does not attempt to tell us the answers to the questions which he has suggested. Instead, he indicates possible solutions, and gives his views as to their practicability. Since he offers no panacea, it is difficult to give in abstract the conclusions at which he has arrived, more particularly so because he leaves us with the suggestions instead of the conclusion. One gets the impression that he would favor experimentation by various localities with various methods of voluntary insurance. Compulsory insurance in this country he believes would prove unsatisfactory. He would favor the regulation of specialists, but unlike many writers, he believes that the growth of true specialism is good and not harmful. He prefers a National Registry for doctors, such as exists in England, to the individual state boards such as we have here, and finds much that is good in group health services, such as those organized by some universities and industrial corporations. As regards group medicine itself, Cabot says, "It appears to me to be of the first importance that we should consider very carefully the ultimate possibilities of group practice, particularly if we look forward to the development in this country of some

plan which is suited to our own state of social progress, and is based upon developments which have already taken place here. It should not be forgotten that the development of the group is not only peculiar to this country, but is the single outstanding contribution of the medical profession to improved organization for the delivery of medical service."

In effect, Cabot's only advice is that we should not oppose new departures just because they are new. "On the part of organized medicine, too great an insistence on the perpetuation of the present order is in danger of developing into a struggle for the perpetuation of a vested interest." His book is suggestive, not conclusive, but it contains much material which can be employed in building a road out of the somewhat unstable region in which we now are, to higher and more solid ground. —*New England J. of M.*, July 25, 1935.

COMMENTS AND EXCERPTS

Files Birth Control Bill.—A new birth-control bill has been introduced by Senator Copeland, being a revision of the Hastings and Pierce bills offered at the previous session of Congress.

The National Committee on Federal Legislation for Birth Control stated that the bill, by modifying the restrictions put on licensed physicians by the present Federal laws, will put the matter in the hands of the medical profession instead of commercial interests.

"The new birth-control bill will bring the Federal laws on contraception in line with the laws on the subject in more than 40 states and with the spirit of the Constitution concerning states' rights," the committee stated. "Indicative of public opinion on this subject, more than 40 states now permit physicians to prescribe birth control to their patients." —*New York Times*, Feb. 13, 1936.

Baby Talk Handicaps Infants.—Baby talk was condemned by Dr. Frederick W. Brown, of Floral Park, N. Y., at the annual American speech correction convention held in Chicago in January.

Poor comprehension in children of the seventh and eighth grades has been traced to the fact that they were baby talkers in infancy.

To encourage it or indulge children in it will retard their general learning.

An explanation of stuttering, as based upon "a desire to express infant, non-speech sounds," was offered to the convention by Dr. Smiley Blanton, of Cornell University, who said:

"It is such early sounds as gurgling and suckling breaking through again. The stutterer dramatizes an unconscious conflict between the desire to express them and the adult necessity of suppressing their primitive expression."

This desire to revert to the prespeech stage showed up in many who did not stutter. That was what made men chew pipe stems or cigars, smack their lips, and eat noisily. —*New York Times*, Jan. 2, 1936.

Writing in Lay Journals.—The profession has condemned the action of those of us who write for lay publications when the motive is a public discussion of a medico-economic problem or when the article purports to instruct laymen along general lines. In most of such publications, by no stretch of the imagination can the author be accused of self-aggrandizement or specifically calling attention to himself.

^{*} Published by Columbia University Press, Columbia University, New York, 1935. 313 pages.

The Principles of Professional Conduct, section 31, provides among other things, that "they shall not boast of cases, operations, cures or remedies, nor aid or permit the publication of any of the foregoing in the public print."

We call attention to section 31 because we feel that when medical men write for lay magazines published for lay consumption, detailing themselves, their operations, their cases, and their cures, this constitutes, in our opinion, a violation. To our knowledge some of our professional friends have inadvertently fallen into this. To clarify the situation and sound a warning is our purpose.

It requires no great piece of mental activity to reason out to whom an article is addressed, who will be the readers. Then write so—if write you must—that good taste and our traditions, including our ancient code, are not violated.—Editorial, *N. Y. State J. M.*, Feb. 1, 1936.

The Demon Noise.—Experiments of doctors, in measuring the pressure put on the brain by either the explosion of paper bags or the blowout of automobile tires, reduces to mathematical symbols what everyone has felt. Metropolitan centers are becoming acutely aware that noise from the city streets is a liability against which the nervous system is in direct revolt. It is probable that the agitation for silence is prompted more by our frayed nerves than by an increase in noise decibels from outside. London is reputed to be quieter in this machine age than it was in the horse and buggy days. There is every reason to think Philadelphia is. Wooden blocks are replacing paving stones, rubber has usurped the use of steel for horseless carriages. Trolleys do not yet creep upon us silently but they put less pressure on our ear and brain cells than they did in the nineties. If an automobile has its brakes properly lubricated, and its horn used with discretion, the whirr of its engine—sometimes called its purr—produces its only sound.

The machine age ought not of itself split any ear drums. Radios, it is true, have noise possibilities with which previous generations did not have to wrestle. But it is the use of these machines that causes sleepless nights, not the instruments themselves. Many of our problems are really due to the fact that, as Americans, we haven't lived long enough together. We do not as yet appreciate or visualize our common interests in a great city. Our noise-making proclivities are in the same class. We shall have to learn the courtesy and politeness that living in the city requires, and cease acting like people who have just moved in.—Editorial, *Evening Bulletin* (Phila., Pa.), Feb. 27, 1936.

MEDICAL ECONOMICS

Freedom of Choice.—Regardless of whatever plans are proposed for the improvement of existing difficulties in medical practice, none will be adequately effective from the viewpoint of both the patient and the doctor unless freedom of choice is maintained. The privilege of the sick man of selecting his own medical attendant has existed from time immemorial, and it is one which he will relinquish, if at all, with a struggle and with a great deal of dissatisfaction and regret. The privilege of maintaining a clientele composed of what he has always called *his* patients is the only one under which the doctor can give an adequate measure of efficient service.

The number of plans proposed for the solution of the medico-economic problems of the day is legion. But the principle of freedom of choice is and should be a basic requirement when and if changes are made. That certain alterations are possible without interfering with freedom of choice has been satisfactorily demonstrated in a form of industrial group practice which is in vogue in Binghamton, N. Y. As described by Dr. M. S. Bloom, the medical adviser of this plan, it is feasible to provide for a welcome type of group medical practice in such a manner as to earn the good will of the doctors of the community without in the least usurping from them the power and the right to dictate the fundamental principles of their practice. [A New Experiment in Industrial Medicine, *J. A. M. A.*, 100:1869 (June 10), 1933; Successful Industrial Group Practice, *ibid*, 103:1155 (Oct. 13) 1934].

This plan in essence is a system of prepayment of a small weekly allotment by employees, with adequate support by employers, and creates an insurance against illness. The unique feature is that "the employee goes to whom he pleases for treatment." The whole-hearted reception of this plan by patient, doctor, and industrialist, plus its complete financial success over a period of years and covering a large number of employees, is sufficient index that this is one solution to the situation. There is no doubt that this plan is of sufficiently flexible nature to allow for its adaptability to diversified types of industries.

Freedom of choice permits the continuance of the *status quo* in the doctor-patient combination. The lack of freedom of choice will hamper the prospects of acceptance of any other measure.—*Medical Record*, Jan. 15, 1936.

Compulsory Health Insurance.—*The Saturday Evening Post* of Jan. 25, 1936, carries the following editorial on compulsory health insurance:

"Many social workers, actuated by the best of motives, have long been pressing for compulsory health insurance with free medical attendance included. It touches our pride as well as our compassion to hear of folk in the richest country in the world without proper care when they are ill because they are too poor to pay for it. These feelings are intensified when we are told that nearly half of our population gets no medical attention whatever.

"If these hardships could be done away with by setting up a system of state medicine, that would be a powerful argument in its favor. Unhappily, the experience of nations which have given such systems a thorough tryout is anything but encouraging.

"According to a study of conditions in England in 1933, made by the *London Times*, the time lost through sickness by insured workmen averaged 12½ days per man yearly, an aggregate of 12 months' work for 558,000 persons. Before compulsory insurance went into effect, the loss was only 9 days; the increase under the insurance scheme being more than 38 per cent. Germany has had half a century of experience with insurance against sickness, and in those 50 years the time lost through illness has trebled. The comparison with American figures is striking, for the average loss of time by our own workmen is only about 6½ days a year, and the figures have been stationary at that level for a quarter of a century.

"We are indebted to Dr. Frederic E. Sondern, president of the Medical Society of the State of New York, for a well-rounded study of the whole matter. To quote his own words: 'We are asked to occupy our lives with

false gestures of administering good medical care which the conditions will not allow us to give; we are asked to make ourselves a part of a gigantic bureaucracy and play politics with human lives.'

"The most significant paragraphs of Dr. Sondern's study are those which deal with our growing reliance on group action. He, like most Americans, believes that our national destiny lies in individual rather than in collective efforts, and he does not fail to point out that one of the most powerful factors which brought into being the Renaissance period of the fourteenth century was the realization by men of their own individual powers and of the responsibilities those powers carried with them. This was one of the prime characteristics of the great eras of history.

"Dr. Sondern does not overstate the facts when he says that 'we have evidence of retrogression in the increasing domination of the group spirit, the sacrificing of individual independence, a lessening sense of personal responsibility and a growing paternalism, the former intrepid pioneer in thought and act leaning more and more on the soft bosom of the state.'"—*N. Y. State J. M.*, Feb. 15, 1936.

The Exaggeration of Sickness Hardships.—It is well to keep in mind that there has been much exaggeration in the portrayal of isolated cases of unhappy social and economic conditions associated with unforeseen sickness, such special instances being used only too often to lay down premises from which general conclusions may be drawn that would favor the institution of the social and sickness relief procedures advocated by such proponents.—Editorial, *California and Western Medicine*, July, 1935.

Additional Data on Medical Economics

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MEDICOLEGAL NOTES

Master's Promise to Pay for Medical Services.—The Georgia Court of Appeals holds, *Guy vs. Riley*, 180 S.E. 624, that the promise of a master, on finding a physician attending his injured servant, who had been burned by falling into a vat of hot whiskey mash while assisting the sheriff to destroy an illicit whiskey still found on the master's farm, to pay the physician for such medical attention and services was an original undertaking by the master, based on a valuable consideration, making him liable for such services although the sheriff, who procured the physician, promised to pay him in the event no one else would agree to do so.—*Medical Record*, Nov. 6, 1935.

Evidence That Pain Was Merely Mental.—In a suit under the Tennessee Workmen's Compensation Act for total and permanent disability alleged to be the result of spraining of claimant's back while lifting a motor for his employer, 3 physicians who examined claimant, had roentgen-ray examination made, etc., testified that they could find nothing that would cause pain, and gave it as their opinion that claimant's pain, if in fact he had any, was mental and not attributable to the injury alleged. Such testimony, the Tennessee Supreme Court held, *Carter vs. Kelsey Wheel Co.*, 77

S. W. (2d) 449, is competent, citing 22 C. J. 661, 668.—*Medical Record*, July 17, 1935.

Attorney's Authority to Obligate Client for Expert Witness Fees.—The New Jersey Supreme Court, *Klein vs. Boylan*, 179 Att. 638, holds that an attorney who is retained to prosecute a suit for damages arising out of an accident has implied authority to obligate his client to pay the fee of an expert witness to testify in behalf of such client when the necessity for such a witness and the reasonableness of his fee are not challenged.

The plaintiff in this case was a roentgenologist who had, during the treatment of defendant's injuries, examined roentgen rays of defendant and rendered reports thereof to the other attending physician. The defendant's attorney requested him to testify at the trial of defendant's action for damages as an expert, which the plaintiff did. The necessity for his testimony and the reasonableness of his charge of \$100 were not challenged by the plaintiff. Judgment for plaintiff was affirmed.—*Medical Record*, Nov. 20, 1935.

Typhoid Fever from Food Provided by Employer.—The Department of Labor, *McDonald vs. Belle Terre Lodge*, Reversing 244 Appellate Division 855, awarded compensation to McDonald, a soda dispenser in a summer hotel for disability due to typhoid fever, upon findings that he contracted the fever from food provided to him by the hotel as part of his wage and that such contraction was an accident. Six other employees had the fever at the same time with himself, one of whom died from it. Upon appeal, the carrier contended that the evidence did not show the epidemic to have been food borne. The Attorney-General replied that the water supply had been shown not to have borne the germs and that none of the employees proved to have been typhoid carriers. He cited cases in other states in which contraction of typhoid was held to have been accidental. The Appellate Division affirmed the award, with statement that the Industrial Board was justified in its inference that the disease was food borne; but, upon further appeal, the Court of Appeals, all of the judges concurring, has reversed the Appellate Division's order and dismissed the claim, with statement that the typhoid was not proved to have been the result of an accidental injury.—*The Industrial Bulletin*, Oct., 1935.

Liability of Mental Hospitals in Suicides of Patients.—The patient's case had been diagnosed as manic-depressive psychosis accompanied by suicidal tendencies, and, on the advice of the physician, he was placed in a sanatorium from which he escaped and committed suicide. The plaintiff, as administrator of the decedent's estate, sued the defendant sanatorium and the jury returned a verdict for the plaintiff. A motion to set aside the verdict was denied and the defendant appealed to the Supreme Court of Errors, Connecticut.

From the evidence, said the court, the jury was justified in concluding that the decedent was suffering from a manic-depressive psychosis and that the sanatorium authorities knew, or should have known, in the exercise of reasonable care that the decedent would commit suicide if the opportunity offered.

The sanatorium contended that it could not be charged with negligence since the decedent had not been committed to its custody by any court, that there was no evidence of voluntary submission to restraint, and that since the institution had no right to restrain the decedent, his escape and suicide did not render the defendant hospital liable for negligence.

In *Mulliner v. Evangelischer Diakonissenverein*, 144 Minn. 392, 175 N. W. 699, said the Supreme Court of Errors, it was stated that when a patient enters a hospital maintained for private profit he is entitled to such reasonable attention as his safety may require, and that if he is temporarily bereft of reason and is known by the hospital authorities to be in danger of self-destruction, the authorities are in duty bound to use reasonable care to prevent such an act.

The Connecticut court agreed with the Minnesota court and held that even if the sanatorium could not have legally restrained the decedent and prevented his leaving the building, it did not follow that they were not negligent in failing to have an attendant with him when he left the institution. The sanatorium had assumed, for a consideration, the duty of keeping the decedent under surveillance, and the suicide was a result of having failed to do so. Whether the sanatorium had exercised reasonable care under all the circumstances was for the jury to determine, and the court concluded that the findings of the jury were not so unreasonable as to warrant interference with the verdict and that the trial court did not err in refusing to set that verdict aside.—*The Modern Hospital*, Feb., 1936.

"Confinement Within the House."—There is much diversity of opinion among the various courts of last resort as to the meaning and effect of the provision in an insurance policy allowing benefits "while necessarily and continuously confined within the house" by disease.

Some courts hold that the clause is unambiguous and should receive a strict and literal construction. Others, and these are in the majority, hold that it is ambiguous and, having been prepared by the insurance company, should be liberally construed in favor of the insured.

Among the courts in favor of a strict interpretation are those of Kansas, Missouri, Wisconsin, Massachusetts, Maine, Michigan, and Arizona. A more liberal interpretation has prevailed in courts of equal dignity, including Colorado, Illinois, Washington, Arkansas, New York, North Dakota, Louisiana, Kentucky, Ohio, Iowa, Texas, Oregon, North Carolina, and Nebraska. The federal courts also take that view.

The courts which take the liberal view seem to base their decisions upon the reasoning that it may be necessary or advisable, for the speedier relief of the patient from his indoor confinement and his ultimate cure, that he occasionally leave the house, and sometimes this may be necessary for his proper professional treatment. The circumstances of the cases vary greatly and the phraseology of the policies also varies somewhat, but out of the numerous decisions a few of the more recent show the general trend of judicial opinion on the subject.

In one recent case it was held that a doctor, insured under a health policy, who was unable to attend to his duties and whose confinement indoors from cerebral hemorrhage, causing worry, nervousness, and increased blood pressure, was broken by going outdoors only on the advice of his physician as a part of the proper and necessary treatment of his illness, was "confined continuously within doors" within the meaning of the policy.

In another case it was held that the fact that the insured, suffering from a serious ailment, was not visited in his house by a physician at least once a week as required by the policy, but upon the advice of his physician was taken to the physician's office several times a week for roentgen ray and other treatments not

available in his house, did not warrant a finding that the insured's illness was a nonconfining one.

A policy, covering a doctor, insured against loss of time from disease causing total disability and requiring the regular and personal attendance of a physician. A rider to the policy covered total disability while "necessarily confined within the house by disease." The insured became totally disabled from arteriosclerosis while the rider was in effect, and so remained until his death. From the effective date of the rider the insured had remained at home upon the advice and under the care of 2 physician friends. Upon their advice, however, he daily took a short walk of a block or two and a short automobile ride. On at least one occasion he visited his dentist. The Fifth Circuit Court of Appeals, affirming judgment for plaintiff in an action on the policy, did not go so far as to approve the more liberal rule announced in some jurisdictions, but it did think that the clause should be so construed as to authorize the patient to be taken to his physician's office, or under his physician's orders to take short walks for exercise or short rides in an automobile for fresh air, provided that the sole object and bona fide purpose is to benefit his health or alleviate his condition.

Another case held that where an insured person, totally disabled, is taken twice in a car a distance of a few blocks to impart information particularly within his knowledge about a business with which he had been connected, but performs no work, he does not contravene a clause requiring necessary, continuous, and actual confinement within the house.

Several cases hold that confinement in a hospital is equivalent to confinement within the house.—Editorial, *Medical Record*, Feb. 5, 1936.

HOSPITAL ACTIVITIES

Politics Rampant.—In many states the people will have expressed their choice at the polls for their government officers when this is read. For weeks a political battle of words has filled radio programs and the columns of the press. The hospital has not escaped. This magazine has no official interest in the claims or even the successes of local or national contending parties. It has but one platform plank, the better daily medical care for almost a million of the country's population. It calls for a halt on the use of the hospital's personnel as tools to carry a political clique to success at the polls.

The voluntary hospital can be harmed but little by the greedy grafting political boss. The state institution is at his mercy. For those high in authority to discharge whole boards of self-sacrificing trustees and replace them with illiterate or low-visioned satellites of their own creed in order to get votes and jobs is the lowest type of social debauchery.

Can nothing be done? Should good citizens sit idly by while sickness, distress, and poverty are used as pawns in the political arena? Is there one who can defend this policy? What can the organized profession of hospital administrators do in this social emergency? Where is the wrong being done? Look about you—in your own city, county, or state. To permit a great injustice to be done to any or all of the nation's sick without at least hospital and medical associations and publications forcibly directing attention to the unfairness and folly of such a policy is cowardly even though

to do so may be futile.—Editorial, *The Modern Hospital*, Dec., 1935.

Square Holes and Round Pegs.—Is the present yardstick used in determining the qualifications of interns adequate? The graduates of class A medical colleges routinely possess such knowledge of medicine as enables them to perform under supervision the work of the hospital intern. Rarely do they fail through any lack of formal education.

Many hospital boards, however, are very properly seeking some way of selecting young physicians whose personalities and cultural backgrounds will meet their particular needs. Resentment of discipline, lack of graciousness, low moral tone, selfishness, or the absence of any of those character traits which distinguish the medical gentleman of the present and past will cause the most brilliant medical student to fail as a hospital intern.

On the clinical side, too, the intern must be chosen to fit the situation. Where close supervision is assured, it is possible to use a man possessing less medical judgment than in the large general hospital where staff visits are infrequent and where a great number of patients are treated.

One fact is unassailable. Round pegs never have been known to fit into square holes. Similarly, those of uncertain cultural, intellectual, and moral attributes can never metamorphose within a few months into cooperative, kind, and efficient interns.—Editorial, *The Modern Hospital*, Feb., 1936.

Should Hospitals Admit Moribund Private Patients?—Many patients expire in the hospital in less than 48 hours following admission. In some instances such cases have received extensive trauma as a result of industrial or automobile accidents. A goodly number suffer from acute surgical states and succumb after emergency operative interference. However, too many represent hopeless cardiorenal conditions or other terminal states in which the hospital and its staff have not even a chance to save life.

Some physicians, it is suspected, prefer to have a patient expire in the hospital rather than in the community in which they practice. This feeling represents a desire to pass a part or all of the responsibility for the death over to the hospital. Relatives are too eager to grasp at a therapeutic straw and to expect miracle working by the hospital.

Moribund patients should not be brought to the hospital. It is not fair to them or to the institution. To increase the mortality statistics of the hospital unduly in order to satisfy the false hopes of relatives or to serve the interests of the doctor is poor practice.—*The Modern Hospital*, Feb., 1936.

Politics and Hospitals Do Not Mix.—Politics again rears its ugly head to menace the well-being of hospitals. It is the pay-off time of election promises. The faithful are demanding jobs. In states that conduct public institutions for the mentally and physically ill, the position of superintendent of these hospitals possesses a strong allure for him who demands political favors.

Of no importance is the fact that an incumbent has rendered long and faithful service to the community or that he is a valued member of state or national hospital associations. Little counts the past efficiency of a directress of nurses when one who can get out the women's vote but who has no professional training to

recommend her, desires her place. The unfairness to the individual counts but little.

The institutional executive who has a definite contribution to make can always earn a livelihood. But the patient—he is the one most harmed. When the soiled hand of greedy politicians touches the care of the sick, all that is human and efficiently scientific suffers.

We need but to study the question of executive turnover in these public institutions to learn concerning political methods and their effect on the care of the patient and on the scientific progress of the hospital. It would seem that one remedy for political meddling in hospital work would be the arousing of public opinion by national hospital groups against such practices. The community has its own destiny in its control were it always wide-awake and informed as to need for skilled executives in its hospitals.

Perhaps this reform should be led by the American College of Surgeons, the American Medical Association, the American Hospital Association, or the American College of Hospital Administrators or, better, by all of them. It surely is reasonable to expect that he who would care for the sick in any capacity should be specifically trained for these duties. Politics and hospitals do not mix.—Editorial, *The Modern Hospital*, Nov., 1935.

Powerful Support.—We have talked about our problems among ourselves so much that we understand them thoroughly. At conventions we have been treated graciously by the press. Within the limitations of the space which city news editors can grant to the coverage of local events, the newspapers have presented our problems to the public. Many newspapers have devoted editorial space to able discussions of the situation which faces our institutions.

But so far as we know, no newspaper has a circulation equal to that of *The Saturday Evening Post* nor wields as great an influence over such a vast number of people. Thus when the editor of that great publication, George Horace Lorimer, devotes a long editorial to the hospitals' plight and discusses the problems which face them in the authoritative manner of one thoroughly familiar with the subject, the renewed evidence of his continuing sympathy and understanding is cause for sincere appreciation on our part. That aid in the solution of the problems of hospitals constitutes a part of *The Saturday Evening Post's* editorial program cannot be doubted in view of the editorials which it has carried in the past and carries in its issue of Jan. 18, 1936.

Because of its special interest to hospital people, the editorial "Hospitals in the Red" is reprinted here by special permission of *The Saturday Evening Post*, copyright 1936 by the Curtis Publishing Company:

"Most of us who have had occasion to spend a week or two in a hospital, or have to pay the bills for relatives who have undergone surgical operations, have thought the charges burdensome, if not excessive. Few of us realize how greatly the inescapable costs of operating a hospital have multiplied. Science, during the past century, has managed to prolong human life by several years—7 or 8 some authorities tell us—but often the means for doing so are expensive. Take the single item of radium, which is employed with such success in the treatment of malignant conditions. Radium salts are among the most costly known, but our hospitals have to have them, and their investment in them may run into 6 figures. They have to have expensive roentgen-ray apparatus, for treatment as well as for

diagnosis, and such progress is being made in this field that the devices in use are made obsolete by the newer models. The upkeep of operating rooms, with their prodigal use of dressings, anesthetics, and other supplies in endless variety, runs into more money than the patient on the table can possibly realize.

"In well-managed hospitals, every proper effort is made to cut out waste and to enforce every wise economy, but, by the same token, the chief end and aim of the hospital is to make sick persons well, and considerations of money-saving, no matter how important or pressing, are not permitted to stand between the patient and his chance of recovery. Moreover, to every medical man worthy of the name of physician, the life of the poorest patient is as precious as that of the richest, and the doctor orders what his patient needs, being guided by his physical and mental condition and not by reference to his bank balance.

"Our voluntary hospitals from one end of the country to the other have been going through a heart-breaking experience. Not only have contributions from rich friends dwindled to next to nothing but the paying patients have been falling off while the free patients have been steadily increasing. Deficits are the rule rather than the exception, but our hospital managers tell us, with justifiable pride, that they have put considerations of humanity above what, in a commercial undertaking, would be called the canons of good business management. There was nothing else for them to do.

"Last month the voluntary hospitals of New York were engaged in a campaign to raise 2 million dollars with which to carry on. The drive was preceded by a careful study of hospital costs and their relationship to receipts. Some of the figures thus obtained are sufficiently typical to be of nationwide interest to those who feel concern for the welfare of our hospitals.

"Mr. William A. Dawson, expert in charge of accounting, announced that the average cost to patients for a day's treatment, including bed, board, routine, and professional services, was \$4.30 a day, whereas the actual cost to the hospital was \$5.86. This gives an average deficit of \$1.56 per patient per day, but, in the case of ward patients, the daily deficit for each and every one is \$2.54.

"Going more deeply into the matter, Mr. Dawson's researches revealed that with patients of all classes the hospitals lose \$3.35 a day on operating-room costs, 45 cents a day on roentgen-ray costs, and 74 cents a day on laboratory examinations. If we multiply these losses by the number of patients in a hospital and the product by the number of days in the year, we can instantly determine what formidable deficits are bound to result.

"There appear to be but 3 courses which will put our hospitals on a firm financial footing. We can turn away patients who cannot pay full costs, and let accidents and disease do their worst to them. Such a course cannot even be considered in a civilized community. Second, we can intensify our appeals to the public to give our voluntary hospitals the wherewithal with which to carry on. In the past, this method has had considerable success, but the pinch of poverty has cut off the gifts of the public-spirited, while the pay patients have dwindled and the free patients have multiplied. Third, we can bend every energy toward the perfecting of the sundry methods of health insurance which have been tried out in many localities.

"Any one of us, at any hour of the day or night, may stand in urgent need of the services of the nearest hospital. It is only right, then, that we should take a per-

sonal interest in them and help to keep them in such a condition of efficiency that they will be able to serve us properly should occasion arise."—*Hospital Management*, Jan., 1936.

INDUSTRIAL MEDICINE

Industrial Accidents.—Dr. Harold A. Spilman, Ottumwa, Iowa, in an article in the *Journal of Iowa State Medical Society*, Nov., 1935, states that there is a very great difference between ordinary accident work and industrial accident work for several reasons. One is the mental attitude of the employee which is influenced very definitely by the compensation laws. Another factor is the effect of the attitude of the various foremen in viewing the situation from the angle of production and continuation of work of employees.

The importance of industrial surgery has been growing in the minds of the medical profession in recent years. Among the first to pay special attention to industrial accidents were the railroads. One reason for this early manifestation of interest was the Interstate Commerce Commission. An accident which results in an employee losing more than 3 days from his work is what they call a reportable accident, and as such requires a special investigation and report to the Interstate Commerce Commission. This has reacted beneficially on the accident rate, but it has also resulted in some evils, because the railroad officials have gone to extremes to prevent the reporting of accidents.

The safety program has reduced the amount of disabilities resulting from accidents by discouraging unsafe practices. During a 5 years' observation there was a total of 1449 employees requiring medical attention; some had 6 or more injuries, varying from 6 to 16 in number. An analysis of the accidents showed many to be preventable by proper attention on the part of the heads of departments.

An analysis of the accidents reveals a certain type of grouping. Infections are divided into 2 groups: Those in which the original injury was promptly reported, and those in which it was not. Cuts, bruises, sprains, fractures, hernias, back injuries, burns, and the miscellaneous group comprise the remainder of the cases.

Infections form a very important group of cases in industrial accidents. If these cases can be controlled, it will be possible to reduce materially the disabilities resulting, the time lost, and the cost of administration of the medical department. In the final analysis, the only way physicians can talk to the average industrialist is to show him where proper medical and surgical attention affects his pocketbook.

A group of cases extremely interesting to those dealing with industrial cases in which edged tools are handled is the group of cuts involving tendons, especially the flexor tendons of the fingers. Satisfactory repairs of the cut flexor tendons are obtained when they occur near the distal end of the fingers in about one in 4 despite the use of every aseptic precaution. That is not a very good result. It is hard to tell why it is so poor. A large number of physicians state that they had about come to the point where they did not want to repair cut flexor tendons of the fingers; they would rather pay for the disability and the loss of function that exists.

In the discussion of this article, Dr. J. A. William Johnson said that since the workmen's compensation laws were enacted some 25 years ago, trauma has been seriously considered by both medical and legal profes-

sions. From the industrial standpoint trauma is destined to occupy a very important place in the practice of medicine and surgery, as evidenced by the interest taken in this subject by the American Medical Association and the American College of Surgeons.

The immediate effects of contusions and lacerations, burns and scalds, fractures and dislocations have been given voluminous descriptions and considerable attention. The remote results, although less apparent, are just as grave in their effects and require equally serious attention, for instance, the "industrial back." It is a frequent cause of idleness, fraud, and malingering. It means \$18 a week in compensation, which is no bait for the thrifty, but to the malingerer it beats working. It causes confusion in the minds of judges, juries, compensation boards, lawyers, and doctors; it often leads to injustice to the employee and employer, and to waste of time and funds. The common causes of mistakes in handling injured backs constitute 3 main groups, and it is the doctor's duty to correct all 3.

1. Errors resulting from ignorance of true anatomy, physiology, and pathology of the spine.

2. Inefficient and inaccurate methods of examination.

3. Improper treatment based on faulty diagnosis.

More attention is paid to fractures today than ever before. The use of the roentgen ray shows that each fracture is a case unto itself and requires special attention. The student learns the use of suspension and traction, the Hodgen splint, and the Steinmann pin. He sees what can be done under the fluoroscope and the application of the plaster of paris splint to hold the fragments in place, while an immediate roentgen-ray film checks the results. He learns that there must be normal weight-bearing lines to avoid abnormal strain on joint ligaments, which will result in pain and diminished function as long as the deformity lasts. In spite of good bony union he also learns that the patient has not recovered until joint function and muscle tone have been restored. The outstanding surgeons throughout the world are giving their attention to fractures. No physician should take an industrial accident case unless he is willing to go the limit in diagnosis and treatment for the good of the patient, the employer, the insurance company, and for his profession's sake.

A big problem in industrial accidents is the repeater, the man who, in spite of the fact that the machine has guards, will get a finger or hand cut off after he has just returned from a lay-off due to a broken leg. He is a misfit in the industrial world of high speed machinery. His speed of working just does not coincide with the speed of the machine on which he works. He is out of rhythm with machinery and should be doing something else. Perhaps his domestic troubles are at fault. Improper food, fatigue, ill health, and bad atmospheric and lighting conditions all tend to increase liability to accidents. Those who fail to pass certain sensorimotor tests have been found by psychologists to have an accident rate $2\frac{1}{2}$ times greater than those who pass the tests.

Without a doubt the responsibility of the surgeon who treats the injured workman is greater today than ever before, due to the many advances in medical and surgical treatment. Better results are expected. The employer realizes the importance of efficient medical work and accepts the expense attached thereto as part of his overhead. Today many industries have departments of rehabilitation, which means restoration, vocational training, and adjustment of the injured. This calls for early physical therapy, active co-

operation of the patient in the voluntary use of the injured part, and the early return to work as the best form of occupational therapy. The loss of time from accidents can thus be reduced. The close co-operation of employer and employee is essential; without it the work of the surgeon is defeated.

PHYSICAL THERAPY

Fever Therapy for Gonococcic Infections.—Arthur C. Desjardins, Louis G. Stuhler and Walter C. Popp, Rochester, Minn. (*Journal A. M. A.*, Feb. 29, 1936), state that true fever therapy, as it is now understood, originated with Wagner-Jauregg, who made malarial therapy known in 1918. Since then, many other methods of inducing fever artificially have been employed. Of the different types of physical apparatus thus far designed for fever therapy, the one which appears the most effective from all points of view is the air-conditioned chamber known as the Kettering hypertherm.

Although fever therapy at high temperature may be somewhat tedious, the improvement of physical thermogenic apparatus, the judicious selection of patients, and a painstaking technic carried out by a specially trained team remove practically all danger of serious complications and make possible the cure of a high percentage of acute or chronic gonococcic infections of the urethra, epididymis, cervix and body of the uterus, Fallopian tubes, and joints within a period which may vary between 2 and 4 weeks but which, in the majority of cases, varies between 2 and 3 weeks. If a few cases of gonococcic infection prove rebellious to treatment, this is because certain strains of gonococcus can tolerate a temperature of from 41.1 to 41.7° C. (106 to 107° F.) for a longer time than can certain patients.

In certain women suffering from gonorrhea complicated by infection of Skene's glands, that part of the infection which involves the urethra, uterus, tubes, or articulations rapidly disappears under the bactericidal and resolving influence of a sufficiently high temperature maintained for from 6 to 10 hours and repeated 3 or more times at intervals of 2 days. But to cure the infection of Skene's glands it is sometimes necessary to cauterize these structures.

Fever therapy for simple or complicated gonococcic urethritis owes much to the investigations of Carpenter, Boak, Mucci, and Warren, who undertook a systematic determination of the influence of heat on the gonococcus.

Advanced age with its cardiovascular changes and organic lesions of the heart at any age are outstanding and more or less formidable handicaps to fever therapy. Functional disorders of the heart may or may not interfere with treatment. Several renal disturbances also may make effective fever therapy difficult or impossible but, on the whole, they interfere with treatment less than cardiac or cardiovascular disturbances. Pulmonary tuberculosis alone is not a contraindication, but the resulting impairment of respiratory function may make it impossible to raise the patient's temperature to the required level or to maintain it at this level for a sufficient period. When diabetes is under satisfactory clinical control, fever therapy is not contraindicated.

The technic of fever therapy for gonococcic infection is given, taking into consideration tolerance to a high temperature, number of sessions of treatment necessary to cure a gonococcic infection, duration of sessions of treatment, action of fever therapy on cardiac function, and action of fever therapy on blood pressure. The

authors state that, when treatment is carried out under the conditions and according to the indications and technic that have been given, serious complications of any kind should rarely be encountered. The results in 92 patients with simple or complicated gonococcal infection are given.

PUBLIC HEALTH

Cream Imports Face Rigid Test.—According to the *Associated Press*, Feb. 13, Dr. Edith MacBride-Dexter, Secretary of Health, stated that all cream from unapproved sources outside of Pennsylvania will be barred beginning Mar. 15.

Dr. MacBride-Dexter said the restrictions, imposed under an act of 1935, will exclude competition of cheaply produced, unsanitary products with the products of Pennsylvania's own sanitary dairy farms.

In order to minimize the danger of a shortage of milk supplies, no attempt was made to enforce the provisions of the law relating to milk supplies from other states until ample time had been given dealers to locate other sources.

WPA To Do Health Work.—Edward N. Jones, State Works Administrator, announced at Harrisburg, Feb. 13, that medical examinations will be given through WPA facilities to 725,000 school children attending more than 10,000 public schools in Pennsylvania.

The program, supervised and sponsored by the Department of Health, will employ 140 persons at a total cost of \$138,504. The students to be examined reside in 2304 fourth-class school districts in 42 counties and constitute more than three-quarters of the state's pupils.

The project will isolate and provide preliminary treatment for minor ailments discovered among children. The activities are expected to develop long-range plans for the correction of defects through regular facilities of the Health Department.—*Associated Press*.

Rabies in Philadelphia.—Not a single case of rabies (hydrophobia) in human beings has been reported since the outbreak of the disease among dogs in Philadelphia last fall.

This statement should not lead to the relaxing of vigilance and care in the precautions already broadcast concerning the spread of the infection from dogs to human beings. On the other hand, there should be a greater effort on the part of the public to co-operate in eliminating this infectious disease by observing the quarantine on all dogs, confining them to the premises of the owners.

From Jan. 1 to Jan. 29, 351 dog bites were reported to the Division of Communicable Diseases of the Department of Public Health. Of the dogs apprehended since the first of the year, 39 had rabies, proved either by laboratory examination or by clinical symptoms. The discovery of so many infected animals makes it doubly important that all dogs found upon the public highways and not held by leash should be apprehended.

Rabies is an acute infectious disease caused by specific virus which is transmitted from a rabid animal to susceptible animals usually by the infected saliva, almost always by biting or scratching. Man always contracts the disease from some lower animal, usually the dog. The disease may occur in cattle, sheep, and goats, and less frequently in horses.

It may occur at any season of the year, although it is commonly believed to be prevalent during the hot summer months when dogs are likely to roam more freely. The prevalence of the disease at the present

time indicates that the season of the year has no special bearing upon the prevalence of the infection.

England has successfully controlled the spread of this infection by strict quarantine and legislation for the protection of dog and man. Rabies is believed to be on the increase in the United States.

All dog bites and scratches should be treated immediately by a physician who should cauterize the wounds.

Dogs who have rabies usually succumb to the disease within a few days. It is, therefore, important that every offending dog be kept under quarantine to ascertain if the disease is developing. Animals having the disease or suspected of it are killed and the brains examined for Negri bodies which identify the disease. The incubation period in human beings is from 20 to 60 days. The shortest period on record is 14 days and the longest authentic period is 7 months. This long period of incubation in human beings indicates that there is time for the use of the Pasteur treatment as soon as the offending animal is found to have clinical symptoms of the disease. If the offending dog cannot be found, then it is advisable for the person who is bitten to receive the Pasteur treatment at once.—*Philadelphia Department of Public Health Bulletin*.

Cathartic to Mix in Bread Costs Food Fakers \$600 Fine.—A powerful coal-tar cathartic has no proper place in bread or any other product sold as a food. The Food and Drug Administration regarded phenolphthalein as an adulterant when it was used as an ingredient of what the manufacturer called a "laxative health bread." The Federal court at St. Louis, Mo., agreed with the food officials and imposed a \$600 fine on Edward Owen, Frank Dawdy, and Glenn Allmon trading under the fancy name of Bakers' Research Co.

This concern had been selling "Owen's Viti-Veg," a mixture of flour, bran, and between 10 and 12 per cent of phenolphthalein, a coal-tar cathartic. This mixture was recommended to bakers for addition to their regular bread mix. The product was to be marketed as "laxative health bread."

That bread, a staple article of the diet and consumed by everyone from infancy to old age, should not be used to mask the presence of a powerful laxative is the opinion of the Food and Drug Administration. Shipments totaling some 700 packages of "Viti-Veg" were seized and destroyed last June.

This case appears in the summary of criminal actions under the Federal Food and Drugs Act terminated in January, which reports fines imposed on 9 shippers of pharmaceuticals and patent medicines, and 13 shippers of food products.

For shipments of substandard pharmaceuticals, the Elmira Drug & Chemical Co., Elmira, N. Y., was fined \$675; the Tilden Co., St. Louis, Mo., \$600; the G. F. Harvey Co., Saratoga Springs, N. Y., \$200; and the Chicago Pharmacal Co., Chicago, Ill., \$10.

Patent medicines involved in recent actions bore claims for women's disorders and for rheumatism and kidney ailments. In all cases the curative claims made in the labeling were found to exceed the capabilities of the articles, and the shippers were held to have misrepresented them deliberately. Fines were assessed as follows: Snyder Products Co., Chicago, Ill. (Red Cross Brand Periodic Pills and Snyder's Tablets Prescription No. XX) \$25; Osan Products Co., Chicago, Ill. (Dr. Roger's Relief Compound and Sanacaps) \$25; Laboratories, Inc., Joplin, Mo. (Precision Pharmacals Rheumatic Relief and Precision Pharmacals Pills for Kidney and Bladder Ailments) \$50; and Roo-Mo-Rub

Corp., Philadelphia, Pa. (Roo-Mo-Rub) \$50, and Herman H. Kronberg, the firm's president, placed on one year's probation.

Filth in butter, a matter to which the administration is devoting special attention, tripped up Ben Ablon of Dallas, Texas. Trading as the Ablon Produce Co., the defendant had shipped to Chicago 22 barrels of butter which examination showed to contain animal hairs, feathers, insect particles, and other filth. The shipment was seized and destroyed in May, 1935, and Ablon has been fined the maximum permitted under the law for a first offense—\$200. Other prosecutions for similar violations are now pending in several jurisdictions, and seizures of unfit butter and cream are being effected every month.

Morbidity in Pennsylvania in January, 1936

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	1	0	2	0	0
Allentown	1	5	6	1	84
Altoona	2	1	16	0	5
Ambridge	0	0	0	0	0
Arnold	1	0	0	0	1
Beaver Falls	0	1	6	0	0
Bellevue	0	13	3	0	1
Berwick	0	1	0	0	2
Bethlehem	0	1	2	0	2
Braddock	0	0	1	0	0
Bradford	0	0	4	0	0
Bristol	0	0	0	0	0
Butler	1	1	0	0	5
Canonsburg	0	0	1	0	0
Carbondale	0	1	1	0	0
Carlisle	0	0	0	0	0
Carnegie	0	0	4	0	0
Chambersburg	0	0	7	0	2
Charleroi	0	28	1	0	3
Chester	13	7	7	0	8
Clairton	0	0	4	0	0
Coatesville	0	0	0	0	0
Columbia	0	1	0	0	0
Connellsville	1	0	1	0	0
Conshohocken	0	0	0	0	0
Coraopolis	0	0	2	0	0
Dickson City	0	0	0	0	0
Donora	0	5	0	0	3
Dormont	0	0	0	0	2
Du Bois	0	14	3	0	0
Dunmore	0	0	0	0	0
Duquesne	0	4	0	0	0
Easton	2	7	2	0	6
Ellwood City	0	3	16	0	0
Erie	0	5	23	0	17
Farrell	0	0	0	0	0
Franklin	0	0	1	0	5
Greensburg	0	0	0	0	0
Hanover	0	0	1	0	0
Harrisburg	4	2	5	0	0
Hazleton	2	1	5	0	0
Homestead	0	0	0	0	0
Jeannette	0	0	3	0	0
Johnstown	0	1	4	0	26
Kingston	1	0	2	0	5
Lancaster	0	3	4	0	5
Latrobe	0	2	1	0	0

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Lebanon	0	1	8	0	0
Lewistown	0	1	1	0	2
McKees Rocks	0	2	5	0	1
McKeesport	3	0	1	0	0
Mahanoy City	1	1	0	0	0
Meadville	0	0	0	0	0
Monessen	0	27	0	0	0
Mount Carmel	2	0	2	0	0
Munhall	0	9	1	0	0
Nanticoke	0	0	4	0	0
New Castle	0	8	9	0	13
New Kensington	0	0	1	0	0
Norristown	0	1	4	0	4
North Braddock	0	0	7	0	3
Oil City	1	0	4	0	8
Old Forge	0	0	0	0	0
Olyphant	0	8	1	0	1
Philadelphia	10	839	342	9	166
Phoenixville	0	2	3	0	0
Pittsburgh	23	99	388	0	106
Pittston	0	0	7	0	2
Plymouth	2	1	0	0	1
Pottstown	0	1	4	0	0
Pottsville	5	1	1	0	6
Reading	1	6	19	0	7
Scranton	5	49	23	0	2
Shamokin	7	0	3	0	1
Sharon	0	0	6	0	6
Shenandoah	0	0	0	0	0
Steelton	0	0	0	1	0
Sunbury	0	1	6	0	1
Swissvale	0	0	5	0	1
Tamaqua	0	0	5	0	2
Taylor	1	0	1	0	0
Turtle Creek	0	0	3	0	3
Uniontown	0	0	1	1	0
Vandergrift	0	1	1	0	0
Warren	0	0	3	0	0
Washington	0	1	9	0	0
Waynesboro	0	1	2	0	0
West Chester	0	4	1	0	31
Wilkes-Barre	5	0	23	0	24
Wilkinsburg	0	0	8	0	10
Williamsport	1	0	16	0	16
York	1	0	4	1	2
Townships					
Allegheny County:					
Harrison	0	1	1	0	0
Mt. Lebanon	0	1	1	0	2
Stowe	0	8	7	0	0
Delaware County:					
Haverford	0	1	2	0	4
Upper Darby	0	4	26	0	33
Luzerne County:					
Hanover	2	0	8	0	1
Plains	1	0	4	0	0
Montgomery County:					
Abington	0	8	5	1	1
Cheltenham	0	1	2	0	1
Lower Merion	2	0	18	0	6
Total Urban ..	102	1195	1144	14	649
Total Rural ..	92	717	981	21	385
Total State ..	194	1912	2125	35	1034

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the co-operation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

THOSE who see the steady stream of patients entering the tuberculosis sanatorium deplore the all too evident delay in making the diagnosis. About 5 out of each 6 patients in our sanatoria throughout the country are classified on admission as moderately advanced and far advanced cases of tuberculosis. One reason for delay in diagnosis is undoubtedly to be found in the lethargy of the people, coupled with the common human failing of not wishing to face unpleasant facts. Another reason is that even though the warning signals of tuberculosis have been given widespread publicity in the past, new generations are constantly appearing on the scene and older ones forget so easily. What are tuberculosis associations doing to meet this situation?

URGING EARLY DIAGNOSIS

The founders of the tuberculosis movement realized that only through broad education of the public could any progress against tuberculosis be made. The new discoveries of Koch, Naegeli, Pirquet, and others, the promising results of Trudeau's method of treatment, the pioneering activities of Biggs, inspired hope that the disease which had resisted medical science so long could be curbed. Yet this could be accomplished only with the understanding support of the people. They must know that tuberculosis is curable and preventable, that it is not a stigma, and that facilities for diagnosis and treatment must be liberally provided. Wisely the founders chose as the motive power of the new movement, public education. In the early days the exhibit and the lecture were the chief means of arousing public sentiment. Later the press, printed matter, and motion pictures were added. Today practically every avenue of reaching the attention of the masses is used.

Each year tuberculosis associations select a certain theme which all associations are urged to emphasize during that year. Printed matter and publicity aids are produced in advance. To make a definite impact the "release date" is set for April 1. Early diagnosis was the subject of the first of these campaigns; hence it was called "Early Diagnosis Campaign," a label which has

stuck even though subsequent themes were on other aspects of tuberculosis control.

This year the slogan is "Fight Tuberculosis with Modern Weapons." The 2 objectives aimed for are (a) to remind people of the early symptoms of tuberculosis and the importance of consulting the doctor on their appearance, (b) to arouse interest in the routine search for early tuberculosis before there are symptoms and physical signs.

To achieve the former, booklets, articles, and outlines for talks have been prepared calling attention to the 4 most common symptoms of early tuberculosis (as determined by surveys of large numbers of sanatorium patients), namely, fatigue, loss of weight, cough that hangs on, and indigestion. Blood spitting, pleuritic pain, and other symptoms are also mentioned. It is carefully explained that none of these symptoms is pathognomonic, but that any of them should be considered as a danger signal to be investigated by the physician. An effort is made to create appreciation for the roentgen ray. In all the educational material care is exercised not to cause undue alarm.

The second objective sought is to encourage routine search for symptomless tuberculosis among groups of young people such as high

school and college students. What is the justification for advocating this new departure?

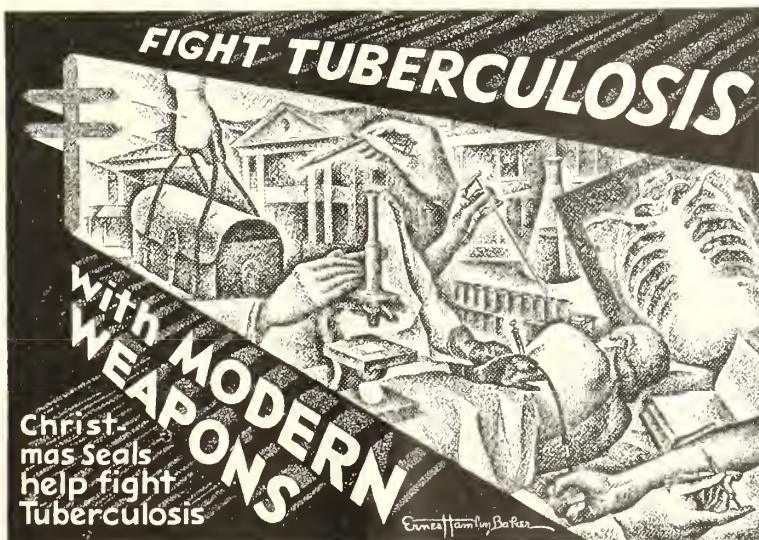
Tuberculosis sanatorium statistics indicate that the ratio of "early cases" admitted has not increased appreciably during the past 10 years. This in spite of years of earnest effort to urge people to obtain medical advice on the appearance of the early symptoms enumerated above. Many conscientious doctors constantly on the alert for tuberculosis have despaired of increasing their batting average of discovering the disease in its incipency. The reason for that failure cannot be blamed entirely on the apathy of patients nor on the lack of vigilance of doctors. It is to be accounted for in part by the fact that the transition from "early" or "silent" tuberculosis to the moderately advanced stage is usually a relatively swift one and only by the barest chance is the minimal case detected. So long as we are obliged to wait until symptoms betraying pulmonary damage drive the patient to our offices, we shall probably continue to despair.

Wrestling with this deplorable state of affairs, efforts have been made to devise some way of detecting tuberculosis in its silent stage among apparently healthy people. Chadwick, Rathbun, Myers, and others pioneered in introducing the scheme of examining routinely, with tuberculin and the roentgen ray, students in colleges and high schools. This procedure, modified in various ways, has "caught on" throughout the country. The routine examination of all students brings to light early cases that might otherwise be undetected and progress to disabling disease. Lees, who examined last year all students of the University of Pennsylvania by the tuberculin-roentgen-ray method, found 17 cases of adult-

type pulmonary tuberculosis, of whom all were symptomless and only one was dismissed from the school. Contrast this with the usual method of "passive" case finding, i. e., waiting for persons to apply to the doctor for the relief of symptoms. Lees reports that during the course of the same year, 15 cases of tuberculosis had been discovered among students who came to the doctor because of one or another symptom. Twelve of the 15 were advanced cases and were obliged to leave school.

In high schools the story is substantially the same except that fewer cases of adult-type tuberculosis are found. However, follow-up work of adolescent children with significant childhood-type lesions leads the investigators into many homes where there is an open case. This is important, for the real threat to the youngster is probably not the calcified remains of a primary complex but daily contact with a source of infection. No wonder proponents of the routine tuberculin-roentgen-ray plan emphasize the value of locating such sources of infection. In grade schools the routine method has not been found so productive, but where funds and facilities are available it is certainly an excellent addition to the school health program.

It is with the hope that the public will accept these newer ideas for the protection of young people that demonstrations are carried on in several important colleges and schools. It is hoped that ultimately parents will depend upon the family doctor to examine their children as a matter of course with tuberculin and the roentgen ray when indicated. In this educational campaign tuberculosis associations look to the physician for guidance and counsel.



TYPE OF POSTER DESIGN USED IN EDUCATIONAL CAMPAIGN

American Medical Association

535 North Dearborn Street, CHICAGO

Application for Fellowship

....., 19.....

I hereby make application for Fellowship in the AMERICAN MEDICAL ASSOCIATION and subscribe for The Journal for one year from date. I am a member in good standing of the

.....County Medical Society,

a component branch of the.....

State Medical Association.

N. B.—Seven dollars is deposited with this application, of which amount, should I be granted the Fellowship applied for, \$6.00 is to be credited to my subscription for THE JOURNAL. The Fellowship for which this application is made is to be subject to the Constitution and By-Laws of the American Medical Association.

Signed.....

NAME IN FULL

Street City

County State

Qualifications for Fellowship.—The members in good standing of the constituent state and territorial medical associations of the American Medical Association shall be members of the A. M. A.

Any (1) member of this Association, who on the prescribed form, (2) shall apply for Fellowship and subscribe for THE JOURNAL, (3) paying the annual dues for the current year, shall be a Fellow.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

DISASTER STIMULATES HEARTENING RESPONSE

Extraordinarily heavy rains, combined with sleet and snowfall, lasting throughout 48 to 72 hours in New York, Pennsylvania, Maryland, West Virginia, and other states, brought about in mid-March a record-breaking flood disaster which will probably become popularly known as the 1936 St. Patrick's Day flood.

Striking with sudden ferocity and exceeding by many feet all previously recorded depths of water, the watersheds and their draining streams, which contribute to the Ohio, the Susquehanna, and the Delaware rivers in Pennsylvania, inundated and completely disorganized the complex utility services which sustain human comfort and ordinary living facilities for such populous districts and modernized cities as Pittsburgh, Johnstown, Harrisburg, Williamsport, Lock Haven, Wilkes-Barre, Sunbury, and Easton.

In addition to destruction of life and property the disaster was marked by the almost complete cessation of civic water supplies, railway and highway travel, telephone, telegraph and mail communication, and above all others, it seemed, the manifold and almost indispensable benefits derived from commercial electric current. Deprive the people who live for miles around a flooded area of the modern necessities just mentioned and you will find rescue and relief endeavors badly handicapped.

In spite of it all, however, the best in most men and women reacted promptly to the urgent needs of the hour—whether by night or by day—and soon organized effort followed the more heroic attempts of individuals on the scene who spontaneously sought to succor those seriously threatened by the flood waters.

Few individuals or organizations responded more promptly or wholeheartedly than did the physicians. Wherever a center of relief for flood victims or refugees existed or was temporarily established, there neighborhood physicians joined with other volunteer workers, whether public health, hospital, or Red Cross groups.

On the afternoon of Thursday, Mar. 19, 20 hours after the flood had reached its devastating crest in Pittsburgh, the following message was broadcast from the powerful radio station KDKA:

The Medical Society of the State of Pennsylvania, through its officers, pledges the assistance of its 8250 members scattered through 60 county medical societies, in helping to meet the sickness prevention problems of boroughs and townships as well as those of individual families which may arise during or subsequent to the present flood situation. Speak to your neighborhood physician who is almost sure to be a member of the Medical Society.

This message was repeated at intervals throughout the following 24 hours from the same station and from several stations in Philadelphia, and was supplemented on Friday afternoon by a more personal radio message of hope and confidence broadcast by President Alexander H. Colwell.

At this writing we have evidence, that e. g., the Mifflin County Medical Society, centering at Lewistown, was assigned responsibility for medical service to the flood victims of the Juniata River and other streams in that mountainous county; the Northumberland County Medical Society, after a special meeting, entered its membership into the very serious situation centering at Sunbury. This action was matched by the Clinton and Dauphin County societies, centering at Lock Haven and Harrisburg, respectively; and county societies outside the flood

districts, such as Erie, Philadelphia, and Washington, offered their members' services as early as Mar. 19 and 20 to near-by counties and states.

Telegraphic offers of help signed by President Colwell and Chairman S. McC. Hamill were made on Mar. 19, in the name of our State Society and the State and County Committees on Emergency Child Health, to Governor Earle and Secretary of Health MacBride-Dexter.

We are confident that when the history of this great flood is written, among the many thousands who contributed, each in his own way, to the assistance of many other thousands exposed to injury or illness or rendered temporarily or permanently homeless, the medical profession will be among those memorialized.

The following appreciative editorial is from the *Pittsburgh Post-Gazette* of Mar. 24, which like the other daily papers of Pittsburgh during this period, were assembled and printed in such neighboring cities as New Castle and Washington, Pa., and Youngstown, Ohio.

Doctors in First Line of Defense

It was simply characteristic of their profession that 600 Pittsburgh physicians should immediately have volunteered their services in guarding the public health in the wake of the flood.

In such crises the doctors are always in the first line of defense, working unselfishly, heroically.

And how quietly and effectively they work, giving not only the benefits of science, but also a warm-hearted touch of humanity!

There could be no higher tribute to the profession than the fact that it is expected to do this as a matter of course—and it never disappoints!

We cannot conclude these comments without calling sympathetic attention to the plight of probably 200 of our State Society members scattered across the state (50 of them in Johnstown), through whose first-floor combined offices and residences flowed from 5 to 15 feet of destructive and filthy flood waters.

THE A. M. A. AT KANSAS CITY

Have You a 1936 Fellowship Card?

No doubt a number of members of our State Society who are subscribers to the *Journal of the American Medical Association* will travel to Kansas City for the 1936 A. M. A. Session, May 11 to 15, 1936, only to be confronted at the registration window with the statement that they are not eligible to register because they are not Fellows of the A. M. A.

All members of our county and state medical societies are members of the American Medical Association, *but only those who have made formal application for Fellowship and paid the*

subscription price for the Journal of the A. M. A. are Fellows.

Any member who is not a Fellow may make use of the application blank published elsewhere in this issue of the JOURNAL, forwarding it at once to Secretary Olin West, 535 N. Dearborn St., Chicago, Ill.

LIBRARY NEWS

Generous packages from several clinics and the American Medical Association, as well as reprints received in response to our requests from individual authors, help in the steady growth of the library. Every effort is made to fill each request from our members.

If the information on a subject is inadequate, an attempt is made to secure additional reprints; therefore, each member who makes a request of the library helps in the building up of a really useful collection of material on subjects in which many other physicians besides the original borrower will be interested.

Your comments and suggestions as to specific articles you desire the library to obtain will be appreciated.

Members desiring to borrow reprints on a subject should send 25 cents in stamps to cover the postage and part of the expense of collecting the material. Address the Librarian, 230 State Street, Harrisburg, Pa. Only one package may be borrowed at a time and it must be returned within 14 days.

From Feb. 15 to Mar. 15 packages have been borrowed from the library by the following:

Theodore R. Koenig, Knox—*Peripheral Vascular Disease* (25 articles).

Thomas R. Gagon, Pittston—*Perimetry* (18 articles).

Myer W. Rubenstein, Pittsburgh—*Skin Manifestations of the Leukemias* (5 articles).

Thomas L. Disque and Hiram D. Ritchie, Pittsburgh—*Dietary Therapy of Urinary Calculi* (15 articles).

Edward J. Carroll, Jr., Pittsburgh—*Delirium Tremens* (1 article).

Thomas R. Gagon, Pittston—*Biomicroscopy and Perimetry* (3 articles).

C. Paul Reed, Indiana—*Erythema Nodosum* (6 articles).

August J. Podboy, York—*Syphilis* (22 articles).

Ralph E. Cummings, Bentleyville—*Mycetis* (13 articles).

Harold J. Bayer, Pittsburgh—*Opaque Substances in Roentgenography of Pelvic Organs* (12 articles; 1 journal).

Walter J. Stein, Ardmore—*Periodic Health Examination* (14 articles).

D. Paul Greenlee, Pittsburgh—*Dietary Therapy of Urinary Calculi* (13 articles).

Hugh A. O'Hare, Corry—*Esophageal Atresia, etc.* (4 articles).

Walter J. Stein, Ardmore—*Periodic Health Examination* (6 articles).

David C. Pewterbaugh, Saint Thomas—*Rôle of Cholesterol in Thyroid Dysfunction* (2 articles).

Maurice Seltzer, Philadelphia—*Thrombo-angiitis Obliterans* (19 articles).

John H. King, Carlisle—*Vivisection* (1 article).

Typical of the favorable comments which have been received is the following made by Thomas R. Gagon: "Thank you very much for your efforts in sending me such a complete package."

MEDICAL SOCIETIES AND COMMUNITY SICKNESS SERVICE

We publish below opinions and comments expressed by Director Wm. C. Woodward of the Bureau of Legal Medicine and Legislation of the American Medical Association relative to a form of agreement now in existence between 7 of our component societies and the poor authorities in these various counties, which, we hope, will soon become a matter of prime interest to many other county medical societies in the State of Pennsylvania.

There will be found also similar expressions by Dr. Woodward regarding the ambitious credit and service plan sponsored by the physicians and dentists of Dauphin county, which, we are confident, will soon become a source of inspiration and guidance to similar groups in a number of other populous and industrial Pennsylvania counties.

This entire subject of the public relations of the organized medical profession in most Pennsylvania counties continues to be second in importance only to that of the continued maintenance of the high quality of professional service.

The newly created committee of the Board of Trustees of our State Society to study the social aspects of sickness service held its first meeting in Altoona, on Mar. 29, in consultation with representatives of our public health legislation, public relations, medical advisory, and medical economics committees.

There can be no doubt as to the great importance, as discussed in the officers' department of the March JOURNAL, of the maintenance by each county medical society of committees constantly active in the study of methods of improving sickness service to all groups of society, and especially in the maintenance of contact with state and county authorities responsible for such service to the indigent, as well as to those temporarily on relief.

Never has there been a time, we believe, when there was more occasion for alertness and energy on the part of all official representatives and members of county medical societies than the present. We are confronted not only with the primaries on Apr. 28, at which time will be nominated all candidates who will serve in the lower house in the regular 1937 session of the legislature, but we are also immediately confronted, no doubt, with a special session of the present legislature on May 4, called principally to consider social security legislation, which may possibly include some form of sickness insurance.

Feb. 27, 1936.

DR. WALTER F. DONALDSON, Secy.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

DEAR DR. DONALDSON:

The situation described in your letter of Feb. 11 in Mercer County and the situation described in the same letter in Dauphin County will be considered separately.

SITUATION IN MERCER COUNTY

With your letter you enclosed a mimeographed sheet containing what are described as "rules and regulations for medical services to those receiving aid from the Board of Poor Directors," adopted by the Board of Poor Directors of Mercer County and the Mercer County Medical Society. Those rules and regulations are approved by the Mercer County Medical Society and the Board of Poor Directors of Mercer County.

Nothing in these rules and regulations as set forth in the mimeographed sheet that you sent indicates that they are in any way in the nature of a contract. There is no evidence of any agreement having been entered into in a contractual sense, and the rules and regulations are referred to as having been "adopted" and having been "approved."

Nothing in the rules and regulations that you sent indicates that there is any legal consideration passing from the Board of Poor Directors of Mercer County to the Mercer County Medical Society or vice versa, or to show that the Mercer County Medical Society would receive anything of benefit by reason of the rules and regulations or suffer any detriment because of them. Moreover, the society cannot in and of itself render the services described in those rules and regulations, not only because it is not licensed so to do but also because it has not the physical and mental organization necessary for that purpose, and moreover it has no authority or power whereby to compel its members to render service on the terms stated in the rules and regulations.

Under the circumstances stated above, it seems to me that the rules and regulations in force in Mercer County, transmitted with your letter of Feb. 11, do not constitute a contract, and therefore the question of whether they are or are not within the contractual capacity of the Mercer County Medical Society does not arise.

Such rules and regulations, adopted and approved in the manner in which these seem to have been, represent apparently a statement of policy by the Board of Poor Directors of Mercer County and an expression of willingness on the part of the Mercer County Medical

Society to co-operate with the board in carrying that policy into effect.

I can see no reason why a similar agreement should not be entered into in any county without regard to the contractual capacity of the county medical society.

I can see no reason for The Medical Society of the State of Pennsylvania raising any question concerning any such agreement at the present time.

SITUATION IN DAUPHIN COUNTY

The clipping from the Pittsburgh Medical Bulletin, Feb. 8, 1936, page 135, that you sent with your letter, describes what seems to me a credit and collection agency incorporated by physicians and dentists, acting as individuals, in Dauphin County. You ask: "Do you believe under the circumstances that our State Medical Society need concern itself with the actions of its component societies along the lines just adopted in Dauphin County provided a separate charter is obtained?"

So far as I can see, the organization described in the article in the Pittsburgh Medical Bulletin—whether it be a credit and collection agency or not—was not organized by the Dauphin County Medical Society and is not a part of it.

It is to be assumed that the Medical and Dental Service Bureau so organized was organized by physicians acting individually, for the Dauphin County Medical Society would be without authority to act as an incorporator of such a subsidiary organization. It might lend its countenance to such an organization, but that is as far as it could well go.

Assuming that the Medical and Dental Service Bureau of Dauphin County is organized and operated along ethical lines—and here I have in mind not only medical ethics but ordinary principles of justice and mercy—I can see no reason for any action with respect to it by The Medical Society of the State of Pennsylvania.

The most the society could do would be to discipline its members who participated in the organization of the bureau or to revoke the charter of the Dauphin County Medical Society, and there is no essential reason for even considering any such action. If anything occurs to bring discredit on the medical profession and on The Medical Society of the State of Pennsylvania, then it will be time to act.

The bureau might in the meantime well be the subject of careful study by the State Society, with a view to reporting on it for the information and guidance of county societies elsewhere than in Dauphin County.

Yours truly,

WM. C. WOODWARD,
Director, BUREAU OF LEGAL
MEDICINE AND LEGISLATION,
AMERICAN MEDICAL ASSOCIATION.

DO YOU HAVE A SCIENTIFIC EXHIBIT?

Can you put on a splint more easily, more quickly? Can you tie a suture better or faster? Have you a trick way of staining a slide? Can you visualize that method of procedure which

has helped you in making a good, clear-cut diagnosis? Are you sufficiently practical to interest yourself in a practical proposition, a scientific exhibit which endeavors to enrich the practical field of medicine?

If so, offer your contribution to the chairman of the Scientific Exhibit Committee. He will endeavor to work out with you such minor details as space, *etc.* Be sure you attend to this at once, as the State Medical Society is becoming scientific exhibit conscious, and little, if any, space will remain available.

LESTER HOLLANDER, M.D.,

Chairman, Scientific Exhibit Committee,
631 Jenkins Building, Pittsburgh, Pa.

MEDICAL CARE OF INDIGENT IN THE HOME

With the approval and support of the New York State Medical Society, a bill introduced into the 1936 legislature of that state would meet as follows the county problem of furnishing medical service to the indigent:

CARE BY PHYSICIANS IN THE HOME

The public welfare official shall provide medical care for sick persons in their homes whenever necessary. Such person in need of medical care in the home shall, so far as practicable, be attended by and receive such care from his family physician or a physician of his own choice, practicing in his immediate vicinity, who shall be employed by the public welfare official, excepting where a person has no family physician or does not elect so to choose, in which case the public welfare official shall select the physician, preferably one practicing in the immediate vicinity of the person requiring care.

Except in cases of emergency, no such care shall be given at any time except upon the prior approval of the responsible public welfare official.

This act shall take effect Jan. 1, 1937.

The enactment of such legislation would require the type of service now being given in the following Pennsylvania counties by agreement between the medical society and the poor directors of the county (see page 363 of February PENNSYLVANIA MEDICAL JOURNAL for sample agreement): Beaver, Blair, Crawford, Lehigh, Mercer, Northampton, and York counties.

PROGRESS REPORT OF THE CHAIRMAN OF THE EMERGENCY CHILD HEALTH COMMITTEE*

Samuel McC. Hamill, M.D., Philadelphia

Your chairman wishes to report that the work of the State Emergency Child Health Committee is progressing very satisfactorily.

The visits to the counties have continued. Dr. B. Franklin Royer has just completed a tour of the western counties despite the prevailing weather conditions and at great hazard to himself. As one of the many effective products of this tour, the Warren County Medical Society has voted to continue the work and has appointed a new chairman and an assistant chairman.

Dr. Donaldson and Mrs. Strauss also addressed very effectively the Berks County committee. In addition Mrs. Strauss has addressed the recent meeting of the Luzerne County committee and conferred with individual members of the committee.

At the time that Mrs. George H. Earle, wife of the Governor, accepted the honorary vice-chairmanship of the committee, she very courteously offered to address some of our county committees if at any time we desired her to do so. We were very fortunate in having her accept a request to speak at the recent luncheon meeting of the newly appointed Berks County Committee. The expressions of appreciation that came from those who attended this meeting were to the effect that her presence and graceful presentation had been a most valuable stimulus to the group she addressed.

During the past summer Miss Morse visited 21 counties with most helpful results.

It is very gratifying to report that several counties that have been relatively inactive have reorganized their committees and are now included among our most active counties. These are Berks, Luzerne, Potter, Sullivan, and Union. Indiana and Warren counties have just selected new chairmen, both of whom Dr. Royer has recently interviewed and one of whom, the new chairman for Warren County, has spent several hours in the office of your chairman. These selections seem to promise effective results. Center County has also recently changed its chairman.

Your chairman is pleased to report also that the Board of Directors of the Philadelphia County Medical Society has recently voted unanimously to create an emergency child health committee. The chairman for this committee is in prospect.

The work has been slowed up in Lancaster and Fulton counties, but they are prepared to go ahead now that the nursing project, later referred to, is finally approved.

Up to Feb. 15, 1936, 93,290 examinations have been reported. This does not include the examinations made in some of the newly reorganized counties. We have initiated a system by which we can check approximately the percentage of completion of the examinations in each county. Pike County, which has always included border-line cases, has examined 44 per cent more than the 100 per cent estimated relief cases. Forest County has examined 70.6 per cent and Blair County, 70.4 per cent. While these figures are interesting and indicate effective work, it should be remembered that Fayette County has examined many more children than any other county in the state; their relief load, however, is among the highest in the state. There are a great many of the smaller counties whose percentage of com-

pletion is not as high as those given above, but whose results in the light of the obstacles they have had to confront have been equally meritorious.

Several counties, without any urging from the State Committee, have engaged in the re-examination of children who at the time of the original examinations were found to be in especially poor condition. The total for such additional examinations to date is 3998.

Some of the counties also have been systematically visiting all of the children who have been examined, and reports that come from these counties show not only very decided improvement in the health of the children but also—and this is of great permanent value—the mothers have been shown to be profoundly interested in the health protection of their children.

There continues to be a persistently increasing number of corrections of defects, supervision of the ill, and protection against infectious diseases. There has been prepared a table covering the defects found with their percentages, and the corrections obtained with their percentages. In order to indicate the marked increase in corrections, there is also shown the number of corrections secured as of Feb. 28, 1935. On this statistical table in the 93,290 examinations, 260,376 defects have been recorded. For purposes of convenience, those in need of preventive measures have been listed under the heading of defects.

There has been secured a percentage of 31.7 corrections on the defects reported. It is interesting to note in this connection that 30.6 per cent of the diseased tonsils have been removed and 32.1 per cent of the dental defects have been corrected. These are very high percentages since it has been stated that in the average school or clinic the maximum corrections for tonsils amount to only 25 per cent. Since the figures were tabulated, another county has sent in a report of 171 tonsil corrections out of a total of 188 tonsil defects.

The average percentage of malnutrition cases has decreased to 28.7 per cent, from an average of 29 per cent in August, 1935, and 30.5 per cent in August, 1934. There are several possible explanations of this, one being that the Emergency Relief Administration has become better organized as time has passed, and another which is probably significant is that the early examinations were made largely in congested areas, in some of which percentages as high as 50 were discovered.

The home economics work continues to increase persistently. Programs are now under way in 41 counties, as compared to 39 in August, 1935, and 27 in August, 1934. To date 46,744 mothers have received nutrition instruction, chiefly in small groups in their own kitchens.

The field work of the Nutrition Division of the Emergency Relief Administration has been discontinued; consequently the Emergency Child Health Committee nutrition work is even more important today than heretofore.

It seems especially commendable that the work of the committees has progressed satisfactorily inasmuch as there have been many obstacles to progress in recent months.

In the latter part of 1933 a secretarial project was started under the C.W.A. This enabled us to secure secretaries from the unemployed list. When the C.W.A. terminated, the secretarial project was transferred to the Work Division of the State Emergency Relief Administration and still permitted the use of unemployed people. However, the Work Division terminated on July 19, 1935. We were immediately notified to submit a new project for secretaries under the Works Progress Administration. With the exception of 10 per cent of

* State Committee Meeting, Philadelphia, Pa., Feb. 28, 1936.

the number desired, all the secretaries had to be chosen from the relief rolls.

This new project was submitted on July 25, 1935. It was approved on Sept. 30, 1935. In the interim there were no funds for the payment of salaries to secretaries. A number of the young women who had been occupying these positions continued as volunteers, but many of the committees were entirely without secretarial assistance. The result was very destructive.

When the project was finally approved we were able to secure only 23 of our former secretaries and 8 of these on a nonrelief basis, since the others had either secured new positions or were ineligible for relief. An effort was made to distribute the nonrelief appointments to counties in which the services of such secretaries would be of most value or where no competent secretaries were available from the relief rolls. Up to the present time we have been able to secure only 69 of the 83 secretarial appointments. In certain counties it seems impossible to secure anyone from the relief rolls qualified for the work.

In the latter part of August, 1935, the Emergency Child Health Committee was asked to apply for a nursing project under the Works Progress Administration. Your chairman at once communicated with the chairmen of the county committees asking whether they approved a nursing project for their counties, and, if so, how many nurses they could use effectively. Practically all desired nurses, and none opposed the proposal. The project was written on the basis of the number of nurses requested, although it was necessary to follow the labor inventory submitted to us by the Works Progress Administration, which included the 4 following classifications: Registered, graduate, trained, and practical nurses. It was impossible to find out what the word trained meant, but we were led to believe it referred to nurses who had graduated many years ago and still used the old-fashioned term trained nurse.

The term practical nurse was not used, after conference with representatives of the nursing organizations, state and national, who very properly objected to practical nurses being assigned on a nursing project. We, therefore, filled in with attendants in place of practical nurses, to the number requested by the county committees where no registered, graduate, or trained nurses were listed on the labor inventory.

This project was submitted to Harrisburg on Sept. 12, 1935, and was approved January 21, 1936. On the date of its approval it was discovered that the labor inventory of nurses on relief showed few registered, graduate, or trained nurses available. After conference with the Harrisburg office, it was decided to broaden the basis of selection to include nutritionists, home economists, medical social workers, or any highly qualified lay individuals available from the relief rolls. On this basis the authority to appoint individuals from this group was given the district supervisors of the WPA.

Your chairman has made an agreement with the president of the Pennsylvania Nurses' Association that no practical nurses will be employed on this project as long as it bears the title "Nursing Project."

This nursing project calls for 159 nurses, 10 per cent of whom may be nonrelief appointments. It also grants 2 supervisors, or project heads. Prospective project heads have been interviewed in Philadelphia and Pittsburgh.

A third serious handicap to the work has been the very severe winter which has made travel impossible over all highways at times and over other than state

highways for periods of weeks. Despite these handicaps, activities have continued in all but a few counties.

We have had most helpful co-operation from the State Department of Health, the State Emergency Relief Administration, and the Works Progress Administration, both with the central offices and with their district representatives. Too much stress cannot be laid upon the spirit that has been manifested, because their endeavors on our behalf have been carried out at great sacrifice of time and effort. The Director of Medical Relief has aided us whole-heartedly at all times.

Your chairman cannot speak in too high praise of the service the medical profession has given in this cause. Despite all the handicaps referred to in the beginning of this statement, the profession has continued to make examinations and participate in the correction of defects. They have established a noble example for other states to emulate.

The dental profession continues to give us excellent service in the counties. The Pennsylvania Dental Society has organized a state committee which they call the Child Emergency Health Committee. Your chairman has had several interviews with the chairman of their committee, and we are endeavoring to develop a plan of co-operation that will eliminate duplication and confusion, with every promise of success.

We are just again entering into a co-operative plan with the Pennsylvania Congress of Parents and Teachers for the effective putting over of their Summer Round-Up. The second year of this co-operative service was more effective than the first, and there is every promise that this year's endeavor will be even more so.

We have continued to receive the efficient support of the various organizations that have been co-operating with us heretofore, and the reports from the county committees indicate that their effort as a co-ordinated project is becoming increasingly successful.

The county committees continue to receive local support for their corrective work. Following are 2 statements, one from the vice-chairman of one county committee and the other from the chairman of another, which will give you some idea of the community support vouchsafed our county committees.

"It is impossible to compute the donations as we had no tangible assets. We lacked for nothing that we asked and received countless donations including nursing, secretary and typewriter services, cars, farm products and equipment for canning, supplies for home food demonstrations, free advertising in all local papers, heat and light for clinic rooms. Children were provided with clothing that they might appear for examination. The local hospitals gave of their facilities, including the use of operating rooms and anesthetists several hundred times. Mailing expenses were borne by the chairman and vice-chairman. Our only assets were the loyalty of the committees, the co-operation of the parents and the public, and the unfailing kindness and courtesy of the medical and dental men of the county."

The other quotation reads as follows: "I did not believe, when we were so advised by members of the State Committee, that funds and help would be available when needed. When an appeal was made to the various organizations in the community for aid, which was not done until we were well organized and many examinations made, the very hardest thing we had to do was to find enough children with defects to exhaust the funds subscribed and the voluntary help offered. We still have money available."

Since the last report, one new member has been added to the personnel of the State Committee, Dr. Maxwell Lick, of Erie, president-elect of The Medical Society of the State of Pennsylvania. Dr. Alexander H. Colwell automatically became one of the honorary chairmen when he took office as president of the State Society, Dr. Moses Behrend accepting membership on the State Committee. There are certain changes which it seems to me would be desirable in the membership of the State Committee. Dr. Rule has been succeeded as Superintendent of Public Instruction by Dr. Lester K. Ade. Dr. Ade has written expressing keen interest in our work and has shown every willingness to co-operate. It would seem desirable, therefore, that Dr. Ade be asked to accept membership on the State Committee. Mr. Robert L. Johnson has been succeeded as Director of the State Emergency Relief Administration by Mr. Karl de Schweinitz. We greatly regret the loss of Mr. Johnson, with whom we worked closely and whose interest was essential to our progress. Mr. de Schweinitz has shown an equal interest, and it would seem wise to add him to the membership of our committee.

Our exhibit was enlarged last fall in order to explain further the activities of the Emergency Child Health Committee at the meeting of The Medical Society of the State of Pennsylvania held in Harrisburg last October. This exhibit was largely attended and created great interest on the part of the medical profession. A number of county chairmen returned home re-inspired to carry on. This exhibit has also been used for other demonstrations. It was sent to the first meeting of the new county committee in Berks County, and it was also exhibited at the State Dental Society's meeting in Philadelphia early this month. It is interesting to note that included in the great number of dentists who studied the exhibit were representatives from England, Sweden, and Bulgaria.

Addresses continue to be made by members of the committee at various meetings. It is gratifying to have learned that the chairman of the Committee on Public Health Legislation of The Medical Society of the State of Pennsylvania is so impressed by the value of the work of this committee to the medical profession, to the cause of good health legislation, and to the communities participating that he takes every occasion to commend the work highly. His remarks have been very helpful in stimulating the chairmen of the county committees and participating physicians to increased activity.

In conclusion your chairman wishes to state that it is his belief that the work of the Emergency Child Health Committee is in a very healthy state and that there is every promise of increasing interest and activity.

PLAN OF WORK OF THE COMMISSION ON APPENDICITIS MORTALITY FOR 1936

I. Each member of the commission is chairman for his councilor district and responsible for the carrying out of the plan. Any difficulties arising in the accomplishment of the work should be reported to the state chairman.

II. Each district chairman has been requested to submit promptly a 50-word paragraph on appendicitis to be printed in a leaflet for distribution to the high schools for publication in their school papers.

III. He will organize his entire district by counties, looking to the appointment of an appendicitis committee in each, in one of the following ways:

1. He will make the appointments himself and submit them to the county medical society for approval, or,
2. He will request the president of the county medical society to make the appointments.

IV. Each county chairman should be instructed to review immediately the work that has been done in his county on appendicitis. The district chairman will meet the various county chairmen before Mar. 15, and review the work to be done in detail, planning the procedure so that the 2 sets of lantern slides available for each district can be kept in circulation, giving each member a chance to use them before the school term and women's clubs' activities close for the summer. The number of appendicitis warning stickers needed by each member also should be decided upon at the meeting. Details of the work to be covered follow:

1. An Appendicitis Meeting in Every County Medical Society Early Each Year.

Early each year a meeting of every county medical society will be given over entirely to the discussion of acute appendicitis. If desirable, guest speakers will be provided. This will prepare the way for the organization of the county appendicitis committees.

2. High Schools.

About 40 per cent of the cases of acute appendicitis occur during the high school age (10 to 20 years). Every high school student in the state eventually should be reached.

A suggestive 10-minute talk with lantern slides will be furnished by the State Medical Society to be used in presenting the subject of appendicitis to the student body.

Warning stickers are also furnished, one to be given to each student with the request that he take it home and stick it in a prominent place in the medicine cabinet.

A leaflet containing paragraphs written by the district chairmen will be given to each high school to be used in their school paper, hygiene classes, or other ways to reach all students.

After a high school has been covered as described above, an effort should be made to have a lecture given at least once a year through the hygiene or physical education department so that every student is reminded of the appendicitis hazard every year.

3. Civic Organizations.

These organizations, Rotary, Kiwanis, Lions, athletic clubs, social clubs, etc., are always interested in health problems and welcome a scientific talk. The lantern slides can be used for them while on hand for the high schools.

4. Women's Organizations.

About 80 per cent of the laxatives are administered by or taken by women. Because of this fact we feel that they should be the next group to whom the appendicitis mortality facts are presented.

Talks with lantern slides should be given to parent-teacher associations, nurses' alumni, women's hospital auxiliaries, women's clubs (literary, social, etc.), and country club auxiliaries.

5. Radio and Newspaper Publicity.

Radio talks and newspaper publicity will be given under the supervision of the Appendicitis Commission.

6. Hospital Surveys.

In order to check up on the effectiveness of the campaign to reduce the mortality of acute appendicitis, a survey of all general hospitals will be made.

The surveys should be conducted through the health departments wherever possible.

Arrangements should be made in advance with the superintendents of hospitals, enlisting their interest and support in making the survey.

The surveys include abstracting all hospital charts of patients with acute appendicitis using a form blank, a copy of which is furnished.

Statistics based on the data in the abstracts will reveal the appendicitis mortality in any given district and collectively will give the state mortality. This material always will be confidential; no hospital or surgeon's name will ever be mentioned; numbers can be used to designate the individual hospitals. A second survey, after a year has elapsed, will show how much the educational campaign has accomplished.

V. The district chairmen will check up on the progress of the work being done in each county every month, by meetings or by requesting reports. This is absolutely necessary if the appointment of this commission is to be justified.

VI. Each chairman will submit a quarterly report to the state chairman in March, June, September, and December, and a complete report of the work done in his councilor district before Aug. 1, in order that the report of the commission may be ready for the annual meeting of the State Medical Society.

Most of this plan is familiar to all members of the commission except those appointed this year. The new part of the plan is the organizing of the councilor districts into county committees and the follow-up necessary in such an organization. The new work in the campaign of educating the public is the giving of appendicitis talks to all the women's organizations.

Each district chairman will be able to direct the work in his district more effectively after the meeting with his committee chairmen who, when appointed, will be asked to prepare a report of the work accomplished in their counties to date; for example, all high school and civic organizations have been covered in some counties, so that the hospital surveys and talks to women's organizations can be started now. In other counties it will be necessary to begin with the high schools.

The educational campaign should be completed before the hospital surveys are conducted in any given county because they are a check on the value of such education.

From this plan each district chairman can direct his county chairmen to proceed from whatever point his own particular county has reached in the work as outlined (see paragraph iv).

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to March 11:

ALLEGHENY: *New Members*—Nicholas A. Alexander, 2033 Monongahela Ave., Swissvale; Ira M. Bryant, Mayview; Francis L. Conwell, Tarentum; Jacob C. Smith, Telegram Bldg., Tarentum; Rita K. Bravin, 5809 Hays St., John W. Hlza, 3448 Brighton Road, N. S., Walter R. Scip, Westinghouse Bldg., Rocco F. Tarasi, Peoples East End Bldg., Karl Zimmerman, Jenkins Arcade, Pittsburgh. *Removal*—John S. Donaldson from Pittsburgh to Elizabethtown State Hospital for Crippled Children, Elizabethtown (Lancaster Co.). *Transfer*—James O. Donaldson, 114 E. Jefferson St., Butler (formerly of Mayview) to Butler County Society; Charles W. Reed, Irwin, to West-

moreland County Society. *Resignation*—Morley Berger, McKeesport; Donald R. Kunkelman, Canonsburg. *Death*—George Walter Beane, McKees Rocks (Bellevue Hosp. Med. Coll. '83), Mar 5, aged 74.

ARMSTRONG: *New Member*—Howard C. Heilman, Elderton.

BEAVER: *New Members*—Theron L. Blackledge, New Brighton; Leroy S. Townsend, 1205 Eighth Ave., Beaver Falls. *Removal*—Walter E. Kiefer from Rochester to 845 Bank St., Beaver.

BLAIR: *New Members*—Charles Hayden Fleck, 616 Fourth St.; Marlyn W. Miller, 1226 Thirteenth Ave., Altoona. *Reinstated Member*—George J. Donovan, 616 Fourth St., Altoona.

BUTLER: *New Members*—Dean B. Shannon, 310 Butler Co. Nat. Bank Bldg., F. B. Zimmerman, Butler Savings & Trust Bldg., Butler.

CAMBRIA: *New Members*—Yale L. Lewine, Dunlo; John R. McGraw, 183 Sell St., Johnstown. *Reinstated Member*—Harry G. Nickel, 220 Conemaugh St., Johnstown. *Death*—Homer C. Blough, Johnstown (Univ. Md. '26), Feb. 22, aged 43.

CLARION: *Death*—Cuvier L. Clover, Knox (Bellevue Hosp. Med. Coll. '91), Feb. 22, aged 70.

CLEARFIELD: *New Member*—Clifford J. Lewis, Deposit Bank Bldg., Dubois. *Transfer*—Frances DeBone Taylor, State Hospital, Philipsburg, from Allegheny County Society. *Removal*—James L. C. Lauder from Philipsburg to Elizabeth (Alleg. Co.). *Death*—James M. Cornely, Madera (Jeff. Med. Coll. '07), Feb. 5, aged 58.

CUMBERLAND: *Death*—John W. Bowman, Lemoyne (Jeff. Med. Coll. '77), Feb. 15, aged 89.

DAUPHIN: *New Members*—John V. Foster, Jr., Box 204, Hershey; Rankin A. Nebinger, 279 Center St., Millersburg. *Removal*—Nellie and Rowland S. Heisley from Marysville to 219 Eleventh St., Honesdale (Wayne Co.).

DELAWARE: *New Members*—S. Irvin Bigelow, 88 W. Marshall Road, Lansdowne; John Scott Miller, Jr., 517 Welsh St., Newton A. Wyman, 413 E. Ninth St., Chester; Harold C. Roxby, 110 Cornell Ave., Swarthmore; Henry L. Somers, 739 Concord Ave., Drexel Hill. *Removal*—Rolfe M. Harvey from Media to Broomall.

ERIE: *New Members*—John F. Hartman, Jr., 216 W. 24th St., Benjamin A. Gray, 1123 Parade St., Robert L. Loeb, 551 W. Seventh St., Francis J. Wilkes, 619 E. Tenth St., Erie; Allen A. Gleitz, 302 E. Main St., Girard. *Death*—Harry S. Falk, Erie (Med. Chi. Coll., Phila., '99), Feb. 12, aged 62.

FAYETTE: *Transfer*—William R. Vernon, Perryopolis, from Greene County Society.

LEHIGH: *New Members*—Charles L. Mengel, 118 N. Eighth St., Allentown; Walter A. Banks, Macungie. *Death*—Raymond E. Heacock, Bethlehem (Eclectic Med. Coll. '11), Mar. 6, aged 48.

LUZERNE: *New Members*—Albert J. Abbott, Geisinger Hospital, Danville (Montour Co.); Lucy May Wunderly, 41 Church St., Pittston; Jacob G. Hyman, 64 W. Union St., Wilkes-Barre; Dominic B. Siderski, 544 W. Main St., Plymouth; Malcolm J. Borthwick, 87 W. Center St., Luzerne; Hugh G. Boyle, 83 Union St., Kingston; Michael M. Burscak, 100 W. Broad St., Hazleton; Gilardo S. Serino, 17 N. Main St., West Pittston. *Reinstated Member*—James S. Dixon, 33 Parsonage St., Pittston.

LYCOMING: *Death*—Abraham T. Welker, Colloms-ville (Univ. Pa. '86), Feb. 7, aged 79.

MERCER: *New Member*—Raymond W. Anderson, Greenville.

MONTOUR: *New Member*—Michael Cammarata, State Hospital, Danville.

MONTGOMERY: *New Member*—Charles K. Reinke, State Hospital, Norristown.

NORTHAMPTON: *New Member*—Robert H. Dreher, Wind Gap. *Transfer*—William R. Stecher, Easton, from Delaware County Society. *Death*—Joseph S. Cohen, Easton (Univ. Pa. '07), Mar. 2, aged 50.

PHILADELPHIA: *New Members*—David M. Davis, 8th floor, 255 S. 17th St., Harry D. Evans, 1120 N. 63rd St., John Francis Gordon, 400 W. Cumberland St., John P. Martin, 4203 Chester Ave., Placido Venuto, 6352 Paschall Ave., Philadelphia. *Reinstated Member*—Maurice H. Schneiman, 1220 Cottman St., Philadelphia. *Removal*—Daniel M. Hoyt from St. Petersburg, Fla., to Vet. Bureau, Bay Pines, Fla.; James P. Sands from Byberry to Oxford Ave. & Penn St., Fkfd., Philadelphia. *Death*—McCluney Radcliffe, Philadelphia (Univ. Pa. '82), Feb. 28, aged 81.

SCHUYLKILL: *New Members*—George R. Beddow, Pine Grove; John F. Burke, Shenandoah; Mark P. Holland, Mahanoy City; Lionel Gates, Shenandoah. *Death*—George S. Marburger, New Ringgold (Jeff. Med. Coll. '75), Mar. 7, aged 75.

SOMERSET: *New Member*—Martin S. Cargill, Somerset.

VENANGO: *Transfer*—Hamblen C. Eaton, Polk (formerly of Warren) from Warren County Society. *Removal*—Archbald Laird from Polk to 356 N. Main St., Butler (Butler Co.).

WASHINGTON: *Reinstated Members*—Howard C. Bliss, Vestaburg; J. Clive Enos, Box 64, Charleroi.

WARREN: *New Member*—H. M. Brickhouse, Warren State Hospital, Warren.

YORK: *New Member*—Charles F. Posey, York. *Deaths*—Raymond E. Butz, York (Med. Chi. Coll., Phila. '98), Jan. 22, aged 72; Howard S. Allen, Delta (Univ. Md. '31), Mar. 7, aged 29.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since Feb. 12. Figures in first column indicate county society numbers; second column, State Society numbers.

Feb. 13	Lycoming	82-88	3486-3492	\$52.50
	Greene	13-14	3493-3494	15.00
14	Luzerne	36-85	3495-3544	375.00
	*Luzerne	312	8168	7.50
	Mercer	39-44	3545-3550	45.00
	Elk	12-14	3551-3553	22.50
15	Eric	64-88	3554-3578	187.50
	Armstrong	1-23	3579-3601	172.50
	Somerset	25-27	3602-3604	22.50
	Indiana	17-25	3605-3613	67.50
	Beaver	22-36	3614-3628	112.50
	Franklin	39-47	3629-3637	67.50
	Lawrence	3-5, 7-31	3638-3665	210.00
	Lancaster	1-50	3666-3715	375.00
17	Huntingdon	16-20	3716-3720	37.50
	York	101-107	3721-3727	52.50
	Fayette	56-62	3728-3734	52.50
	Montgomery	138-146	3735-3743	67.50
	Delaware	89-110	3744-3765	165.00
	Northumberland	51-56	3766-3771	45.00
18	Cumberland	24-29	3772-3777	45.00
	Clarion	15-18	3778-3781	30.00
	Washington	43-91	3782-3830	367.50
19	Mercer	45-48	3831-3834	30.00
	Greene	15	3835	7.50
20	Somerset	28-31	3836-3839	30.00

Feb. 20	Mifflin	21-23	3840-3842	\$22.50
	Lehigh	39-72	3843-3876	255.00
	McKean	16-23, 25, 28-32	3877-3890	105.00
21	Mercer	49-50	3891-3892	15.00
	Fayette	63-67, 69-72, 74-75	3893-3903	82.50
	Montour	21-31	3904-3914	82.50
22	Mercer	51-55	3915-3919	37.50
24	Clearfield	27-38, 40-43, 50	3920-3936	127.50
	Potter	7-9	3937-3939	22.50
	Montour	32	3940	7.50
	Greene	16-17	3941-3942	15.00
25	Venango	30-34	3943-3947	37.50
	Mercer	56-58	3948-3950	22.50
	Cumberland	30-31	3951-3952	15.00
	Lycoming	89-93	3953-3957	37.50
26	Washington	92-100	3958-3966	67.50
	*Washington	139	8169	7.50
	Fayette	76-77	3967-3968	15.00
	Adams	14-15	3969-3970	15.00
27	Mercer	59-60	3971-3972	15.00
	Blair	52-73	3973-3994	165.00
	Schuylkill	46-72	3995-4021	202.50
	Allegheny	2, 13-15, 608-803	4022-4220	1492.50
28	Wayne-Pike	12-13	4221-4222	15.00
	Columbia	27-28	4223-4224	15.00
	Northumberland	57-60	4225-4228	30.00
29	Lackawanna	112-153	4229-4270	315.00
	Cambria	54-104	4271-4321	382.50
	*Cambria	176	8170	7.50
	Clinton	16, 23	4322-4323	15.00
Mar. 2	Fayette	78-80	4324-4326	22.50
	York	108-112	4327-4331	37.50
	Huntingdon	21-22	4332-4333	15.00
	Philadelphia	975-1195	4334-4554	1657.50
3	Northampton	45-83	4555-4593	292.50
	Bradford	14-22	4594-4602	67.50
	Cumberland	32	4603	7.50
	Mercer	61-66	4604-4609	45.00
4	Butler	1-41	4610-4650	307.50
	Luzerne	86-127	4651-4692	315.00
	Center	13-15	4693-4695	22.50
5	Clarion	19-22	4696-4699	30.00
6	Erie	89-105	4700-4716	127.50
	Lancaster	51-102	4717-4768	390.00
	Mercer	67	4769	7.50
	Indiana	25-28	4770-4773	30.00
7	Montgomery	147-163	4774-4790	127.50
	Greene	18	4791	7.50
	Fayette	81-83	4792-4794	22.50
9	Dauphin	152-174	4795-4817	172.50
10	Fayette	84-86	4818-4820	22.50

* 1935 dues.

COMMITTEE ON SCIENTIFIC WORK

FREDERICK B. UTLEY, M.D., *Chairman*

PROGRAM OF THE SECTION ON MEDICINE

The Section on Medicine has planned a program for this year which it is hoped will be of value and benefit to the general practitioner. Accordingly, the section officers have accepted only those papers which present practical and useful information.

The program will have 2 symposiums: One on allergy the first day of the meeting, at which Dr. Leslie Gay, of Johns Hopkins University School of Medicine, will be a guest speaker, and at which various papers will be presented by members of the society on phases of allergy of particular interest to all members.

On Wednesday a symposium on diabetes has been planned. The section is fortunate in having as guest speaker one of the world's outstanding authorities, Dr. Elliott P. Joslin, of Boston. Various phases of this subject will be presented which should be of interest and help.

On Thursday there will be a joint session with the Section on Pediatrics, at which Dr. Thomas Francis, Jr., of the Rockefeller Institute for Medical Research, will speak on the newer developments in influenza.

There will be a paper on pituitary basophilism and several on the diagnosis and treatment of the various blood dyscrasias. Dysfunctional uterine bleeding and undulant fever are other subjects to be discussed. The presentations are diversified enough to interest all concerned with internal medicine.

The program this year is a very comprehensive one, and the various speakers plan to present the problems which are of greatest importance to the general practitioner in a concise and authoritative manner.

County Society Reports

ALLEGHENY

Feb. 18, 1936

The meeting was held in the Hotel Schenley.

Nearly filling the foyer was the scientific exhibit, contributed on this occasion by 3 institutions. That of Columbia Hospital, dealing with both medical and surgical problems, was chiefly interesting in the material illustrating the differentiation between tularemia and rat-bite fever. The high-light of the Montefiore presentation was the study in liver function tests. The Veterans' Hospital exhibit consisted of the products made in the Occupational Therapy Department.

"Vascular Diseases of the Extremities," by J. West Mitchell, was a differential diagnostic summary, augmented by charts, diagrams, and a display of apparatus, of the differentiation between arteriosclerosis, thromboangiitis obliterans, Raynaud's disease, and erythromelalgia.

"Frigidity—A Problem in General Practice" was given by S. Benjamin Meyers, of Johnstown, Cambria County. Limitation of time necessarily prevented the essayist from going into the subject in as much detail as preparation and experience would evidently permit.

"Injection Treatment of Varicose Veins" was presented by John P. Henry, of Carnegie. Demonstrating his cases on a platform high above the floor level, Dr. Henry was able to show with considerable success the various tests for patency of deep vessels and other circulatory-function observations.

HAROLD P. HOOK, *Reporter*.

BERKS

Feb. 11, 1936

The meeting was held at Medical Hall, Reading. President Ralph L. Reber presiding; 50 members and guests were present.

Lorenzo F. Milliken, of the department of urology, University of Pennsylvania Medical School, spoke on "Urologic Emergents and Expedients in General Practice." Dr. Milliken said in part:

One of the most common conditions in urology is phimosis, which occurs in infants and not infrequently in very old men. The presence of it in the aged constitutes a real emergent. Another condition sometimes encountered is phimotic prepuce from gonorrheal infection or chancroid. A dorsal or lateral slit immediately proximal to the corona must be made before treatment can be instituted.

Sometimes it may be necessary to catheterize for a stricture at the meatus. In a case of this type, a meatotomy is preferable. Employing cocaine, make a slit through the floor of the meatus; small pieces of cotton worked well back into the meatus will prevent adhesions.

Another emergent is paraphimosis. A tight foreskin, displaced for an appreciable time is replaced only with great difficulty. Replacement is best accomplished by soaking the penis in hot water, then straightening out and slipping the foreskin over the glans. Occasionally it is altogether impossible to reduce by manipulation, in which case, cut the constricting band and perform a circumcision.

A certain percentage of men with gonorrheal infection contract epididymitis, which should be treated efficiently. Complete immobilization of both testicles is essential and can be accomplished by applying a suspensory or a Blockley bandage. Magnesium sulphate and ichthyol dressings are not needed with complete immobilization. Extreme cases require morphine and recurrent attacks indicate the need for epididymotomy.

Torsion of a testicle, unrecognized for 24 hours, usually results in the loss of the testicle through the impairment of the blood supply. It most frequently occurs in a healthy man; the testicle becomes swollen, is extremely tender and painful, and although it has the appearance of an inflammatory condition, there is no fever or leukocytosis. The vaginal sac must be opened quickly and the cord untwisted. This condition constitutes a real emergent. Some cases with intense inflammation result in thrombosis of the spermatic vessels. In a case of this type nothing can be done to save the testicle.

Acute tuberculous epididymo-orchitis presents symptoms similar to a gonorrheal infection. The differential diagnosis is difficult, and depends upon the history of the case. The emergency is not so great as in torsion of the testicle. An acute case with severe pain and fever requires an orchidectomy.

The treatment of ureteral colic depends upon the etiologic factor. Study of the case includes urinalysis, roentgen-ray and cystoscopic examinations. Colic from ureteral stone is excruciatingly painful and usually requires morphine and atropine. Other conditions which cause ureteral colic simulating calculus are ptosis of the kidney or torsion of the ureter causing stoppage. In case of ptosis, elevate the foot end of the bed to relieve the pain.

Hematuria is always an emergent. If the prostate gland is normal, blood may be coming from the bladder or kidney; the finding of blood or pus is sufficient reason for a urologic study.

Other common emergencies are the retention of urine, occurring in men more than age 60 with an enlarged prostate, stricture, and prostatic abscess.

PEARL E. HACKMAN, *Reporter*.

BLAIR

Jan. 28, 1936

The annual meeting and dinner was held at 3:30 p. m., in the Penn-Alto Hotel, Altoona.

The following officers were installed: President, Harold F. Moffitt; first vice-president, Brooklyn B. Levengood; second vice-president, Francis I. Taylor; secretary-treasurer, Edward F. Williams; director, Herman H. Dight.

It was approved that a committee to revise and bring up to date the constitution and by-laws, also an economics committee be appointed.

Charles H. Fleck and Marlyn W. Miller were elected to membership and George J. Donovan was reinstated.

It was decided that a Bound Memorial should not be instituted. Samuel A. Kennedy, compensation officer of District No. 11 of the WPA, explained the various forms and blanks to be made out by physicians participating in that work.

Richard J. Behan, president of the Allegheny County Medical Society, presented a paper on "The Medical Treatment of Cancer." He emphasized the value of treating not only the malignant growth, but also the general condition of the patient. The average life of persons afflicted with cancer has been lengthened by the effective local and general treatments now in use. The medical profession must be on the alert to diagnose precancerous lesions, and all tumors and irritating ulcers should be removed due to the rapid progress of the disease in susceptible persons.

The annual dinner followed with 47 in attendance.

MARLYN W. MILLER, *Reporter*.

CHESTER

Feb. 18, 1936

The meeting was held at the Chester County Hospital. Luncheon was served. President Charles J. Brower presided.

The report of the Executive Committee was presented. The letter from the State Society secretary relative to rules and regulations for medical service to those receiving aid from the Board of Poor Directors was unanimously endorsed. These regulations are operating successfully in Mercer County and, at the suggestion of the Economics Committee, it was unanimously adopted that the Chester County Medical Society contact the Chester County Board of Poor Directors concerning this matter. The Public Health Commission recommended to the society that an attempt be made to have the county commissioners provide facilities for the care of communicable diseases. It would cost approximately \$8000 to operate the contagious ward of the Chester County Hospital, which is adequately equipped for this purpose. The Executive Committee is in entire sympathy with this suggestion, but feels that the society should be in agreement with the view that communicable diseases represent the most pressing public health need of the county at the present time. The report of the Executive Committee was unanimously adopted.

Leon Herman, Philadelphia, spoke on "The Prostate and Transurethral Surgery as Applied to Obstructions of the Vesical Neck." The speaker briefly reviewed the anatomy of the urogenital tract and particularly stressed the median bar type of hypertrophy. It is in this type of hypertrophy that the electrosurgical procedure has its main indication. The chief advantage of this type of operation is the fact that the hospital stay is very much lessened, and there is usually less shock to the

patient. However, the danger of hemorrhage and subsequent infection definitely exists in this type of surgery. Quite as much skill is required to perform this operation as in any other type of prostatectomy, and the experience and technic of the operator are important elements in prognosis. The speaker pointed out that in any type of prostatectomy much of the gland is always left behind, and the operation essentially consists in the removal of a tumor from the gland rather than the removal of the gland itself. Dr. Herman particularly stressed the fact that preoperative care is even more important than the operation itself, and that variation in mortality from these operations among various surgeons is far more dependent upon this factor than the operative skill of the individual surgeon.

JOSEPH SCATTERGOOD, JR., *Reporter*.

CRAWFORD

Feb. 19, 1936

John Priestes, resident physician at the Western Penitentiary in Pittsburgh, addressed the meeting, which was held at the San Rosario Sanatorium in Cambridge Springs. Dr. Priestes gave what he called a rambling discourse on the "Observations of a Prison Physician." He stated that among the things which did not cause crime were alcohol, syphilis, and narcotic drugs; that the Harrison Narcotic Law is a detriment to society; that a person should be able to purchase narcotics from a depot dispensing such drugs, and that a record be kept of all sales. This he believes would do much to stop the sale and use of bootleg dope.

Reference was made to the prevalence of perversion in prisons and the difficulty in eradicating it.

After the meeting the medical director of the sanatorium conducted the members of the society through the building and demonstrated the various apparatus.

RICHARD L. BATES, *Reporter*.

DAUPHIN

Mar. 3, 1936

The monthly meeting was held at the Harrisburg State Hospital, with Park A. Deckard presiding. The following is a résumé of the papers presented:

"Huntington's Chorea," by Paul Petree. Huntington's chorea, a comparatively rare familial or hereditary organic brain disease, has no relationship to St. Vitus's dance, or Sydenham's chorea. Following the mendelian law of dominant units, it is inherited directly from the parent to the child, both sexes being equally affected.

It is insidious in onset, occurs between the ages of 30 and 50, is chronic and progressive in its course, lasts from 10 to 20 years, and is characterized by motor disturbances and mental deteriorations.

The mental symptoms often precede the physical signs by years, and consist largely of disregard for the niceties of social convention. Euphoria, depression, insanity, and suicide are all frequent.

The motor symptoms start with the muscle groups of the head and upper extremities, and spread downward. They are characterized by involuntary, incoordinated, irregular, and purposeless movements with wide excursion. Speech, writing, swallowing, and walking are all eventually affected. The sphincter power remains intact.

The mechanism of the motor phenomena is not explainable, but is thought to be due to lesions of the corpus striatum.

The treatment is symptomatic (sedative) and prophylactic (sterilization and contraception).

"Epidemic Encephalitis," by J. H. Anderson. Epidemic encephalitis has been described as a toxic-infectious malady, causing both diffuse degenerative and disseminated inflammatory changes in the central nervous system and its coverings, characterized clinically by a marked diversity of symptoms varying with the intensity of the intoxication and with the localization of the scattered inflammatory foci. The term "sleeping sickness" is misapplied, as the two are entirely different. The pathology is found especially in the mid-brain, basal ganglia, and pons, influencing the maintenance of muscular tone, the control of automatic action, and the expression of instinctive and emotional reactions. Usually there is no interference with the intellect in the adult, but occurring in the period of mental development (6 to 13) it not infrequently produces mental enfeeblement and behavior problems.

The acute phase of the disease may be gradual or sudden, often starting with a headache, malaise, and fever, later developing drowsiness, somnolence, muscular rigidity, diplopia, nystagmus, vertigo, facial muscle weakness, respiratory disturbances, ataxia, and purposeless movements.

Convalescence (the mortality is 5 to 45 per cent) may take from a few weeks to 2 years. The sequelae may follow the acute phase immediately or may be delayed for months or even years. The 2 chief sequelae are the neurologic and the personality changes. Of the former, the Parkinson-like syndrome is most common, with its mask-like facies, pill-rolling tremor, stiff shuffling gait, salivation, and festination. Personality changes occur chiefly following childhood and adolescent attacks, and are marked by unmanageability, emotional instability, lying, stealing, and even violence. There is no complete recovery from this behavior disorder.

The marked tremor of the Parkinson case can be partially controlled sometimes by the use of hyoscine, stramonium, or atropine, but the effect of the drugs is usually only temporary.

"Multiple Sclerosis," by Herbert E. Heim. Multiple sclerosis, or disseminated sclerosis, is of interest because of its frequency, characteristic symptoms, and peculiar pathology.

Northern Europeans, especially Scandinavians, are more frequently affected. The age incidence is usually 20 to 40, but may cover the whole life span. The male sex predominates. There is no known cause, and the location of lesions indicates neither systemic infection nor ischemic process.

Pathologically, it is a process characterized by primary degeneration of the glial cells with secondary repair producing the sclerotic patch. The nerve axon is spared until overcome in the sclerosing process. The sites of predilection are the pyramidal tracts, the cerebellar-spino-vestibular pathways, and the optic nerve.

The classic "triad" of Charcot consists of nystagmus, usually horizontal, scanning speech, and intention tremor. The full-blown case also presents spasticity and paresis of the legs with Babinsky, loss of superficial reflexes, and bladder disturbances. Loss of abdominal reflexes is quite constant and often early. Transient diplopia or temporary blindness may be the first symptom. Temporal pallor of the optic disk is frequent.

Mental symptoms are said to occur in 90 per cent of the cases, but few require hospitalization.

The disease may present almost any neurologic picture able to be produced by a gradual squeezing of axons by contracting scar tissue.

"Depression," by Max Levin. The modern conception of depression has its origin in the work of Kraepelin, who grouped together, under the name "manic-depressive insanity," the affective disorders which do not lead to dementia.

The following are the common clinical varieties of depression: (1) Simple depression, characterized by inactivity, sluggishness, and depression of mood (Kraepelin's triad), and usually by physical symptoms, such as loss of weight and appetite, constipation, insomnia, and loss of libido. (2) Agitated depression, in which the patient is restless. (3) Psychoneurotic depression, in which the depressive picture is colored by neurotic phenomena. One example of cases of this sort is the frequently observed hypochondriacal depression. (4) Paranoid depression, in which there are projections, usually in association with a feeling of guilt and a belief that the individual deserves to be punished. (5) Reactive depression (to external circumstances).

The causes of depression are better understood than its pathogenesis, concerning which practically nothing is known. The causes include constitutional factors related to the physical and psychologic type, and a variety of exogenous factors.

In treating a case of depression, carefully attend to the following: (1) The possibility of suicide must be considered. (2) Rule out all those diseases of which depression may be a symptom—paresis, brain tumor, pernicious anemia, etc. (3) The patient should be given a proper amount of rest. A change of scene is frequently advisable. Agitation should be combated by means of continuous baths and small doses of some barbiturate 3 or 4 times a day. For insomnia which does not yield to ordinary measures, hypnotics should be given, such as paraldehyde. In mild cases, a warm bath before going to bed, followed by some crackers and a glass of warm milk, may be sufficient. (4) Attention should be paid to appetite and constipation. (5) Some simple nontiring occupation should be arranged for those patients who can enjoy it. (6) As to specific remedies, try hematoporphyrin. (7) When the patient recovers, psychotherapy may help to prevent recurrence.

Following each address, illustrative cases were presented.

A. HARVEY SIMMONS, *Reporter*.

DELAWARE

Feb. 13, 1936

The meeting was held at the Chester Hospital. President John J. Sweeney presided.

The speaker of the evening was Richard C. Holcomb, a retired naval medical officer, whose subject was "The Evolutionary Aspect of Syphilis." He said in part:

The present attitude toward syphilis is unfortunate; viz., the secrecy, the ban on radio talks, and the fact that 10 to 15 per cent contract the disease either through ignorance or silence.

Dr. Holcomb discussed the various changing theories as to the cause of the disease, which are a matter of history.

Even in the last 35 years the diagnosis, theories, and treatment of syphilis have undergone considerable change, from the discovery of the Treponema, the use of arsenicals and arsenical substitutes, down to the use of malaria and mechanical heat.

Dr. Holcomb exhibited original and photostatic copies of historical references, some of them apparently priceless and unobtainable now, also the cane of Holy wood or Guaiacum.

Supper was served.

E. ARTHUR WHITNEY, *Reporter*.

FAYETTE**Jan. 2, 1936**

The staff of the Uniontown Hospital held a clinico-pathologic conference at Medical Hall, Uniontown Hospital.

Elliott B. Edie reported the case of a male, age 64, admitted to the hospital complaining of ptosis of the left eyelid and pain in the left shoulder, of one week's duration, which followed an attack of grippe one week previously. The left eye showed internal and external ophthalmoplegia. Blood count: R. B. C., 5,300,000; W. B. C., 11,900; polymorphonuclears, 92 per cent; hemoglobin, 76 per cent. Urine negative. Spinal and blood Wassermann negative. Roentgen ray of the left shoulder negative. Tentative diagnosis—cerebrospinal syphilis, or tumor metastasis to the brain. The patient was discharged and advised to report to the genito-urinary clinic. At the first visit to this clinic, lumps were seen in the left lower back, and were painful. He was advised to go home. In 2 days he lost his speech, rapidly became weaker, and died. On the chest wall were numerous nodules. Biopsy showed malignant tissue. At necropsy bronchogenic carcinoma of the lung was found. In discussion, Dr. Lund showed from statistics that the diagnosis of primary carcinoma of the lung is becoming more frequent.

William A. McHugh, Jr., reported the case of a woman, age 41, whose chief complaint was pain in the epigastrium several hours after meals, with vomiting, fullness, and burning. She had lost 25 pounds in 5 weeks. Past history—tonsillectomy, appendectomy, cholecystectomy, and gastric resection. At the time of resection, a diagnosis of carcinoma of the stomach was made. The operation showed a hard tubular mass in the pylorus, involving the lower one-third of the stomach, sharply delineated, whitish in color, with a small passage through the pylorus. There were no enlarged glands. The patient was operated upon again 6 months later for cicatricial stenosis and a section was taken for biopsy. The pathologist reported this as a case of linitis plastica. He demonstrated mounted sections of the stomach, showing the normal carcinomatous and linitis plastica characteristics.

Another case reported by William A. McHugh, Jr., was a male, age 55, whose chief complaints were pain in the epigastrium, vomiting, and emaciation of one month's duration. There was an indefinite mass in the epigastrium. Laboratory tests were suggestive of carcinoma of the stomach. The operation revealed a mass at the duodenum, which the pathologist reported was carcinoma of the duodenum, a supposedly rare event in this region.

Robert H. Jeffrey reported the case of a male, age 49, weight 225 pounds, injured by a fall of slate. The lower extremities were crushed, but there were no fractures. In the left popliteal space was a small painful lump, soft and tender. Treatment generally was instituted and the patient was getting along well when, on the sixth day, he collapsed, became cyanotic, dyspneic, and coughed. He died in a few seconds. At necropsy an embolus, 17 inches long, was found doubled up in the pulmonary artery. It had apparently come from the popliteal veins of the left leg.

The following officers were elected: President, Lewis N. Reichard; president-elect, John L. Messmore; first vice-president, Earl C. Sherrick; second vice-president, Ralph P. Beatty; secretary and treasurer, C. Franklin Smith; editor and assistant secretary, Charles C. Hubbard; reporter to the State Journal, Louis F.

Rogel; censor for 3 years (term expires in 1938). Fred Harrison; district censor, Elliott B. Edie; executive committee (term expires in 1938), John D. Sturgeon, Jr.

LOUIS F. ROGEL, *Reporter.*

FRANKLIN**Feb. 21, 1936**

The meeting was held in honor of Washington's birthday and dinner was served. The attendance was excellent, considering the very inclement weather and dangerous roads.

The speaker was Albert Lindsay Roland, president of the State Teachers College at Shippensburg, who gave an address on "The Physician and Society—The Future of Medicine." He thought that we must consider the question of the future and socialized medicine, stating that he, a layman, saw the coming of that form of medical attention to the public, and felt that we must meet the situation head on. It cannot be avoided, and it behooves us to get into step with public opinion and try to guide it as we may, in all honesty, believe best for everybody concerned.

The speaker told a story of a physician who practiced in a small town in Saskatoon, Canada. It seems that conditions got so bad with this Canadian doctor, financially, you understand, that he could not make a living. The townspeople were a sturdy lot and required little medical attention. One day he was all packed up ready to leave when apparently the folks there began to think what life would be in the village if they had no doctor at all. Probably they saw all sorts of things happening to their children, wives, and old people. The result was that they held a meeting at once, and a selected committee of the residents approached the doctor with an offer guaranteeing him a fairly good living salary if he would stay. He was thereby paid enough to enable him to live fairly well—in fact he got much more than he had been able to earn when working alone—and the arrangement was satisfactory to the villagers.

If this situation be analyzed it will be found to be a perfect case of socialized medicine. The doctor was paid a living salary by the joint contributions of the residents there. In return he devoted his efforts to caring for the health of the community. This type of service has been recognized for a long time by the legal profession and, according to the speaker, no stigma of any sort attaches to such service, nor has any alarm been noted. As is common knowledge, many lawyers are paid regular salaries for their attentions. These, he said, were straws in the wind, pointing to the ultimate alteration of the system now in vogue in our work, and it is coming right under our noses. Our hospitals are rendering similar services constantly, without causing wild alarm. That, he thought, was so close to us that we failed to grasp its significance. Free hospital service is currently accepted as reasonable, and we do not think that it is going to undermine private practice. Probably most of us think that the clinic practice is not our sort, anyway. The public always will pay for skill, and no doubt will wish to make its private selection of medical attendants. Hence, the inference is that there will always be a place for the private practitioner, even with socialized medicine. The matter of seeking private medical attention probably is a habit now to which we cling.

Changing his topic somewhat he urged the teaching of practical psychology in our medical schools, stressing

the extreme value of it in medical practice, and suggested that all of us have had to acquire a working knowledge of psychology if we wished to succeed. But we suffer a handicap by not having it early in our medical careers, rather than having to drudge along for years in order to acquire, in the school of hard knocks, a working psychology that should have been furnished us prior to our graduation.

In closing, the speaker suggested that there appears to be an excellent field for research work in trying to find some method or system whereby the inroads of senility may be averted. He referred to Dr. Carrell's chicken flesh, growing 20 years and apparently able to last indefinitely. The proper time to begin such work should be early in middle life, prior to the onset of the changes we now attribute to age.

FASSETT EDWARDS, *Reporter.*

LACKAWANNA

Jan. 7, 1936

The society had for its guest on Jan. 7 and 8, George Edmeston Fahr, professor of medicine at the University of Minnesota School of Medicine. Dr. Fahr gave 3 addresses during his visit, the final address preceding the annual staff dinner at the Mercy Hospital, Scranton.

The regular meeting was held in the auditorium of the Chamber of Commerce, President Jacob J. Lonsdorf presiding. Dr. Fahr gave an address on "Nephrosis and Nephritis as Explained by Modern Physiology and Pathology." He said in part:

There is no functional change in the kidney tubules in any type of primary kidney disease, according to modern concepts, except in Addison's disease, or diabetes insipidus. The mechanism for conservation of chlorides and sugar is resident in the proximal convoluted tubule, where they are resorbed through the capillary network. Most of the water resorption occurs in the loop of Henle. If it were not for this resorption, the body might lose 40 to 50 liters of water daily. This action is partly mechanical and partly under the control of pitressin, from the posterior lobe of the pituitary gland. Cortin controls the resecretion of sodium chloride. In Addison's disease, the level of the blood chloride drops tremendously.

In studying the production of renal hypertension, Volhard noticed that the glomerulus was frequently plugged with epithelial cells in glomerular nephritis preventing blood flow. He first noted that obstruction to the blood flow by some mechanism produces increase in blood pressure. Goldblatt repeated this and reported that ischemia of the kidney produced high blood pressure, regardless of innervation or reflexes.

Edema is "free water"; there is no evidence of "bound water" in the tissues. Water is found in the interstices of the white fibrous connective tissue, particularly in the dependent portions of the body. No protein is ordinarily found in edema fluid—it is a pure ultrafiltrate of blood plasma. There is no actual capillary damage, but reduction in the colloid osmotic pressure due to a reduction in plasma proteins, with no change in hemoglobin or blood cells, results in severe edema.

True nephrosis is very rare, only about 35 cases having been described. Most cases diagnosed nephrosis are really glomerulonephritis with edema. It has been called chronic lipemic nephrosis because of the high blood fat and cholesterol. These patients come in often with massive anasarca, ascites, fluid in the chest, albu-

min 1 to 5 per cent, high specific gravity, blood fat and blood cholesterol, many casts and red blood cells in the urine, and no increase in blood pressure. There is a low basal metabolic rate due to a low caloric intake. Many of these patients die of the starvation of inanition. When the caloric intake drops to 750-800 calories, the basal metabolism rate may fall to -25. Also, marked edema increases the body area according to the height-weight tables, giving a metabolic increase of 5 per cent. When the B. M. R. drops there is an increase in the blood cholesterol and neutral fat similar to myxedema. With depletion of the plasma proteins, for some unknown reason the plasma cholesterol and neutral fat rises. The mortality in these cases is 50 to 60 per cent. Some have recurrent bouts of anasarca with marked albuminuria which improves after months. True myxedema may be confused with true nephrosis.

In the treatment of nephrosis, enormous amounts of protein by mouth will raise the blood protein very little, as long as there is marked albuminuria. Always eradicate the foci of infection. As there may be a connection between myxedema and nephrosis, some advocate the use of thyroid extract, grains 15, or thyroxin, grains 3, daily. Restrict salt intake to 2 grams daily. Give horse radish, mustard (no salt), or greens. Restrict fluids to 600 c.c. daily. Using ammonium chloride, 8 grams daily, will double the output. Salyrgan does not affect the tubules as once believed; give an ampule every third day. The potassium diuretics and urea (60 to 75 grams daily) are of much assistance in reducing edema.

A high protein diet containing 150 to 160 grams of protein daily should be provided. This high protein diet provides plenty of urea as an end product, the urea being an excellent diuretic. But the treatment, par excellence, is intravenous gum acacia, 30 per cent solution in salt-free water, which has a tendency to plug up leaks in the membranes. Diuresis is immediate and massive with excretion of the sodium ion as the chloride. Divided doses are better, but 400 c. c. of the 30 per cent solution may be given slowly without reaction. Gum acacia given in this manner is the ideal diuretic.

Jan. 8, 1936

In continuation of his series of lectures relative to the physiologic pathology of kidney disease, Dr. Fahr addressed a large audience, in the auditorium of the Chamber of Commerce building, on "Essential Hypertension." Dr. Fahr said in part:

Essential hypertension is a condition or state of high blood pressure not at all dependent upon disease or pathology in the kidney. Generally, it is a condition which has been present for years (average duration—15 years). It is usually found in the drivers of the world, those who do a double day's work, who work hard and play hard.

The urine may show an occasional trace of albumin. However, there are seldom any signs except in the presence of infarction of the kidney, heart failure, or a condition verging on malignant hypertension. After many years of hypertension, the kidney may show little or no pathology beyond slight thickening of the intima of the renal vessels.

Renal hypertension is an entirely different entity, as the urine is frequently loaded with red blood cells and casts and shows considerable albumin. The presence of marked renal insufficiency is noted sooner or later. The patient generally feels sick from the start and tires easily. From the very onset, functional tests show the presence of definite damage.

Malignant hypertension was first described in 1914 by Volhard and Fahr. It is the type of hypertension which becomes associated with pathology in the kidney resulting from long-continued high tension. Hypertension of such degree may be present from 2 to 15 years before there is any sign of insufficiency. The fulminating type of hypertension includes those cases in which there is a very rapid production of kidney insufficiency as a result of hypertension.

According to public health statistics, 140,000 die yearly as a consequence of essential hypertension; 50 to 60 per cent of these die of heart failure as a result of fatigue of the left ventricle and coronary sclerosis, with an occasional case of coronary thrombosis; 25 to 30 per cent die of cerebral accidents, while only 10 per cent die of renal insufficiency and uremia.

Cold Water Test.—The patient is rested for 30 minutes and the blood pressure taken. Then the hand is immersed above the wrist in a pan of cold water (40° F.). After 30 seconds, the blood pressure is again taken—the normal patient will show only a slight rise of 6 to 10 mm. of mercury. In essential hypertension, there may be a rise in tension of 30 to 60 mm. systolic and 10 to 20 mm. diastolic. When renal hypertension is present, there is little or no change in blood pressure.

Etiology.—Essential hypertension is hereditary—a mendelian recessive characteristic. If one partner has essential hypertension and there are 4 children, only one child will develop essential hypertension. If both have essential hypertension, at least 3 out of 4 of the children will have it. So, by careful breeding, essential hypertension could be wiped out.

If 3 to 6 grains of amylal are given before the cold water test to cut out sensory stimuli, patients with malignant hypertension may show a rise of only 10 to 20 mm. Vasomotor center hypersensitivity results in hypertension through overstimulation by way of the sympathetics. It is known that certain tumors of the suprarenal gland are also associated with hypertension, removal of these tumors resulting in a drop in blood pressure.

Prognosis.—In essential hypertension with no signs of renal insufficiency, the average patient will live 15 years and enjoy a fairly normal existence, regardless. The patient who works hard physically and mentally will live only 5 to 10 years at best. In these cases, cardiac dilatation develops very slowly, and it is remarkable that many years may elapse before there is any sign of heart failure.

Therapy.—Be philosophical about your talks with the patient. Calm his fears and above all make the patient promise never to ask his blood pressure. As to diet, there is no objection to red meat, for studies have shown that there is no change in blood pressure with a high protein diet, unless uremia is present.

Use a mild hypnotic to release the patient, such as chloral hydrate, grains 5 t. i. d. Advise a vacation with complete rest. If the blood pressure can be lowered 10 to 30 mm., several years will be gained for the patient. An excellent aid is a warm relaxing bath at 4 p. m. each day, followed by a light massage. An hour's nap after the noon meal, daily, is of definite value. In advanced cases the patient should stop work at noon. Relaxation is afforded by a drive of an hour after work with a chauffeur, each afternoon at four. An easy game of golf, noncompetitive, provides needed exercise. If the patient is frankly obese, it is absolutely necessary to impress upon him the necessity of adhering to a diet with restricted intake, which may result in a drop of 10 to 20 mm. in blood pressure.

The surgical treatment of essential hypertension by partial adrenalectomy has resulted in little permanent improvement. When sympathectomy is employed, the cure is worse than the original condition. Removal of the upper splanchnics by Peet has resulted in definite improvement in 75 per cent of his cases.

Jan. 14, 1936

The regular monthly meeting was held in the auditorium of the Chamber of Commerce, President Jacob J. Lonsdorf presiding.

The Public Relations Committee presented a request from the State Emergency Relief Board that the local society support a new proposition, enabling them to determine the employability or unemployability of relief cases, physicians named by the local society to act as go-betweens or referees between the regular SERB physician and the physician of the Poor Board, the latter being required to provide for all unemployables. As this proposition placed all responsibility upon the county medical society with no proper remuneration, and practically exempted the state, it was decided to postpone any direct action on this request. The Medical Economics Committee reported a much more healthful relationship between the subsidized charities and the profession; stated that the new Rating Bureau would shortly be in operation for one year, funds being obtained as a WPA project; and asserted that despite numerous meetings, the state society had nothing constructive to offer concerning state medicine; and criticized the lack of representation given this district on the state committee, particularly since Lackawanna County is the only county in the state where facts and figures are available for the past 5 to 10 years concerning all phases of hospital and welfare work, as well as summaries of hospital practices.

The membership committee reported that there were 7 delinquents during the past year, 6 of whom have paid, while the seventh has paid in part. The library committee reported that the extensive reprint and journal library of the late Jonathan M. Wainwright had been offered to the society if space could be found to take care of it. They also recommended that the society subscribe to 18 medical and scientific journals to keep this library up to date. St. Thomas College library has offered limited space to take care of the collection.

The following were elected to membership: Meyer A. Kline, Dalton, and Loran Aloysius McAndrew, Vandling.

The society was invited by the local dental group to attend the sessions of the Third District Dental Society at the Hotel Jermyn. At the close of the business session, the society was invited to be the guests of Dr. Joseph P. Burke at dinner at the Hotel Loughran.

Jan. 21, 1936

The meeting was held in the auditorium of the Chamber of Commerce, Jacob J. Lonsdorf, president, presiding. Wells P. Eagleton, Newark, N. J., gave an address on "Brain Injuries." Dr. Eagleton said in part:

Surgery in brain injuries can do 2 things—relieve compression, and prevent sepsis. Do not worry too much about skull fracture and do not make that diagnosis. Preferably talk of cerebral injury. If there is no injury to the cerebral tissue, fracture is unimportant. With multiple lacerations and generalized trauma to cerebral tissue, make the patient comfortable and wait for the end.

Is the patient conscious or unconscious? First learn whether the patient had a conscious period following the injury before he became unconscious. If so, then something has happened since the injury to produce unconsciousness. Manipulation or movement may start up an extradural hemorrhage, which had stopped, with resultant death.

Every patient with a brain injury should have the blood pressure taken every half hour. If the patient has had a period of consciousness followed by unconsciousness, and the blood pressure is rising, do a decompression operation and open the dura, if necessary. In case of compressed fracture, relieve the pressure and do a débridement to eliminate the possibility of sepsis. Spinal puncture will relieve pressure and temporary edema but, if there is a space-consuming lesion, spinal puncture kills.

Every case of fracture should have a study made of the visual fields to determine if hemianopsia is present. Also examine for possible papilledema and exophthalmos. In any case of injury about the orbit, examine carefully for arteriovenous aneurysm; ligating the carotid will relieve the exophthalmos.

Slight trauma which afterwards gives symptoms should not be neglected. In 90 per cent of all head injuries severe enough to give symptoms, there is a contrecoup injury. All patients with concussion should be put to bed for a month with an occasional dose of magnesium sulphate.

Any case of frontal injury with leakage of spinal fluid should be operated upon. If rhinorrhea is present as a result of any type of trauma, operate and repair with fascia lata. Fractures about the face which result in numbness of any area should be operated upon. Anesthesia of the cornea is often missed. Test for it with a tiny pledget of cotton. It is of great localizing value. If it is gone one day and returns, there is an advancing lesion.

Jan. 28, 1936

Thomas A. Shallow, professor of surgery at Jefferson Medical College, Philadelphia, held a dry clinic during the afternoon at the Scranton State Hospital. The cases presented included: (1) Spinal cord tumor in the cervical region. Important points in diagnosis are the Queckenstedt test, Brown-Séquard syndrome, loss of pain and temperature sense in one leg with atrophy of the other, and finally a block shown by lipiodol and roentgen ray. (2) Duodenal ulcer. Characterized by severe hemorrhage, continuing despite repeated transfusions. Failure of operation in certain bleeding cases was emphasized. (3) Toxic goiter in a girl, age 7, with a basal metabolism rate of plus 37-38. Operation should be done only as a last resort following attempted reduction of the basal rate by roentgen therapy of the thyroid and adrenals. (4) Multiple myeloma with characteristic roentgenologic findings. The one suggestion was the possibility of parathyroid tumor due to the presence of an abnormally high blood calcium determination.

At the regular evening scientific session held at the Chamber of Commerce, Dr. Shallow presented a paper on "Goiter."

Feb. 4, 1936

At the regular weekly scientific session it was decided to dispense with the usual monthly business meeting on Feb. 11, because of the annual dinner to be held on the tenth. William F. Rienhoff, Jr., associate professor of surgery at the School of Medicine of Johns Hopkins

University, Baltimore, gave an address on "Surgical Aspects of Affections of the Bronchi and Lungs."

Feb. 11, 1936

Establishing a precedent for years to come, the annual dinner and dance of the society was held in the Crystal Ballroom of the Hotel Casey, Scranton. In attendance were 300 members of the society, their wives, and guests. Departing from custom, no courtesy speeches were allowed and the presence of officers of neighboring societies and professional organizations was merely acknowledged. The dinner was in honor of the retiring president of the society, Raymond J. Garvey, who formally presented the gavel of office to the newly elected president, Jacob J. Lonsdorf.

Mr. J. Fred Essary, political correspondent of the *Baltimore Sun* for the past 25 years, and now dean of the Washington journalists, completely in touch with the present political and economic situation, made an address. Mr. Essary said that he does not approve of many phases of the New Deal. He considers that work relief is the biggest fraud ever perpetrated upon a tax-paying people.

FREDERIC B. DAVIES, *Reporter*.

LUZERNE

Feb. 5, 1936

The meeting was held in the Medical Building, Wilkes-Barre, President Vivian P. Edwards presiding.

Herbert T. Kelly, Philadelphia, read a paper on "Early Diagnosis of Diabetes and Its Treatment." He said that although great strides have been made in the treatment of diabetes by the judicious application of diet and the administration of insulin, the mortality from diabetes has been increasing. Joslin says, "There is still great room for detection of diabetes nearer its onset."

The new diabetic physiology showing the connection between the pancreas and other endocrine glands will undoubtedly aid in the earlier diagnosis of diabetes. Experiments have shown how the pituitary exerts a governing action upon the pancreas, through the blood-raising hormone, the contra-insulin hormone of the anterior lobe. This acts by way of the sympathetic nervous system upon the suprarenals and through them on the liver. Inject it into the muscles and it soon will be found in the spinal fluid. Remove the pituitary and the diabetic dog still lives, although the diabetes is nearly abolished.

With an adequate knowledge of the history and physical findings of a suspected diabetic, it is necessary to have a reliable laboratory procedure to confirm the diagnosis. The glucose tolerance test is the procedure of choice. The new test can be performed in one hour as follows: Collect blood and urine samples, preferably a fast overnight, and give first dose of glucose (50 gm. in 325 c. c. of water with lemon juice), allowing one to 2 minutes for ingestion; 30 minutes after ingestion of the glucose, collect samples of blood and give second dose of glucose; 30 minutes after, collect blood and urine samples. The typical criteria of normal responses are: A fasting blood sugar within normal limits; a rise in blood sugar which does not exceed 75 mg. in the 30-minute sample; the blood sugar in the 60-minute sample is less, the same, or does not exceed the 30-minute sample by more than 5 mg.; and all urine samples are negative to Benedict's test.

This test was performed on 260 patients who had gone without food for 12 hours, and who had a previous

normal fasting blood and no glycosuria; 160 had no evidence of impaired carbohydrate metabolism; 100 had the abnormal sugar curve, and were classified as positive cases; 61 of the latter were checked with the 3-hour tolerance test.

With proved etiologic significance of heredity in diabetes by Pincus and White, keen interest has been evident in determining the glucose tolerance in relatives of diabetics. A routine investigation should be made on obese persons. Cholelithiasis is probably one of the most important etiologic factors in diabetes. A surgeon should also study the patient's carbohydrate metabolism.

The treatment of diabetes consists of diet, exercise, insulin, and general care. Special diet is vital in every case. Insulin is often life-saving but not required by the majority. The overweight will reduce and the underweight will gain in weight, with recovery of normal health and strength.

In the early diabetic, diet and exercise are essential. The author employs the midway course of Allen and Joslin—protein (60 to 90 gm.), carbohydrate (100 to 150 gm.), and restricted total calories but adequate for maintenance diet. The unit system seems to be the easier method for the dietary prescription.

In conclusion, the glucose tolerance test is the best method to study the mechanism and measurement of an organism's ability to metabolize carbohydrate. Its application to that group of patients with a diabetic familial tendency, obesity, endocrinopathies, gallbladder disease, and protracted infection, will aid in the early diagnosis.

The following were elected to membership: Jacob G. Hyman, Lucy M. Wunderly, Albert J. Abbott, James S. Dixon, and Dominic B. Siberski.

Feb. 19, 1936

The meeting was held in the Medical Building, Wilkes-Barre, President Vivian P. Edwards presiding. Edward W. Bixby, Wilkes-Barre, read a paper on "The Medical Treatment of Peptic Ulcer."

Dr. Bixby said in part: During the last 20 years opinions have differed among authoritative men regarding the treatment of ulcer, primarily as to whether it is a medical or surgical problem. The surgeon has been convinced that it is a surgical problem from the number of cases coming to operation after ineffectual medical treatment, and the physician has been impressed by the continuance or recurrence of ulcer symptoms in patients following operation. A patient with this condition primarily is a medical problem. The specific surgical problems are: Perforation into the peritoneal cavity; perigastric abscess; suspicion of development of cancer at the site of the ulcer; pyloric obstruction; and large, deep ulcers which fail to heal.

An excess of hydrochloric acid is found in ulcer cases. It is theorized that possibly some factor such as thrombosis due to infection, endarteritis, or atheroma also might lead to ulcer formation. Rosenow first demonstrated the isolation of streptococci from various foci in ulcer patients as well as from tissues of resected ulcer areas. Certain lesions of the central nervous system may be followed by ulcer. This is quite common in those with brain tumor. The histidine theory is based on experiments of Mann and Williamson who diverted the natural secretions of the duodenum into the terminal ileum. Ulcers develop in the stomach, and also nutritional disturbances, resulting in the death of the animal in a few weeks.

One of the essential points in the treatment is rest, especially in the large, deeply penetrating ulcers. The

patient should be at absolute rest in bed if possible. No smoking should be allowed. Foci of infection of the teeth, tonsils, sinuses, prostate, or gallbladder should be removed and suitable treatment given.

Diet.—The rule is to give large amounts of albumen to neutralize the hydrochloric acid, and sufficient fat to depress secretion of this acid. The foods are to be bland. Each clinic has its own dietary schedules and all patients cannot be treated alike. The Sippy treatment is the commonest. Control of the hyperacidity is brought about by the use of alkalies—calcium carbonate, magnesium oxide, and sodium bicarbonate. Symptoms of alkalosis must be watched for such as nausea, headache, thirst, loss of desire for food, polyuria, and vomiting. Belladonna may be used to control excessive secretion. Bromides are of value in nervous persons. Morphia is necessary in hemorrhage. Glucose intravenously, 10 per cent in normal saline, is of value especially if the patient is thin and poorly nourished. The drug synodal is a combination of lipoproteins and emetine and has been used in the past 3 years. Larostidine is the trade name of a 4 per cent solution of histidine for intramuscular injection. Injections of 5 c.c. are given daily for 24 doses. There is no reaction and very little pain, and no local irritative effects. The diet is not restricted beyond ordinary sensible rules. The patient may be ambulatory and may work. Treatment is not used during hemorrhage. A second course is advised in 6 months.

Very good results were obtained in 3 patients into whom larostidine was injected.

Uncomplicated peptic ulcer is primarily a medical problem; definite cures are obtained from medical treatment; once an ulcer patient, always an ulcer patient, and treatment should be continued; patients should be educated to consult physicians early for disturbances of digestion; dyspepsia and indigestion should be considered as having an organic basis until proven otherwise; the histidine treatment of all such patients is based perhaps on the most logical theory as to causation.

Frank Pugliese, Wilkes-Barre, read a paper on "The Surgical Treatment of Peptic Ulcer." He said in part: An impartial attitude toward the modern management of ulcers at once admits the important fact that peptic ulcers today are no longer primarily surgical. The patient must come to surgery as a result of failure of good adequate medical treatment, or because of some complication such as hemorrhage, perforation, pyloric obstruction, or malignant degeneration.

Hemorrhage.—There is a difference of opinion as to when to continue with medical treatment, and when to resort to surgery. It is unwise to operate when there is an active hemorrhage unless it is not relieved by conservative measures. Most patients will stop bleeding if given morphia, ice caps to the abdomen, and hypodermoclysis (nothing by mouth). If not, transfuse and operate. An effort should be made either to remove the ulcer or ligate the main vessels.

In the surgical treatment of duodenal ulcer there is much discussion as to the relative merits of operations, but it should be realized that no one operation can be applied in all cases. The procedures employed are posterior or anterior gastro-enterostomy, gastroduodenostomy, excision alone, or combined with gastro-enterostomy or pyloroplasty, partial gastrectomy with the Billroth 1 or 2 type of anastomosis, antral exclusion, etc.

The classical indications for operative procedures were detailed.

Gastric resection is still a debatable subject. Secondary ulcers do form after this operation. He reserves the resection for cases in which symptoms persist after the conservative operation, or in cases in which there is repeated hemorrhage. The mortality rate is high.

When the lesion is small the essayist prefers excision with the knife or cautery, and gastric resection when the lesion is large.

The management of peptic ulcer is primarily medical; surgery is indicated when there is failure of the former; gastric ulcer cases are treated differently than duodenal ulcer cases; the results in peptic ulcer cases are gratifying when properly selected.

In discussion, Frank R. Hanlon, Wilkes-Barre, considers that the treatment with larostidine should be checked as Dr. Bixby has done; personally Dr. Hanlon leans toward the neurogenic theory of causation.

Frederick W. Heyer, Nanticoke, thinks a great deal of importance lies in the alcohol factor in ulceration. When there is a cessation of alcohol intake the ulcer often disappears.

Angelo L. Luchi, Wilkes-Barre, stated that the question is whether a patient without money and with mental difficulties should be subjected to long medical treatment instead of operation first. Medical treatment may well be regarded a treatment for the rich and not the poor. The most important sign for bleeding is the blood pressure; when it goes to 180, surgery is indicated. Gelatin is of value in the medical treatment. Blood transfusion is of value when the pressure goes below 100 and the red cell count below 3,000,000.

Alfred W. Grover, Kingston, was very much impressed by the mention of alcohol in the causation of ulcer.

In closing, Dr. Pugliese said, if an ulcer patient can be put at complete rest in bed and treated for 6 weeks and he does not respond to treatment, then he is a subject for surgical treatment. Good results are not obtained in young persons, so they should be carried along on medical treatment as long as possible. He agrees with the neurogenic theory. Alcohol does play a part, as does smoking. If transfusions are necessary, give small ones frequently. If perforation occurs simply close it, and do no further operation at that time.

MARJORIE E. REED, *Reporter*.

LUZERNE (HAZLETON BRANCH)

Dec. 11, 1935

The regular meeting was held in the Elks' Home, Hazleton. The guest speaker was Francis W. Davison, bronchoscopist to the Geisinger Memorial Hospital, Danville, Pa., who gave an address on "The Differential Diagnosis of Chronic Cough," saying in part:

Primary carcinoma of the bronchi, sino- and tracheo-bronchitis, and tracheobronchitis with the allergic status are the most frequent causes of chronic cough in their series, in which 12 causes are noted.

In studying patients, the methods of examination include roentgen ray of the sinuses, smear of excretions with methylene blue stain, and with Wright's stain for eosinophils (as in the allergic status), and smears stained with the acid-fast method for tubercle bacilli. Diagnostic lavage of the sinuses is done when indicated. Chest roentgen rays and pneumograms with lipiodol are done, as well as serologic tests and complete hospital clinical study.

The preferred technic for lipiodol examination comprises the use of a catheter with Coude tip and 10 per

cent cocaine solution which is used upon the larynx and trachea. The catheter is inserted through the nose, directed through the larynx, and introduced well down in the trachea. The lipiodol is then injected under fluoroscopic control. Frequently all lobes of the lung need to be examined to prove that the lesion is in only one lobe.

A case of bronchogenic carcinoma with massive atelectasis was described. Marked improvement was obtained with deep roentgen-ray therapy and bronchoscopic drainage for "drowned lung," to relieve accumulated fluid and pus in the collapsed lobe. This patient is now alive after one year, although he cannot be termed cured. Two patients with foreign body in the bronchi were described. One lived without symptoms for 18 months; then, after bronchoscopic removal, remained well, since the bronchus was never completely obstructed. The other, however, suffered complete obstruction which resulted in rapid suppuration and death in 4 weeks, despite bronchoscopy.

Sinobronchitis with the allergic status is best illustrated by a patient showing edema as the allergic symptom. This edema is of the mucous membranes of the bronchial tree, and results from pus or organisms from a sinus infection, or from inhaled dust or dander. Treatment demands that the sinus infection be cleaned out, and that bronchoscopic drainage be used for thick secretions which cannot be coughed up. Many such cases are termed asthmatics because they are relieved to some extent by adrenalin, but they differ in that they are not so orthopneic, do not secure complete adrenalin relief, and have sticky gummy secretions not easily expectorated.

In discussion, Fayette C. Eshelman stated that chronic cough often results from chronic otitis media. Geo. F. Burkhardt described a patient with marked asthmatic rales, in whom complete relief for 8 years was gained by a course of serobacterin injections. He also stated that patients with chronic cough are frequently examined for tuberculosis and, when this disease is excluded, are classified as bronchiectasis suspects. William V. Coyle described a patient with sinusitis, bronchiectasis, and pulmonary abscesses, who required lobectomy and many transfusions, but eventually became well. He also stated that the experience of the otolaryngologist with allergic patients can be summarized by saying they all are relieved during periods of treatment and sinus operations, but suffer recurrences in the periods of no therapy. Shem A. Everett asked about metabolic deficiency as a factor in producing the allergic status. John M. Dyson described a patient with atelectasis supposedly from bronchogenic carcinoma, which proved on bronchoscopic examination to be from a mediastinal tumor, probably carcinomatous.

In conclusion, Dr. Davison stated that chronic cough frequently results from otitis, especially when the eustachian tube is involved. Allergy is very much an unknown quantity. They avoid surgery in allergies as much as possible because of the intense swelling and reactions which may follow. They do surgery only when the diagnosis is sure, and the operation is needed very definitely. In sinobronchitis, relief of both sinus and bronchial symptoms is obtained with sinus treatment. If bronchiectasis is present lobectomy may be required. The relationship of metabolic disorders to allergy is a good thought. There are cases of endocrine dysfunction helped by administration of proper extracts or glandular preparations.

JOHN M. DYSON, *Reporter*.

Feb. 26, 1936

The regular monthly meeting was held in the new Elks Home, Hazleton, President Fayette C. Eshelman presiding.

The guest speaker was Robert Lewis Gilman, Philadelphia, associate professor of dermatology, Graduate School of Medicine. His subject was "A Discussion of Common Skin Diseases," illustrated with lantern slides. An abstract of his address follows.

To get the best results in the treatment of skin diseases emphasis was placed upon diagnosis so as to prevent error in either instituting wrong treatment or overtreating, and chief among the skin problems is the separation of skin syphilis from all other skin conditions, ranging from toxic erythemas to chronic granulomas.

Treatment is simplified by keeping the following axioms in mind: Treat etiologically when at all possible, i. e., syphilis; treat symptomatically on pathologic or morphologic principles; do not use strong local applications, i. e., use 3 per cent ammoniated mercury rather than 10 per cent; use drying lotions for acute processes; ointments are usually reserved for subacute or chronic processes, particularly for stimulations; skin cleanliness is important, and soap and water is useful more often than contraindicated; importance of general medical treatment—removal of foci, proper diet and elimination, management of systemic diseases such as anemias, metabolic conditions, and infections; and specific treatments, such as the use of pituitary extract or sodium iodide in herpes zoster, antimony salts in granuloma inguinale, and gold or bismuth in lupus erythematosus.

The best advances are being achieved in the eczemas (eczema, ichthyosis, and urticaria), occupational diseases, and in the control of tinea infections.

In all tables of classifications there are several conditions that achieve prominence—eczema, ringworm infections, and acne vulgaris.

Acne vulgaris always occurs in adolescence, often leaving the patient in the early twenties with a crop of scars sometimes comparable to those of smallpox. Clinically the disease ranges from an obviously shiny skin with simple comedones to large groups of comedones, and to deep and superficial pustules that may involve the entire face, upper chest, shoulders, and back. Associated with this condition usually is a good growth of coarse scalp hair and an oily, scaly scalp. The etiologic background primarily is adolescence and attendant glandular changes. Next there is a familial tendency toward overactive or overdeveloped sebaceous glands. Coupled with this often is an overuse of carbohydrate foods. The carbohydrate background does not hold for all cases, but occurs often enough to suggest an etiologic relationship and following this a suggestion for management. It has been repeatedly demonstrated that there is not an increased blood sugar, although it is quite reasonable that there may be an increase of glucose in the skin vascular areas or spaces. Other etiologic factors of some weight are susceptibility to varieties of bacteria—streptococcus, staphylococcus, coli and acne bacillus, and finally faulty elimination.

Immediate treatment should be instituted because of the marked antisocial effect the long-drawn out course (5 to 6 years) may have on the child and the later resultant scars of a disfiguring nature. The treatment follows directly from the etiologic factors: An empirical reduction in carbohydrates; local measures to discourage sebaceous activity (sulphur and tincture of green soap); general measures to include correction of

any constipation, quartz lamp over entire body, Brewer's yeast, and viosterol; sterner measures including glandular therapy when indicated, a trial with vaccines, additional local measures to combat sebaceous activity (lamp or roentgen ray); and other measures such as milder astringents, attention to the scalp and general health, and a change of surroundings.

Insofar as the pyogenic infections are concerned (including impetigo contagiosa, follicular impetigo, sycosis, furunculosis, secondary infections, ecthyma, and dermatitis repens), the etiology usually is a specific streptococcus or staphylococcus organism. Treatment principles require cleanliness and the manual removal of crusts; application of mild antiseptics such as ammoniated mercury, oxyquinoline, bichloride washes, dusting powders, or gentian violet. Vaccines are used in chronic cases and for epilation in sycosis; the lamp or roentgen ray, vaccines, and foreign protein therapy in furuncles; and systemic measures of cod liver oil in ecthymas.

Of the parasitic diseases, scabies is a common condition. The diagnostic points are: Generalized itching (night cases); history of contact with someone else; and typical distribution on the flexor surfaces of the wrists, webs of the fingers, anterior axillae, around the waist, on the glans in the male (diagnostic) or about the nipple in the female. The face is exempt except in nursing infants. The condition may range from an isolated area of dermatitis to a widespread secondary dermatosis. A great help is the finding of a single burrow or a lesion on the glans or nipples.

Treat with 10 per cent each of sulphur and balsam of Peru, giving three 12-hour applications followed by a bath and repeating if necessary. During this time the patient should wear the same underclothing and use the same bedclothing. Prevent overtreating, for too much sulphur or a susceptibility to the same may cause a sulphur dermatitis—a red, diffuse, patchy venenata with an odor.

Then followed a recapitulation of the 10 commonest skin conditions illustrated with lantern slides: *Tinea*—no matter where the involvement, look at and treat the feet—use potassium permanganate and mild astringents; *acne vulgaris*—do not dismiss it by saying "the child will outgrow it"—treat immediately; *seborrhea*—soap and sulphur treatment; *verruca*—anatomical removal (every other method is a variant of psychotherapy or hexing but, if you believe in it, your results will be better than 60 per cent); *pyoderma*—clean and remove crusts (use 3 to 5 per cent ammoniated mercury); shave the bearded regions antiseptically if involved; do not be hasty in slashing, and exercise care in the use of iodine; *dermatitis venenata*—use drying lotion early; whole blood is helpful; the disease is not contagious; *eczema*—real sympathy needed—try unsaturated fatty oils (corn, cotton, or linseed); *moles*—hormones and fulguration; *pityriasis rosea*—reassure the patient that it is not syphilis; *herpes zoster*—use pituitary extract or sodium iodide and dry applications; call an ophthalmologist if the facial type.

In discussion, Patrick J. Gillespie asked about the use of stannoxyl in acne. George F. Burkhardt inquired about the therapeutic action of pertussis vaccine in eczema and asthma. He reports a case of a child and 2 adults treated with good results. Otto C. Reiche stated that in a case of pustular acne with iritis and infected tooth a good result was obtained by foreign protein injections. Joseph T. McAloose questioned the use of strontium in psoriasis and also inquired as to the use of calamine lotion with 50 per cent salicylate. Dr. Burkhardt asked about gold treatment in lupus.

In conclusion, Dr. Gilman stated that insofar as stanoxyl in acne is concerned the word of the manufacturers should not always be taken. In the allergic type of eczema with asthma, results are remarkable with the use of pertussis vaccine; however, the psychic effect of the new drug and new doctor must be remembered.

In some forms of acne, foreign protein therapy has proved to be of value. In psoriasis, lamp treatment and the use of crude oil and little meat in the diet seem to yield better results. Calamine lotion with 50 per cent salicylate has no specific effect in acne; its effect is just of a coating nature. Gold treatment in lupus should be utilized until pigmentation of the skin occurs, then change to bismuth. Of the gold preparations, Dr. Gilman preferred gold thiosulphate.

JOSEPH V. FESCINA, *Reporter.*

LYCOMING

Feb. 14, 1936

The meeting was held in Medical Hall at the Williamsport Hospital, President Galen D. Castlebury presiding, and was devoted to a symposium on socialized medicine. Wilbur E. Turner, of Montgomery, detailed the English plan of socialized medicine. He said in part:

When 2 groups are compared the density of population as well as the distance between large cities and the number of small towns must always be considered. But keeping this discrepancy in mind, visualize the English system transplanted to our own community. Under the English panel system the average physician receives about \$2000 each year, \$1000 being required for expenses. His average income per patient, per year, is \$1.95. The panel physician is supervised by men known as advisory consultants who superintend the work of the practitioner and who settle questions of disability and extent of illness when the panel doctor and the patient are in disagreement.

The system is supported by contributions from the employee, the employer, and the state. Since the start of the plan the percentage borne by the state has steadily increased. The yearly cost of the system is \$154,000,000, which is spent as follows: Administration, \$23,000,000; to physicians, \$30,385,000; to druggists, \$9,000,000; mileage (to physicians), \$1,015,000; medicines (dispensed by physicians), \$980,000. Sick benefits paid direct to the worker totaled \$79,000,000.

Fifty per cent of the English population is insured under the panel system or in insurance groups. Of the 36,000 physicians practicing in England, 17,000 are enrolled in panel practice. Under the system illnesses of less than 4 days are not insured and hence, though they receive treatment, do not receive any sick benefits.

The proponents of the system claim the following benefits for it (following each statement is inserted a rebuttal in order to make it more coherent):

1. People receive attention who previously would not have been treated. (More are treated, but malingering is encouraged. In 1921, 14 out of every hundred men were treated for illness each year; in 1927, 26 of every hundred. Of the single women, in 1921, 12 of each hundred received sick benefits; in 1927, 21 of each hundred. Of the married women in 1921, 19 of each hundred received sick benefits; in 1927, 38 of each hundred.)

2. It increased the number of physicians in densely populated districts. (Admitted.)

3. Amount and character of services better than under the old plan, that of club or society medicine. (Probably, but it is significant that the old clubs are being revived now in the presence of the panel system.)

4. Illness comes under observation during the earlier course of disease. (Undoubtedly, see 1 above, but a doctor treating between 80 and 100 patients each day certainly must limit the extent of his "observation.")

5. The physicians are led toward preventive medicine. The vital statistics show:

	England	Germany	U. S. A.
Death rates/1000	11.4	13.2	10.0
Infant rates/1000	76	53	49
Diphtheria (preventive)			
Deaths/100,000	5.6	6.3	3.9
Cases/100,000	114	117	39

6. Better records. (Yes, if well kept, but does the panel physician have time for truly adequate records?)

7. Co-operation of the physicians has improved.

8. More attention to public health matters. (But, the yearly health record is not improving.)

Frederic C. Lechner, of Montoursville, spoke upon the German system.

The German system has been operative for 50 years. Promulgated by Bismarck as a sop to the laboring classes it has far extended itself. Let us examine it in 3 phases—its benefit to the worker, to the state, and to the physician.

1. The patient:

(a) Expense: When originally proposed it was financed by a deduction of $1\frac{1}{2}$ per cent of employee's wage, with $\frac{3}{4}$ per cent by employer. In 3 years it rose to 3 per cent of employee's wage, with 3 per cent more by employer. In 10 years it was set at 6 per cent of employee's wage, with 6 per cent more by employer. Now it takes 10 per cent of employee's wage, with 10 per cent more by employer. In other words, at the present time 20 per cent of the pay envelopes of Germany are confiscated to pay for the health program. In mining or other hazardous employment 30 per cent is taken for insurance.

(b) Total national cost:

	1913	1930
Sickness benefits ...	200,000,000	2,000,300,000
Social insurance ...	1,000,300,000	6,000,000,000
Public welfare and social insurance ..	2,100,000,000	10,000,000,000

(c) Character of service:

There is a German maxim, "Insurance medicine is always second rate." Quantitatively there are many more visits made to the insured. The 35,000,000 people insured in Germany were visited by a physician 4 times as often as the 30,000,000 people who remained uninsured. (Surely a moral here).

(d) Preventive medicine: In the United States the average employee loses 6.5 days each year by illness. In Germany in 1906 he lost 5.5 days, while in 1934 he lost 28.5 days each year!

(e) Diphtheria prevention: The deaths in the United States average less than those in Germany.

2. Effect upon the state:

(a) It has increased taxation as follows: The tax bill in 1913 was 800,000,000 marks; in 1930, 4,800,000,000 marks.

(b) The blow to German morale is decided. The old German workman known for his loyalty, his industry, and his skill has been supplanted by a workman who loses little opportunity to rest at home on half-pay. This is shown above by the days lost. The loss to the German state of these industrious workers cannot be replaced.

3. Effect upon physicians:

- (a) The average visit pays the doctor 10 cents; hence, to make expenses he must see a hundred patients each day.
- (b) One-half his time is devoted to record work. (The records of the patient receive more average time than the patient himself.)
- (c) Trivial complaints consume much of his time, with ultimate resultant carelessness.
- (d) Impossible to do the best for patients, because they believe the panel doctors are inferior. The supervising physicians, who have power to alter the local physician's orders, also undermine the patient's confidence.
- (e) Germany has lost its proud position as the Mecca of physicians, and this system, due to the type of service demanded and given, is at least partially responsible. There is little incentive for increased skill.

LaRue M. Hoffman then spoke upon "Modern Legislative Endeavors," and outlined the features of certain modern plans for the care of the ill. He discussed the Northampton County (Pa.) plan, the Adrian Hospital plan, and the Washington, D. C., plan. The last named has succeeded in the following objectives:

1. A decrease in the occupied beds of the charity hospitals.
2. An increase in the occupied beds of the voluntary hospitals.
3. Pay for every patient in a voluntary hospital.
4. Decrease of 10 per cent in the payments from the community chest.

Almost all of this was due to the policy of aiding the patient to pay for hospitalization over a period rather than demanding cash when he enters the hospital.

John P. Harley spoke upon the various plans for group hospitalization, stating that the majority of workable plans are based upon the Dallas (Tex.) plan, which is nonprofit-making, and usually insists upon groups of subscribers rather than individuals. The plan in different localities varies from \$3.65 to \$12 per year, giving usually 21 days of hospitalization, with or without roentgen rays, laboratory fees, drugs, etc. The administrative costs are usually 12 to 15 per cent of the total.

EDWARD LYON, JR., *Reporter.*

NORTHAMPTON

Feb. 21, 1936

The regular monthly meeting was held at St. Luke's Hospital, Bethlehem; William J. Happel presided.

Delbert K. Santee and Clayton P. Struthers were elected to the Milk Commission.

The secretary made an earnest plea that all dues be paid promptly. He said that this society had the lowest standing in the matter of dues payments of any of the component societies last year.

Frank R. Hanlon, associate surgeon, Mercy Hospital,

Wilkes-Barre, Pa., gave an address on "The Management of Acute Empyema." Dr. Hanlon said in part:

Because empyema appears in epidemics, mild one year and severe the next, thereby having a tendency to catch the unwary off guard and because of the great divergence of the opinion among surgeons as to the proper method of drainage, it is a topic worthy of particular consideration.

Pyothorax may be a primary but usually is a secondary disease. It occurs most often as a complication or sequel to pulmonary infection (pneumonia, abscess, or tuberculosis of the lung); or it may follow an injury to the chest wall or the extension of a subdiaphragmatic infection. It assumes several different anatomical forms. It may be unilateral or bilateral. Involvement of the entire pleural cavity is spoken of as empyema totalis; it may involve but a portion of the free pleural cavity. It may be encysted between the lobes of the lung (the interlobar form of empyema), or it may consist of multiple abscess cavities, the multiloculated form. This type of empyema is inordinately dangerous because of the possibility of inadequately draining the several pockets. It should be suspected in a patient who does not show marked clinical improvement following surgical drainage and usually can be demonstrated by roentgen films of the chest. It may require multiple operations before all the pockets have been satisfactorily drained.

The diagnosis of empyema as a rule is not difficult. Of the physical signs the flat percussion note and the displacement of the heart are the most important. Roentgen-ray study is indicated. It is almost impossible to localize definitely an interlobar empyema without a roentgen-ray investigation. Thoracentesis is the final diagnostic test.

A bacterial smear and culture should be investigated before any plan of treatment is adopted. There is a growing tendency to reclassify empyema according to the bacteriologic cause of the infection. This is essential for the surgical pathology, the prognosis, and the treatment will vary considerably depending upon the invading organism. A smear of pus stained with methylene blue or Gram's stain and studied microscopically will permit a differentiation between the streptococcus, staphylococcus, or pneumococcus—3 organisms which account for 90 per cent of all empyemas.

The pneumococcus is the most frequent cause of empyema. The pleural infection usually manifests itself after the pneumonia and is therefore referred to as a metapneumonic empyema. This type of empyema is best treated by open operation. Aspiration is usually not successful due to many flakes of fibrin in the exudate.

Streptococcal empyema usually occurs simultaneously with the pneumonia and is referred to as parapneumonic empyema. Very often it is but an incident in a general infection. The ideal therapy consists in multiple aspirations, measures to combat toxemia, and blood transfusions. An interesting bit of research work on streptococcal empyema was reported in the *Brit. Jour. of Surg.* by Mr. R. C. Brock of Guy's Hospital, London. Using particulate matter as an absorption medium he found that the absorption of fluid from the pleura is intensified by 4 factors: By the amount of fluid present; by the depth of respiration; by the inflammatory reaction; and by the presence of air in the pleural cavity. Mr. Brock suggests that this early inflammation be treated by aspiration at least twice daily.

The staphylococcus is responsible for from 8 to 22

per cent of all empyemas. It is the predominating cause of empyema in childhood.

Empyema occurs in 2 forms. In adults it is usually sacculated, but in children it assumes the form of empyema totalis. In the former an open operation is preferable, but in children a closed type of drainage is desirable.

Tuberculous empyema fortunately is not very common. If an associated active pulmonary tuberculosis exists, it is important to maintain pulmonary collapse during the treatment of the empyema. The pleural infection may be either a pure or a mixed infection. In the pure tuberculous infections, the ideal treatment is aspiration with air replacement. In the mixed infections, an airtight drainage is preferable. If either of these types of drainage fail, an extrapleural thoracoplasty should be done. It is particularly important to do the thoracoplasty early in the cases of active pulmonary infection.

It is an amazing fact that the medical profession today is still in the throes of disagreement regarding the proper method of treatment. In 1903, at the Eighth German Medical Congress, a symposium was held on the treatment of empyema. It was the consensus of opinion at the meeting that aspiration should be abandoned and that the choice of therapy rested between interrib drainage with siphonage and rib resection. Today we find the advocates of aspiration on the rebound to popularity while other enthusiasts are divided between the open operation and a closed type of tube drainage. In my opinion, one of the great mistakes in our attitude toward empyema has been a fanatical desire to adhere to a single type of treatment. The most adequate drainage is obtained by an open operation, but it should never be done until nature has stabilized the structures of the mediastinum by the formation of firm adhesions. We can presume that adhesions are formed if the pus obtained on the diagnostic tap is thick in consistency.

In performing thoracentesis, the puncture should be accurately planned by a study of the roentgen film. In empyema totalis, the ideal site is the 8th or 9th interspace in the midscapular line. The area to be punctured should be anesthetized and a large needle used for the tap. A fine needle has been responsible for more negative taps than has been suspected. If much fluid is to be aspirated, a large 50 c.c. syringe may be used or better yet a negative pressure bottle.

In inserting a tube for closed drainage, it may be well to resect a rib and insert the tube through the subperiosteal space. This applies particularly to children, as the interspaces are often quite narrow.

The open operation is a well-standardized procedure and needs no further comment.

FREDERICK J. PEARSON, *Reporter*.

PHILADELPHIA

Jan. 22, 1936

The meeting consisted of a symposium on medical economics. The "Evaluation of Medical Economics" was presided by Joseph W. Post, chairman of the Commission on Medical Economics of the Philadelphia County Medical Society. This session being the fifth annual meeting devoted to a consideration of this subject the essayist proceeded to outline the basis upon which his commission is working to attain its objective. He cited the difficulties attending the treatment of the problems involved in the term "medical economics" by

the same measures that might apply to economics in general since the former was concerned so largely with service while the latter had to do with the laws affecting production, distribution, and consumption of wealth or the material means of satisfying human desires.

Illness and its management will not harmonize with these laws. Anyone endeavoring to gauge the value of personal service, particularly that of medical care, by any of the methods used in economics in general, is confronted with the inseparability of producer and service in contradistinction to the relation between the producer and his material commodities. These latter are standardized.

The speaker stressed the necessity of the analyst recognizing the part played by tradition, custom, morals, and ethics in the evaluation of medical economics. The scientific advances in medicine have been entirely different as compared with the technical inventions in industry. In medicine they have increased the ability of the physician to render better service and not greater quantity and have led to the progressive elimination of his field by eradicating disease.

In industry the program has tended to minimize the human worker's skill by competition with machinery and concentrated effort directed towards greater use of the products created. The advances have aided industry materially to carry out its program.

The physician's stock in trade is of a distinctly personal nature and his armamentarium cannot be separated from his personality. Morbidity and mortality statistics should be the gauge of his value, not the cost in dollars and cents. Losses to the human being from sickness and death are irreparable; losses in materials or material wealth can be replaced. Mass treatment, as advocated by some, of human illness only tends to lessen the quality of the service and the influence upon morbidity and mortality statistics is disastrous.

While a physician must be dependent upon certain technicians, to be of value the interpretation of their findings remains with him. To carry out the refinements of modern diagnosis and therapy, hospitals are a necessity in many cases. Such institutions and the appliances they provide must be looked upon as merely supplementary. The individual variability of both patient and physician makes the placing of medical fees upon a class price basis, whether by prepayment voluntary or compulsory schemes, most impracticable if the welfare of the patient is the primary consideration in the handling of the sick.

The low-income groups furnish one of the greatest problems in the consideration of medical economics and, until these individuals are given the opportunity to earn more money, the problem is an economic one, not a medical one.

The distinction between adequate and accepted medical care was also considered by the speaker. Legislation or plans which seek to provide medical care under insurance or other methods will not compel people to seek it, since the average American values things according to what he pays for them. It has been shown that such schemes cannot provide better or more adequate care by evading the normal cost for it and diverting the funds available to routine unconnected with the medical care itself. The free choice of physicians on the part of the public—a constitutional right—will render state or socialized medicine unsuccessful even though it should obtain legislative sanction.

Medical nostrums and their specious advertising, forbidden by our code of ethics, constitute a dangerous

form of competition, dangerous alike to patients as well as to physicians, and doubtless would develop into a source of competition with state medicine, but it is significant that none of the foundations interested in public welfare have shown any interest in curtailing such activities. There is, however, a growing tendency on the part of these foundations to seek co-operation with the medical profession in considering adequate medical care for those in the low-income groups, especially in the so-called "catastrophic" illnesses. The financing of credit was discussed, and the accomplishments of the Philadelphia County Society were noted. Emphasis was laid upon the necessity of further study and vigilance on the part of this and all other medical societies in order that the members may be informed of the character of the problems that confront them.

"Medical Economics from the Standpoint of the State Society" was presented by Francis F. Borzell, chairman of the Committee on Medical Economics of The Medical Society of the State of Pennsylvania. This speaker stated that the state committee is a fact-finding and advisory committee with powers limited only to these 2 fields. This he regards as the proper approach to the study of medical economics from a state-wide standpoint. The expansion of the scope of medical services had brought with it some economic problems which were amplified by the crash of the economic structure of our entire social body, upon which ground-work various schemes for the socializing of medicine have been erected.

Local economic problems are less complex than those that confront the state as a whole, yet legislative action is state-wide and the state society is concerned with coordinating the activities of the counties. The state committee on medical economics must participate in a close liaison between the legislative and public relations activities of the state society. Co-operation with the national body is likewise imperative since legislative success of any of the socialized medicine schemes in one state will doubtless be quickly followed by similar performances in other states.

These conditions should make the organized profession assume a critical, analytical attitude not only towards extraneous forces but towards ourselves. Our own weakness must be determined and our forces and influences for right and justice must be strengthened. Our studies in medical economics convince us that the best defense of our professional status lies in the direction of a wider, more dynamic participation in the social life of the people on the part of the organized medical profession than ever before.

A year of opportunity to study the problems of our own state has shown the speaker that the future prosperity of the medical profession lies in the county society by reason of the direct contact that exists between the profession and the public. The unit of the county society is obviously the individual physician. It, therefore, behooves him to be thoroughly conversant with the problems of present-day medical economics. However, the problem is no longer one of gathering statistics or passing resolutions by state or national bodies. It means that organized medicine through the active participation of its membership must become articulate and must be a dynamic factor in each community. Unfortunately there are still more than half of our county societies whose activities and studies in medical economics are confined to a pitifully small handful of zealous brethren who are seriously concerned. This condition is gradually improving.

A state-wide study is being made in specific phases of medical economics, which includes lay workers in professional fields, hospital economics, industrial and contract practice, health department co-operation, and nursing service. These were described in detail, and group hospitalization was discussed at length.

The State Society insists that certain specific requirements must be met by each individual contract covering group hospitalization insurance. These are as follows: (1) The contracts must have the approval of the county medical society; (2) they must permit free choice of physician; (3) they should include a clear majority and, in most instances, all of the approved hospitals in the community; (4) they may not include any medical services as benefits. Further the state committee urges that no county society adopt any plan until it has been approved by the Committee on Medical Economics and the legislative bodies of the State Society, namely, the House of Delegates and ad interim the Board of Trustees.

"Changes Confronting Modern Medicine" was read by Rosco G. Leland, Chicago, director of the Bureau of Medical Economics of the American Medical Association. The speaker reviewed the background prepared by his department for the study of the economic problems of the medical profession. In addition he pointed out the dangers that confronted medical organizations in accepting too hastily some of the various plans presented for the medical care of the indigent and those in the lower income brackets. The principles enunciated by the A. M. A. in this connection were reiterated.

Feb. 12, 1936

SYMPOSIUM ON KIDNEY DISEASE

"The Clinician Looks at Chronic Glomerular Nephritis" was the subject of the paper presented by James A. O'Hare, of the Peter Bent Brigham Hospital, of Boston, Mass. He introduced his topic by a reference to the tremendous legacy left by Richard Bright at his death in 1858, in the matter of clinical and pathologic observations of the group of diseases which collectively bear his name. It was he who first pointed out the relationship between albuminuria, edema, and pathologic kidneys. His contributions regarding other affections are also worth while, but in vascular disease and nephritis his observations were particularly outstanding. His thoughts on hypertension and obstruction in the circulation were pertinent to renal disease. While he never examined the fundus of an eye, he wrote concerning the visual changes in his nephritic patients. He described many toxic manifestations of uremia, even the "milky serum." This observation was recorded in his original monograph. Renal function tests were devised by him. The toxins in the urea secreted in the urine as well as the increase of urea-like substances in the blood of nephritis were described by him.

The greatest additions to our knowledge of this subject have been within the last 30 years. A new phase has developed largely through simple methods of studying the blood and urea chemistry, the use of blood-pressure instruments, the more frequent employment of the electric ophthalmoscope, and a better understanding of chemistry among physicians. In regard to the etiology of glomerular nephritis, this essayist subscribes to the thought that the *Streptococcus hemolyticus* plays a most important part.

The character of the onset of this affection seems to determine its course. The patient in whom the on-

set is insidious is more likely to develop chronicity than one whose condition is traceable to an acute infection. The severity of the acute stage is no indication of the possibility of a chronic state. The patient with the most acute and severe nephritis may completely recover. An acute nephritis that does not disappear within a few weeks gives promise of becoming a chronic type.

Concerning albuminuria, patients with acute glomerular nephritis who show albumin rarely recover. The duration of the disease may be prolonged over a long period. The amount of the albumin is no index of the seriousness of the disease. Syphilitic nephritics may put out many grams of albumin in the course of 24 hours. A large loss of albumin, day by day, week by week, however, is likely to lead to serious consequences. The subacute nephritic who appears to be doing very well but is showing a large trace of albumin may slip into a definitely nephritic stage with marked edema and other characteristic symptoms.

Early recognition of these cases points to the need of a compensatory high protein diet. In the ordinary forms of nephrosis, albuminuria is believed by many to be serum albumin. In nephrosis, probably in the nephritic stage of glomerular nephritis, it has been shown that it is not serum albumin but an entirely different protein, which may explain the difficulty attending attempts at building up the protein loss in these cases. The speaker presented all the data concerning the protein loss in cases of nephritis, and the indications and observations regarding its replacement through diet.

The relation between hypertension and arteriosclerosis, and the condition under discussion were emphasized. The problem of cardiovascular renal balance is a very delicate one, especially in the later stages. The essayist in referring to the ophthalmoscopic evidences of kidney disease would like to discard the term renal retinitis, and accepts the understanding long since adopted by ophthalmologists that the lesions observed in the eyegrounds are essentially vascular and vary according to the different stages of the same vascular disease. The duration of life after the recognition of these retinal signs is from 3.6 months to 23 months.

"Nephrosis" was presented by Dana W. Atchley, Columbia University, Presbyterian Hospital, New York, who differentiated the terms nephritis and nephrosis. Nephritis includes a vast array of pathologic conditions, while nephrosis is a clinical state characterized by edema, serum albumin, albuminuria, and additional findings. In nephrosis there are no especially characteristic anatomic changes in the kidneys or elsewhere. The patient's face is swollen, and his hands and ankles are edematous. The serum is milky and a careful analysis will show a deficiency of albumin. General edema should always suggest an assumption of profound changes in the serum protein content. Reference also was made to the increase of edema subsequent to the ingestion of chloride of iron and sodium chloride.

The nephritic syndrome has 2 important therapeutic approaches—sodium restriction and increased protein diet. Detailed instructions were given regarding these 2 factors. The prognosis of amyloid nephrosis is usually bad. Glomerular nephrosis progresses.

The speaker also discussed genuine or lipid nephrosis which he regards as a distinct entity and not merely a stage of glomerular nephritis. More than one-half the patients who are subject to this affection recover. The treatment of true nephrosis resolves itself into a variety of attempts to dispel the edema, together with measures to combat the nephrotic syndrome and the general meas-

ures of good hygiene and appropriate attention to the nutrition.

George M. Piersol, in discussing these papers, emphasized the important rôle of infection in the production of acute glomerular nephritis. The mildest and most insignificant upper respiratory tract infection may be responsible for the most acute glomerular nephritis. Those caring for patients with acute infections should be ever on the alert for renal complications. The most severe cases of glomerular nephritis may get well without damage but, on the other hand, many of the insignificant cases with persistent albuminuria with indifferent treatment will develop into chronic glomerular nephritis. The insidious character of these is worthy of especial mention. Focal infections are important etiologic factors. Functional kidney tests are to be regarded merely as adjuncts in determining diagnosis. The most reliable is the urea clearance test. Blood urea nitrogen determination was discussed at length. The study of the individual patient, especially as regards the circulation, should determine the treatment. His reference to the decline of the routine use of diuretics is worthy of mention.

Feb. 19, 1936

SPECIAL MEETING

"The Immunization Following Electrocoagulation of the Tonsils" was presented by Seth A. Brumm, who stated that the essence of the misunderstanding in this connection seems to be involved in a lack of appreciation of what is meant by "quality current" as used in electrocoagulation. There appears to be just as much difference in current quality as there is between black and white. In addition to a familiarity with current quality, the worker in this field must be conversant with anatomy, the character of the disease present in a given case, the technic of current application, receptivity and biologic resistance of the patient, and the current acceptance of the different tissues within the field of operation. While the removal of the tonsils by the ordinary surgical means has the great factor of time in its favor, electrocoagulation lists the following advantages: Complete extirpation of the tonsils (60 per cent); retains normal structures intact; absence of pain; freedom from the hazard of surgical pneumonia; no hemorrhage; no incapacitation; patient is ambulatory; no untoward reactions or complications; it provides surgical intervention commensurate with the biologic acceptance of the patient; partial sterilization of the tonsils in situ; immediate stimulation of metabolism; and immediate production of a vaccine.

The absence of shock and pain is facilitated by first spraying the throat with novocaine, followed by several applications of a solution of equal parts by volume of flaky cocaine and carbolic acid crystals. This solution produces rapid anesthesia, acts as a deodorant, prevents secondary infection, and by its disclosing properties is especially beneficial during the end-treatments. Hemorrhage is prevented by the use of the proper current and by the care exercised in its application. Care should be taken to avoid piercing the tonsil with the electrode. In cases where ordinary surgery is impracticable or contraindicated such as hyperthyroidism, tuberculosis, auricular fibrillation, etc., the dose of the current to be utilized may be brought to the patient's tolerance, and the procedure repeated if necessary.

The special point of Dr. Brumm's paper was his insistence upon the immediate production of a vaccine by this method of therapy. The beneficial reactions that

follow are convincing to his mind that such is the case. Such beneficial results follow at once and the reactions are less with subsequent coagulations. They have been especially well marked in cases of tuberculosis. These conclusions are based upon clinical observations and deductions and not upon laboratory control, but they have a feasible character. His contention appears to be that the bacteria in the tonsils, by their electrocoagulation, have in themselves become vaccines—autogenous vaccines as it were—and that these already implanted in a receptive area have the same effect upon the organism as any other vaccine. The proposition is intriguing and justifies further careful investigation. Several slides were shown.

"Changes in the Globulin Picture Following Electrocoagulation of Tonsils" was the topic of the paper read by S. DeWitt Ludlum. The essayist referred casually to a number of observations concerning the variability of individuals in their reaction to toxins and antitoxins. He then passed on to a consideration of the specimens of blood examined in Dr. Brumm's patients before and after electrocoagulation of the tonsils. Those that had high globulins were hyperreactive. Of the 20 cases examined, patients who were of the nonreactive or low-globulin type came up after the electrocoagulation. The hyperreactive cases came down. So there must be a middle point to which the physiologic, colloidal chemical state of the blood must approach—either come up or come down—to be in a normal condition. The possibility of obtaining information in this field with animals is a question.

"Phrenic Exeresis in the Treatment of Pulmonary Tuberculosis" was read by Frederick D. Stubbs. Recent developments in the field of thoracic surgery have brought to the armamentarium of the modern phthisiologist an array of operative procedures which in otherwise hopeless cases of pulmonary tuberculosis have resulted in clinical cures. Artificial pneumothorax, phrenic paralysis, and thoracoplasty have demonstrated their worth in providing additional lung rest and facilitating closure, but less than 2 per cent of the patients in this country are being given the advantage of this form of therapy, although a conservative estimate would indicate that from 35 to 50 per cent of such patients would respond favorably to these procedures. This is due for the most part to the almost universal lack of adequate sanatorium and clinical facilities for providing such treatment. In urban centers the statistics show a greater use of these treatments.

Operations on the phrenic nerve for the purpose of paralyzing the diaphragm have been in use extensively in the treatment of pulmonary tuberculosis only during the last decade. The operation was first proposed by Steurtz for this purpose in 1911. In 1922, Felix and Goetz by demonstrating the importance of eliminating the influence of the accessory phrenic nerves at the same time placed the operation upon a more satisfactory basis and by so doing created the operation now known as "phrenic exeresis." It is not a panacea but a valuable adjunct to other accepted modes of therapy. Its first result is the immediate cessation of the diaphragm's pumping action. After operation it assumes an exaggerated expiratory position. Later the muscle atrophies. Basal lesions of any type are apt to benefit from the obvious rest afforded by the cessation of diaphragmatic movement as well as by the facilitation of drainage. As the muscle atrophies it gradually attains a higher level. Clinical improvement follows. The paralyzed diaphragm exerts no pressure but is actually pulled higher into the thorax by the retraction

of the diseased lung. Drainage is facilitated and fibrosis of the diseased lung is fostered. Fixing of the diaphragm by the wearing of abdominal compression belts also has been attended by gratifying results.

There are some contraindications for the operation of phrenic exeresis. Caseous pneumonic tuberculosis in its acute phase is seldom benefited and a more rapid and extensive excavation may be precipitated. It is also dangerous in cases with large subpleural cavities which are fixed to the chest wall by adhesions. Thick-walled, rigid cavities are not apt to be benefited. The associated presence of severe emphysema, cardiac disease of major grade, or advanced intestinal tuberculosis are contraindications that apply to all forms of collapse therapy. The complications resulting from the operation are for the most part associated with its actual performance. An accurate knowledge of surgical anatomy is essential to its best results. A number of slides were shown illustrating the field of operation, the technic, and the structural changes following the operation.

"A Conservative Method of Treatment for Tic Douloureux" was presented by Benjamin Ulanski. This was preceded by a review of the various forms of treatment in use with comments upon their limitations. The speaker referred to some gratifying results he had obtained in the use of the rapid-alternating electric current in some 40 cases. Five patients were shown.

"Ear Drums and Their Interpretation" was the title of a demonstration of a series of plaster models, painted in correct colors, illustrating the progressive stages of acute ear infections and the treatment of each, prepared by James H. Mendel. This was a display that must be seen to be appreciated. Notes without the illustrations would be completely devitalized.

Feb. 26, 1936

The stated meeting constituted a Symposium on Diabetes.

"Immunity in Diabetes" was presented by Russell Richardson. When diabetes and infection occur concurrently in the same patient only a single entity is present, although the outcome may be favorable or unfavorable. Two problems present themselves, however—the effect of the infection with its toxemia upon the diabetes, and the effect of the diabetes and its disturbed metabolism upon the infection.

Infection, itself, presents 2 problems. There are the factors by which the body is enabled to kill the invading bacteria and protect its own tissues from damage, and there are the factors inherent in the characteristics of the bacteria by which they may continue their invasion regardless of the attempts of the body to destroy them. Among the weapons of the body to be used against the bacteria are certain immune substances such as agglutinins and bacterins, phagocytosis, and perhaps mechanical segregation of the bacteria in certain tissues. Other immune bodies such as antitoxin, as well as the normal metabolic state of the body cells, act to protect these cells from the damaging effects of the bacterial toxins. The bacteria, on the other hand, possess invasive properties such as rapid growth and exotoxins which have been shown to inhibit the phagocytic activities of the body cells. Also their protective properties are represented by such characteristics as the fatty capsules which so well protect the tubercle bacillus. It therefore becomes probable that the diabetic patient may develop an infection with perhaps one or more of these protective mechanisms in a defective state. Low-

ering of the ability to form antibodies and the abnormal condition of metabolism provide a loss in the patient's resistance to the invading bacteria. The details whereby this was effected were described by the essayist. Slides were shown to illustrate this.

From animal experimentation it has been determined that hyperglycemia in itself has no damaging influence on the ability of the body either to kill invading bacteria or to lower the protective power of the cells against bacterial toxins. On the contrary when glucose is given intravenously (in laboratory animals) before the bacteremia there is a definite increase in the duration of life. As there is no coincident decrease in the number of the bacteria in the blood it would seem that the ability of the tissues to withstand the toxic effect of the infection has been increased. Experiments in this field show that it is necessary to look further than the hyperglycemia alone for the influence of diabetes on infection. Depancreatized animals show a high mortality and rapid death after injections of *Staphylococcus aureus*, while control animals not depancreatized showed longer life and lower mortality; 85 per cent of the control animals showed increase in blood sugar after bacterial injections. Attempts made to determine the effect of the toxin on the insulin of the body have not yielded conclusive results. Diphtheria toxin has a selective action on glycogen formation in the body from certain sources. His conclusions embrace the acknowledgment of the great complexity of this subject. The treatment recommended for diabetes aims to maintain the nutrition of the body at a normal level and by so doing sustains its protective capacity. He regards it safe not to keep the blood sugar down to an entirely normal level.

"Trauma in Relation to Diabetes" was presented by Elliott P. Joslin, Harvard Medical School. Diabetes is so universal that its discovery in an accident case should not be regarded as strange. It is estimated that one-fourth of the population of the United States are carriers of diabetes. There are at least 500,000 diabetics in the United States; 2,500,000 either have had it or will have it before they die. In 1934 one death in 50 was due to diabetes in New York State. In greater New York City among the Jewish women between ages 35 and 64, one death in 23 was attributed to diabetes. Trauma is practically never the primary cause of diabetes. Injury of the pancreas leading to diabetes would be so destructive that it is inconceivable that a person so injured would live. Of the 14,000 persons who have consulted the essayist for glycosuria, not one was directly caused by trauma so far as could be determined. It is recognized, however, that frequently immediately following trauma an existing diabetes becomes apparent. Trauma may excite a latent tendency to diabetes. Severe trauma may not necessarily make a diabetic worse. Trauma may advance the date of onset of diabetes. A potential diabetic at a certain age will develop the disease. If he be fat, the age will be earlier than otherwise. If he exercises the precautions now understood and recommended, his security is relatively assured, but should he have some accident that interferes with these precautionary measures diabetes will develop, and it becomes difficult to say that the accident did not hasten the appearance of the diabetes.

Duration of life is affected by the onset of diabetes, or of trauma in the course of diabetes. In diabetes the effects of trauma are more frequently manifested than in those not the subject of diabetes. In the speaker's experience one-sixth of the number of his patients had lesions of the legs. Physicians are becoming

more conscious of the association of trauma and diabetes, largely because of the extension of life among these patients. Analysis of cases shows that the diabetic today is living an average of 11 years instead of 4 or 5 as formerly. The age hazard has consequently increased and old people are more liable to trauma. While the diabetic of today does not age so fast, he is old for his years and is more susceptible and less resistant to the effects of trauma. Of the several contributing factors, age at onset, obesity, heredity, and lack of exercise must be mentioned.

The essayist carefully defined diabetes and described its diagnosis and differential diagnosis, in order that it could be distinguished from ordinary glycosuria which appears independent of it. Hyperglycemia is essential for the diagnosis. Glycosuria, however, may temporarily be present with diabetes.

In considering trauma as a cause of diabetes, the trauma must interfere with the secretion of the islands of Langerhans of the pancreas. The occurrence of such trauma has never been proved. In the aged with poor circulation trauma may cause the loss of a limb or even the loss of life but its etiologic relation to diabetes is remote. There was no epidemic of diabetes during or after the World War although every type of trauma was observed at that time. Actually the diabetes death rate fell during this period. In considering a possible relationship between trauma and diabetes, the shorter the interval between the trauma and the appearance of the diabetes the better chance one has for assuming an association.

Cases were cited in which such a relationship was claimed. He did admit the possibility that indirectly trauma may be proved to have some effect. If trauma of the nervous system can lower the functional activity of the islands of Langerhans it might cause diabetes even without obvious organic lesions of the pancreas. The World War experience fails to show any greater incidence of diabetes in brain injuries than those not so affected. The essayist also discounts the influence of psychic trauma in the etiology of diabetes. The glycosuria from head injuries should not be confused with diabetes. On the other hand, trauma in the course of diabetes is very common. Careful recording of all data in connection with injury cases as well as diabetics will go far towards preventing confusion as well as safeguarding the truth. In discussion, Joseph T. Beardwood referred to the compensation aspect of diabetes and cited cases in which injury was assigned as the cause of diabetes, but in which careful investigation revealed other more conclusive etiologic factors.

"Pituitary, Adrenal, and Pancreatic Diabetes" was presented by Cyril N. H. Long. In the course of this paper the essayist pointed out that alterations in the activity of the pituitary and adrenal glands may contribute in some cases to the development of the diabetic condition. This, he stated, does not afford a justification for surgical attack upon the pituitary and adrenal glands. Death has followed operation upon the adrenals in diabetic patients without any relief from the diabetes, except the fatal termination. This paper was amply illustrated by slides and a motion picture film.

SAMUEL HORTON BROWN, Reporter.

SCHUYLKILL

Feb. 11, 1936

The meeting was held at the Pottsville Hospital with 50 members present.

At the same time the newly organized Woman's Auxiliary had their monthly session at the Necho-Allan Hotel, in Pottsville.

A clinic on dermatology was conducted by Vaughn C. Garner, assistant professor of dermatology, University of Pennsylvania Medical School. Ten or 12 difficult cases were diagnosed, explained, and treatment outlined.

A stenographic report was made of all the cases, and any one wishing to have a copy of the notes of the afternoon's clinic can secure it by application to the hospital.

Lewis H. Bacon showed motion pictures of his recent trip to Europe. Dinner was served at the hospital.

The following officers were elected at the January meeting: President, Guy A. Robinhold, Ashland Hospital; first vice-president, James B. Heller, Pottsville; second vice-president, J. Russell Sweeney, Tamaqua; treasurer, Charles V. Hogan, Pottsville; and secretary, Arthur B. Fleming, Tamaqua.

ARTHUR B. FLEMING, *Secretary*.

WARREN

Feb. 17, 1936

The meeting was held with 22 members and 3 guests present. Our former secretary, Hamblen B. Eaton, was elected an honorary member.

Frederick G. Templeton gave a summary of "Essential Arterial Hypertension." He explained the term by saying it was not a hypertension due to any specific cause, but that the pathology for the most part is that of a sclerosis in the coronary vessels, and in the kidneys, with final hypertrophy and dilatation of the heart. Many cases have no definite symptoms other than the hypertension; others show all degrees of cardiac decompensation. Very few die from apoplexy or coronary disease; 1 out of 3 has congestive heart failure as a final symptom.

Dr. Templeton warned against making the patient blood pressure-conscious. This was also stressed in the discussion. Mental and physical rest are important in the treatment. Treatment should not be directed to the reduction of pressure. Many patients are more uncomfortable with reduced pressure than with abnormally high pressure, especially if it is reduced abruptly. Diet plays but little part in the treatment except that 4 small meals are more advisable than 3 large ones. The quantity of food should be restricted rather than any particular kind. Digitalis is to be given only if symptoms of decompensation are present, and then digitalization should be rapid.

B. Franklin Royer was present, representing the State Society in its program on child health examinations and made an earnest plea in favor of continuing the work. He said it would benefit the physician by giving him experience and it would prevent lay organizations from entering upon a field which should be in control of organized medicine.

Thirty members of the society have enrolled in a course of graduate instruction which, with the co-operation of teachers at the University of Pittsburgh School of Medicine, will be held at the State Hospital on successive Thursdays. The first one was held Feb. 13, when William H. Guy demonstrated for 5 hours various forms of skin disease as presented by inmates of the State Hospital.

MICHAEL V. BALL, *Reporter*.

WASHINGTON

Jan. 15, 1936

The meeting was held at the George Washington Hotel at 6 p. m., at which time 100 physicians and their wives had dinner. The dinner was the occasion for the retiring president, Milton F. Manning, to introduce the new officers for the coming year.

The officers for 1936 are: President, John R. Maxwell; first vice-president, William R. Dickson; second vice-president, George W. Ramsey; secretary-treasurer, Albert E. Thompson.

The speaker of the evening was Judge Howard W. Hughes, of the local county court, who gave an address on "The Physician in Court." He mentioned the importance of the doctor holding conferences before the trial with the attorney on his side so as to acquaint the lawyer properly with the medical aspects in the case. Before testifying the physician should not be backward about giving his qualifications, which should include all of his medical training, specialties if any, all of his associations with hospitals, and the number of years in practice, because the jury must be impressed with the value of the doctor's testimony. The testimony should be given in as simple and understandable language as possible.

Walter F. Donaldson, secretary of the State Medical Society, spoke on "Medical Economics." Dr. Donaldson made the statement that his father was the first councilor of this, the eleventh district, and that the present holder of that position, Laurie D. Sargent, was the second.

Wm. Stewart Fulton, of the Wheeling, W. Va., Clinic, gave an account of his hunting trip in Mexico.

Feb. 12, 1936

The monthly meeting was held at the Washington Hospital, Washington, 8:15 p. m. The program of the meeting was supplied by Audley O. Hindman, representative to the State Legislature, from Burgettstown, Pa., and also a member of the Washington County Medical Society. His topic was "Legislative Aspects of Medicine." He gave a very intimate picture of the proceedings related to bills introduced by chiroprodists and chiropractors, compensation insurance bills, the Epstein bill, and health insurance. He stressed the persistence with which the Chiropractic Bill, under different phases and modifications, was introduced 3 times in the past legislative session. Pennsylvania has 200 legalized chiropractors who practice under the authority of drugless therapy. In contrast to that the state has 2000 outlawed chiropractors who practice their profession. All of these support a very active lobby, whose presence is apparent like a swarm of bees. No legislative measure is attended with more propaganda than is the Chiropractic Bill.

Our state has 10,000 legalized doctors, and yet in spite of their superiority in number and influence, they take less interest in protecting their profession. Each year it is getting more difficult to combat the cultists. Each doctor should appoint himself a committee of one to keep in constant contact with his local legislative representative, and also never lose an opportunity to impress the laity with the injustice of the demands of the cultists as compared with the educational standards of Pennsylvania.

At one time the Chiropractic Bill was introduced agreeing to the admission standard of one year of college and a chiropractic course of 4 years. This all

seemed very good on the surface, but there was no established recognized school of chiropractic that was prepared to comply with the medical standard of education, and for that reason it was voted down. Efforts are made to kill in committee their attempts at legislation.

Dr. Hindman states that it is of inestimable value to have members of the medical profession as representatives in the legislature, because of the heterogeneous group of occupations that comprise the personnel of the legislature. The few physicians who are members are intellectual and honorable representatives.

SAMUEL A. RUBEN, *Reporter*.

WESTMORELAND

Feb. 13, 1936

Arthur B. Thomas, of Pittsburgh, read a paper on "Clinical Evaluation of Circulatory Changes." He said that the most satisfactory treatment depended on a careful estimation of the prognosis. To show his point of view he answered the following questions:

What is meant by hypertension? How is it produced? Does it cause symptoms? If not, how can the symptoms and signs found in association with it be explained? What is the prognostic significance of such phenomena? What does prognosis have to do with treatment?

To the layman hypertension vaguely means high blood pressure with all that this portends in the way of strokes, heart failure, and early death. To the physician on the other hand it may mean—first, the systolic or diastolic blood pressure or both as measured over the brachial artery; second, the synonym for the disease of which it is one of the signs; third, the synonym for the symptom complex with which it is often associated. In relation to the mechanics of circulation hypertension may be explained according to the laws of physics while in other respects it is bound up with the properties of living tissue. In general blood pressure is increased in response to increased vascular resistance whatever the cause may be. Consequently, in the present discussion this is what is meant by arterial hypertension, and it is produced by a contracting left ventricle.

Does hypertension cause symptoms? No! not necessarily, for if hypertension alone were responsible for headache, dizziness, nocturia and the like, then we should expect to find these symptoms invariably present in patients with high blood pressure. However, we know that patients may live with blood pressure of 200 to 300 millimeters and still have no symptoms. On the other hand symptoms may appear and disappear while the blood pressure remains relatively constant and high. Therefore, it seems reasonable to conclude that the symptoms noted are not due to high blood pressure.

The symptoms and signs found in patients with hypertensive cardiovascular disease are mostly due to pathologic physiology in one or more organs of the body, and the impaired function in turn is the result of chemical and structural changes thought to be incident to local circulatory insufficiency. Thus the circulation may be abruptly interfered with or gradually become inadequate. For example, a patient may have arterial hypertension for many years and remain constantly at work, enjoying good health; suddenly he is seized with a pain in the chest, gasps for breath, falls unconscious to the floor and dies. At necropsy an occluded coronary is found and a large part of the heart

muscle has been deprived of blood. On the other hand there is a gradual interference with the circulation, the patient is troubled for many years with dizzy spells, headache, nocturia, and the like. Gradually he suffers from impaired vision, the urine contains albumin and casts, and he dies of renal failure.

In this way may be classified and grouped all the symptoms and signs found in hypertension, showing that they arise from impaired function in one or more parts of the body. In no sense can they be directly related to high blood pressure. Therefore it seems reasonable to assume that the manifestations in this disease become clinically evident only when a large vessel is suddenly occluded or ruptured or, when due to the more gradual failure of the capillary circulation, a slow destruction of important organs such as the kidneys or brain results, with those symptoms appearing which generally occur when these organs are called upon to work beyond their reduced capacity.

Treatment will depend to a considerable extent upon the ability to estimate functional capacity of the various organs and to predict the amount of impairment likely to occur within given time limits. Dr. Thomas further stated that he believed the etiologic agent is not known and that no therapeutic agent now employed can or does influence the course or nature of the underlying process. Unlike cancer, which in its early stages can often be interrupted and cured, hypertensive cardiovascular disease is never cured, and there is no evidence to show that its progress can be interrupted.

If this point of view is accepted, the objectives to be attained by the usual treatment then become clear: First, to increase the functional capacity of vital organs by measures designed to obtain for them a maximum physiologic rest; and second, functional improvement having been thereby obtained, to regulate a patient's habits so that the amount of work which these organs are called upon to do will be somewhat less than their new capacity.

SPURGEON S. DEVAUX, *Reporter*.

YORK

Feb. 19, 1936

The meeting was held at the Professional Building, York, with President Clyde L. Seitz, in the chair.

Thomas P. Sprunt, associate professor of medicine, University of Maryland Medical School, Baltimore, gave an address on "Calcium Metabolism and the Parathyroids."

Dr. Sprunt said in part: There is a new conception of bone; viz., living, vital tissue with active metabolism. Calcium is necessary as a bone constituent, being useful for bone formation and in the body fluids. Blood stream concentration of calcium is 10 mg. per cent, whereas phosphorus is 3.5 mg. per cent; calcium has to do with clotting of the blood, with the neuromuscular apparatus, and with acid-base equilibrium in bone.

Calcium has 2 main regulatory mechanisms: (1) That of parathyroid-bone relationship; bone is a storehouse of calcium in the body, and parathyroids govern the release of calcium from bone into the blood stream by regulating and releasing; the mechanism is prompt. (2) Ingestion and absorption of calcium from food through the gastro-intestinal tract with its disposal and excretion through the bowel and bladder; this throws vitamin D into the blood stream; this function is slow or of long term.

Ingestion and excretion: In rickets there is insuffi-

cient absorption; in osteomalacia the calcium drain is already excessive. The parathyroids are related to these diseases. Sprue, celiac disease, and others may have calcium washed out as a calcium soap. When calcium of the blood is below 7 mg. per cent, tetany may result; in tetany, hyperplasia of the parathyroids may be present. When phosphorus goes up, calcium goes down in the blood stream. Parathyroids compensate in an orderly fashion and act as regulators of calcium. In hyperparathyroidism this compensation may be an overcompensation; 80 per cent of these patients present embryonic rests which grow and become active; viz., a true hyperfunction of the parathyroid gland; in hypoparathyroidism, or removal, low blood calcium and tetany result. Tetany is hyperirritability of the neuromuscular apparatus (spasms). In hyperparathyroidism a high calcium causes hypotonicity, weakness, general inaptitude, and malaise; it may be mild and vague. Overactivity of the parathyroid glands causes overactivity of the bones with greater deposition of calcium by osteoblasts in bones.

Early stages of resorption of calcium from bone may not be detected even by roentgen ray, as the cancellous portion of bone goes first, then all bones with osteoporosis; later fibrosis, hemorrhage, and cysts by activity of osteoclasts (osteoclastic tumor or giant cell tumor of bone, epulis, or cysts of the jaws) all come in hyperparathyroidism. In von Recklinghausen's disease (osteitis fibrosa cystica) there is easy production of fractures in the end stages, resulting in a bowed and bedridden patient.

There is a marked increase in excretion of calcium through the urinary tract resulting in marked negative calcium balance, polyuria, or little or no urine. If the urine is decreased or there is a superimposed infection, the result may be kidney stones; deposition may even take place in collecting tubules of the kidneys.

In renal caleuli, routine blood chemistry will often show a calcium metabolic disorder; a fair proportion of kidney stones are due to hyperparathyroidism.

The course of the disease is chronic; some symptoms may be present several years; symptoms as well as blood examinations may fluctuate. Hypophosphaturia and hypercalcemia are present in some cases.

Treatment consists of large doses of calcium and viosterol. Roentgen ray has been tried to decrease calcium in the blood with some favorable results. Surgical exploration and removal is the method of choice. The speaker explained the position of the parathyroid glands and poles and stated that, in four-fifths of the cases, a tumor is present; the tumor may be entirely separate from the thyroid gland so that the surgeon must recognize tumor and normal parathyroid gland. He stated: Do not remove normal glands, for tumors may also be present and tetany result. Three-fourths of the parathyroid tissue can be removed when hyperplastic; a small sinus results. Blood calcium falls rapidly, phosphorus rises rapidly, and the bone condition changes at once, with deposits of calcium, marked oliguria, or anuria resulting. When there is osteoporosis, the system shows an avidity for calcium, and tetany may result as calcium cannot form fast enough; if the patient can be carried over the third to fifth operative day, the parathyroid glands seem to take care of the regulatory function. There is no reabsorption of kidney stones or change in renal disease.

In the differential diagnosis, bear in mind senile osteoporosis, osteomalacia, osteitis deformans (Paget's disease), metastatic carcinoma, multiple myeloma, marble bone disease, and osteogenesis imperfecta.

In summary, osteitis fibrosa cystica is one manifestation of overactivity of the parathyroid glands and calcium deposits in the kidneys, lungs, heart, and stomach wall (where acid excretions occur). In other diseases parathyroids may play a secondary activating part only.

In discussion, Joseph Markel, Manchester, asked what effect the injection of magnesium had in the shift of the blood calcium ion on Paget's disease. George E. Holtzapfel, York, asked what the nonunion of fractures had to do with calcium metabolism. Edward W. Stick, Hanover, asked what relation to calcium metabolism did the hypophysis gland bear in acromegaly; if oliguria is high, does pitressin hold it in abeyance? Julius H. Comroe, York, asked how long postoperatively such patients are treated (in nonmalignant cases). Jeremiah F. Lutz, York, asked if the speaker had any experience with calcium metabolism and the parathyroids in calcium balance in the disease known as calcinosis universalis. W. Frank Gemmill, York, discussed Paget's disease, the number of cases in the York Hospital files, the type of treatment, and also cysts of the jaw and their treatment. P. Jaisohn (guest), York, asked if one or more gland is involved when the parathyroids are involved. Dr. Markel, Manchester, asked why chronic ulcerative colitis improves under calcium and parathormone therapy.

Dr. Sprunt (in closing): Magnesium in osteoporosis may help; calcium does not help in nonunion of fractures; parathyroids are the only glands which affect bones; pitressin is from the posterior lobe and affects only diuresis; treatment postoperatively is an individual affair. Treat until the blood calcium is $8\frac{1}{2}$ to 9 mg. per cent, then continue to give calcium chloride or calcium gluconate or lactate in milk. Calcinosis universalis has nothing to do with parathyroid disease. Local cysts or giant cell tumors have nothing to do with parathyroid disease if a single tumor, but solitary cysts of bone may be multiple; one gland alone is involved with a tumor, but all parathyroid tissue is hyperplastic; in chronic ulcerative colitis, parathormone and calcium therapy helps the general condition of the patient but probably does not help the colitis.

PAUL M. REIGART, *Reporter*.

SECOND COUNCILOR DISTRICT COMMISSION MEETING

The councilor commission meeting of the Second Councilor District was held at the Valley Forge Hotel, Norristown, on Feb. 19. Every county in the district was represented, 25 officers and committee chairmen being present.

The meeting began with a luncheon at 12:30, after which Trustee and Councilor Edgar S. Buyers announced that the program would be limited to 3 papers of 20 minutes each, in order that sufficient time would remain for free discussion, and for the discussion of problems any member wished to present.

Dr. Robert M. Alexander, of Reading, chairman, Emergency Child Health Committee, Berks County Medical Society, read a paper on "The Emergency Child Health Committee and its Work, and How It May Lead to Periodic Health Examinations in Adults."

In presenting Dr. Alexander, the Councilor stated that recently the Board of Trustees of the State Society had given Dr. Samuel McC. Hamill, chairman of the State Emergency Child Health Committee, a vote of confidence, and encouraged him to broaden the work of his committee. This work in the various county societies has taught the physicians to make careful

physical examinations, and has greatly encouraged the necessity for regular periodic health examinations in adults. The work has further opened up a way for preventive medicine, which after all will be one of the most important duties of the younger physicians in the future. If the work of the committee has done nothing more than improve the health and shown the necessity for various corrections for children in the rural districts it has accomplished a noble purpose and is well worth-while.

Dr. Alexander approached the subject from the standpoint of the periodic health examination, and from the standpoint of the Emergency Child Health Committee. He referred to a paper read by Dr. Hamill at the 1935 Session of the State Society at Harrisburg, which was published in the January, 1936, issue of the PENNSYLVANIA MEDICAL JOURNAL. Dr. Hamill stressed the following: Health movements should be directed by the organized medical profession rather than by lay people. He reports that in $2\frac{1}{2}$ years 90,500 children have had complete health examinations, and there were 3763 re-examinations. He states in addition to this that the mothers of many thousands more have been taught how to provide, on their limited allowances, foods best calculated to build up the undernourished and to protect the healthy child.

As a result of these 90,500 health examinations, 247,000 defects have been reported and 74,500 corrections have been made.

The real secret in this general improvement in health and the decrease of malnutrition among the relief children is not only due to food but also the removal of physical defects and the stimulating benefit of cod liver oil.

Many hundreds of lay individuals have been participating in the work of the committees. They have learned to understand the meaning and value of health examinations. They have witnessed the discovery of removable defects in children who were presumably healthy. They have come to recognize the benefit to be derived not only from the early recognition but also from the correction of these defects. They have gained a better understanding of the medical profession, recognizing the value of its leadership as well as the value of co-ordinated effort in the working together of the medical profession, the various lay and professional organizations, and lay individuals. The information they have gained regarding the hygiene and diet of children will stand them in good stead in the supervision of the health of their own children.

What has the physician gained? He has the consciousness of having rendered a high service to suffering children in a time of crisis; he has established for himself a position of leadership in health matters; he has greatly broadened his contact with the people of the community and has been given opportunity to demonstrate to them his interest in the protection of the health of children as well as his capacity to render a high-class protective service.

The work of the Emergency Child Health Committee has done much to open the way for physicians to urge periodic health examinations of their patients. What, then, is a periodic health examination and how shall we approach the physician and the lay population to promote its acceptance and use?

Periodic health examinations were recommended in Great Britain more than 50 years ago. In 1900 Dr. George M. Gould, of Philadelphia, read a paper before the A. M. A., in which he stressed the need for periodic health examination as we do today. He said that all

good medicine tends inevitably to become preventive medicine, and all good physicians labor to stop disease before it occurs.

Our State Society Committee on Periodic Health Examinations conceived the idea in 1933 that the medical schools were not laying enough stress upon the periodic health examinations; accordingly, at the meeting of the State Society in Philadelphia the committee met with the deans or other representatives of all of the medical schools in Pennsylvania. Some of the schools permitted members of the committee to give one or 2 lectures in their school the following year. Others agreed to give more thought to the subject. Most of the deans felt that any medical man should be able to perform a periodic health examination without any special training. The committee considers that there is a definite technic or procedure to be practiced in performing health examinations which students should know before they graduate, so that they will be health examination-conscious when they begin practice.

The committee is making some reels of motion pictures for the purpose of interesting both the laity and physicians in this subject.

The Emergency Child Health Committee, with hundreds of physicians performing health examinations upon children, will give an impetus to periodic health examining generally that could have been secured in no other way.

The chairman, in presenting Dr. Francis F. Borzell, of Philadelphia, chairman of the Committee on Economics of the State Society, stated that the trustees of the State Society always have one important problem constantly before them. The greatest problem more recently has been socialized medicine, a problem that, while by no means dead, is at least dormant at the present time. That does not mean that it will not awaken with more force than ever in the near future. Now comes the problem of hospital insurance plans undertaken in various parts of the State. If any of these plans come before your county medical society, please obtain a ruling from Dr. Borzell's committee before accepting or rejecting them. Your Board of Trustees is insistent upon this.

Dr. Borzell read an address on "Hospital Insurance Plans." He said in part:

A note of warning is timely. In spite of the fact that we are possibly enjoying a "breathing spell" in our fight against socialized medicine, the opposing forces are still at work. It is becoming more and more apparent that the strength of organized medicine lies in the solidarity of the county medical society. The county society *must* do its part to help itself. The state and national bodies cannot perform the functions of the county society. An excellent example is evident in the efforts to establish group hospitalization. The county society *must* be prepared

1. To determine whether such plans are needed in the county.

2. To safeguard the ethical interests of the local doctors, as well as the patients.

The county society cannot expect the State Society to step into the county and assume certain detailed duties and prerogatives of the county society. It can only act in an advisory capacity and lend the strength of its moral support. The State Society, through its constituted committees, is prepared to review every proposed plan submitted.

There can be no serious objection to hospitalization insurance per se from the standpoint of the interests

of the medical profession, as long as the contracts do not include medical services as part of the benefits. There is, nevertheless, always the danger that such plans may prove to be but entering wedges for more ambitious schemes of medical service insurance.

It is a question whether the public will long be interested in an insurance plan which offers a maximum of about \$105 per year benefits in the form of hospital bed and board for an annual premium of \$10. In fact, from an insurance standpoint, this is a high premium. The question naturally arises also whether Mr. Public will care to continue to contribute to the obstetric expenses of his neighbor. Is it not perfectly feasible to suggest that, through the family physician, the public could be taught to budget for a small fund, similar to a Christmas Fund, for the establishment of a reserve for hospitalization contingencies? A fund of one or two hundred dollars, once established, would relieve many families of the distress occasioned by emergency medical contingencies.

In presenting Mr. Roy Jansen, publicity director of the State Society, and author of "Your Health" column, the chairman said that it had been the desire of the Board of Trustees for many years to bring about a more friendly relationship between the medical profession and the press. Some papers are friendly, others are passive, and some are really hostile. Mr. Jansen is now interviewing the various papers in the Second Councilor District with the idea of obtaining a closer contact.

Mr. Jansen read a paper on "The Medical Society and the Press." He said that medical men do not curry intimate association with newspaper men—not for publication, at any rate. He has tried earnestly to make the acquaintance and use for mutual benefit the association of a medical man—any medical man he could find—but it was useless. Time and again his city editor would say, "Get in touch with a doctor, somebody who knows what this subject is all about, and get a statement from him." It was a waste of effort, for he could not find a doctor who would discuss medical matters with him for fear he would do one of two things, or both—misquote him or use his name in print.

Ethics! To his mind that has been a much over-emphasized word.

It seemed to him, during his active years as a newspaper writer, that it would have been far better ethics for the medical profession to come out from that room marked "Private" and clarify the atmosphere on certain topics, rather than have permitted him to exercise his imagination on a subject he was not qualified to impart to the reading public.

Take the case of the tooth pain killer recently announced by a Columbia University scientist. Reputable dentists did not care to discuss the subject with the newspapers, but the quack dentists did wish to discuss the subject, and even permitted their names and photographs to be used in the newspapers. Before the dental societies decided to issue a formal statement regarding the new anesthetic, the quack dentists had reaped a harvest.

Newspapers are not the natural enemies of the medical profession. They are in business for profit, and must sell a commodity attractive to the public.

The public is interested in matters related to health, and the newspapers are going to satisfy this desire. Practically every newspaper publishes a health column, together with most news stories that have anything to do with health.

Newspaper editors are not unmindful of the vast

benefit doctors are to mankind, but it is an accepted hoodoo around newspaper offices that doctors are so inculcated with the ethics of their profession that if and when a story having to do with doctors or their work comes along there is no use calling a doctor—dress the story up for the public and shoot it.

Some time ago the essayist was engaged by The Medical Society of the State of Pennsylvania to write and get into the newspapers publicity favorable to the doctors regarding socialized medicine. He sent out a considerable number of releases which did or did not get into print. There were a number of newspaper editors who picked up the releases and said, "Oh, oh! So, at this late date, the doctors are coming to us for help. Well, we can return the favor." And the copy went with tons of other propaganda—into the wastebasket.

Feeling that the medical profession had not paved the way for a very affectionate welcome by the newspaper editors a plan was devised that would give the newspapers something they would use regularly and make an established feature of in their papers.

There are about 20 well-established health columns syndicated throughout the country and most newspapers publish one of them. Names of eminent doctors adorn these columns. They all read more or less alike—written by doctors, with the doctor's sober, deliberate, and academic style.

The essayist suggested a health column with a dash of something different in it. A cheery breezy column might be acceptable to the newspapers, especially as they would receive it gratis, a gift from The Medical Society of the State of Pennsylvania, through the various component county medical societies.

The "Your Health" column is now being published regularly in about 125 newspapers, dailies and weeklies, in Pennsylvania. Editors handling this copy daily or with each weekly issue get a definitely friendly feeling for the county medical society through whose auspices they receive the material.

There are many editors who still feel antagonistic toward the doctors, or who feel that the releases from the Medical Society are in the nature of an advertisement for the medical profession and should be paid for. You cannot do much with editors who feel this way, and no argument is going to soothe matters.

In Bucks County the editor of the *Bristol Courier* said that he and a group of about 25 editors in the district had decided not to publish any more advertisements for the doctors, cutting out, too, the weekly health letters from the Pennsylvania Department of Health. A half hour later, while talking with the editor of the *Delaware Valley Advance* at Langhorne, but a few miles from Bristol, he said that he had been noticing the Health Column in Montgomery County papers and wondered how he could obtain it for publication in his own paper.

Similar conditions prevail in other counties and the only thing to do with the unfriendly editor is to let him cool off, and the good will that results from these releases in other communities may spread over and take him in.

In Allegheny County there is as satisfactory an arrangement as any place in the state, with newspapers and county medical society working co-operatively for their mutual benefit.

Through the county society's Committee on Public Relations, a spokesman for the medical society has been assigned and he is known to every editor in the city as the man who will speak for the medical pro-

fession in that community. More favorable and correct health information is published in the newspapers of Allegheny County due to this arrangement than in any other community of its size in the country.

The city editors of each of the Pittsburgh papers said that at last they have a working scheme with the doctors and that problems arising in the news are explained or worked out with the doctor designated by the county medical society to answer the question. He is always ready to talk to the editors and reporters and always has an answer or will obtain one very shortly.

This plan should be worked out in every county and large urban community in the state.

Pick a member of the county society who has a lively interest in news and who can meet and be on friendly terms with the editors of the newspapers. Much misunderstanding can be obviated with such a partnership. It should be much easier in those cities where the Health Column is being published, but the gesture to the newspaper of offering to co-operate is a token of good will and in time breeds satisfactory contacts.

Delaware and Chester counties are completely covered by daily papers with large circulations, and Montgomery County, thanks to the insistence of Dr. Buyers, leads all counties in the number of newspapers carrying the Health Column regularly.

Dr. William H. Mayer, chairman of the Committee on Public Relations of your State Society, is cognizant of the ever-growing need for a more workable and intimate understanding between the medical profession and the laity. He is now working on a plan, providing the various county societies individually desire it, to co-ordinate the efforts of the various groups interested in public health.

The plan calls for local health councils to be under the leadership of the county medical societies, which,

in effect, would prevent much of the present overlapping of effort and give the medical societies that leadership which they naturally should take in health matters. The manner in which certain county medical societies in this district are now functioning as directing forces in such health and welfare councils could well be used as models for every other county in the state.

Few organizations exist today that do not have their direct contact with newspapers through publicity writers. The medical profession must discard some antiquated ideas regarding newspaper publicity. There is nothing unethical in putting the public right on medical affairs. There is nothing unethical in getting just as much publicity for the doctors as possible.

The Health Column, now running regularly for exactly 3 years in more than 125 newspapers, has gotten off to a good start. Personal contact between a member of the county society and the newspaper editors in his community will engender more good will.

The co-ordination of all social effort with a public health aspect under county medical society leadership, with its accompanying lay educational campaigns, will complete a trilogy of goodwill that should remove much of the misunderstanding and suspicion that has characterized the feeling between newspapers and doctors for these many years.

Let the newspapers get acquainted with the doctors. They want to know what the doctors are doing, because what doctors are doing medically is news—vital, important, hope-inspiring news. The public is so avid for information about what the doctors are doing for the alleviation of suffering that they snap at any morsel of medical news. Certainly there should be nothing unethical in telling the ethical side of a noble profession.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

The weather, good or bad, is always a reliable standby when other inspiration is not at hand, but this time it is news since, to paraphrase the classics, "Neither rain nor snow nor the elements have stayed the auxiliaries in their accustomed tasks." Delaware County rose supreme to a coating of ice and snow. Lebanon talked in terms of snow plows and tractors. Lancaster takes bad weather all in her stride, and Northampton and Schuylkill find nothing in threatening floods to mar the serenity of their programs.

It has been a rare pleasure to travel snow-clad hills and valleys, to be greeted by women whose enthusiasm triumphs over the elements and whose hospitality is not a whit chilled by the winter winds.

One is impressed more and more as the coun-

ties unfold their agenda, with their apparent diversity of expression and at the same time their uniform fidelity to the basic principles of auxiliary work. Self-expression in groups, as in individuals, makes for progress.

By the gracious hand of the editor, we have in a large measure "the freedom of the press." We are deeply grateful for this expression of confidence in auxiliary work.

It seems possible, however, that the doctor-husband does not always share his JOURNAL with the fireside group at home. A tactful word to him will secure you a chance to read what the counties are doing and what your county in particular has done.

This letter goes to you on the eve of a trip westward to Fayette, Somerset, and Washington counties. MRS. W. BURRILL ODENATT.

NECROLOGY

The memory of the departed members of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania should be kept in our hearts and in the annals of our organization.

In order to pay this tribute to our departed and to keep an accurate record of their passing, it is essential to have the co-operation of county presidents, and to this end it is earnestly requested that such names, with dates and residences, be sent promptly to the chairman, Mrs. Clarence R. Phillips, 924 N. Third St., Harrisburg, Pa.

The following is a record of those who have died since the convention in October, 1935:

Oct. 22, 1935, Mrs. Hugh M. Moorhead, Erie.
Oct. 24, 1935, Mrs. Wm. L. S. Landes, York.
Oct., 1935, Mrs. W. Gilbert Tillman, Easton.
Jan. 1, 1936, Mrs. Grace G. Kempter, Chambersburg.
Jan. 5, 1936, Mrs. Geo. R. Shenk, Reading.
Jan., 1936, Mrs. Leroy H. Cheesman, Pittsburgh.
Feb., 1936, Mrs. R. J. Phillips, Pittsburgh.

DISTRICT COUNCILOR REPORTS

Oct. 1, 1935-Feb. 1, 1936

February brings to us the task, or shall I say pleasure, of compiling reports for our board meeting. We can truly be amazed at the accomplishments of the past months, and I am sure we have all displayed a marvelous trait, that of "stick-to-it-iveness," as our reports indicate. Observe the postage stamp; its usefulness depends upon its ability to stick to one thing until it gets there.

The result of the first 4 months inspires us to great efforts, with the basis laid for greater achievements for the remaining months.

I requested all district councilors, also the presidents of the county auxiliaries, to keep me informed of their activities and their monthly programs.

DISTRICT NO. 1—MRS. WILMER KRUSEN

In December the auxiliary reported the distribution of 16 Christmas baskets to very needy physicians' widows and families, 130 nightingales to female tuberculosis wards in the Philadelphia General Hospital, also 50 toys. It sponsored 4 card parties, a dance, and a white elephant sale. It gave \$300 to the Aid Association.

DISTRICT NO. 2—MRS. JOHN A. FARRELL

Berks, Bucks, Chester, Delaware, Montgomery, and Schuylkill counties were all very active.

Chester County arranged 24 meetings at which physicians spoke before different clubs and associations. Twelve hundred persons were reached. The *Hygeia* chairman was authorized to order 15 subscriptions for 9 months, to be placed in schools and public libraries. At the November meeting Dr. Joseph Scattergood spoke on "Socialized Medicine," and Dr. Samuel J. Dickey on "Hygiene." On Jan. 21 they had book reviews of "Fifty Years a Surgeon," and "Rats, Lice, and History," presented by Mrs. Henry Pleasants, Jr., and Mrs. Howard Mellor, respectively. On Jan. 29, a husbands' party was held with Dr. and Mrs. W. Burrill Odenatt, and Dr. and Mrs. Wilmer Krusen, of Philadelphia, as guests.

Berks County has aimed to accomplish much during this year. Fifty-three subscriptions to *Hygeia* were

secured during December. They broadcast 15 minutes every Tuesday over station WEEU, Reading. One of the broadcasts so impressed an outsider that the auxiliary member who gave the broadcast was asked to give it to an outside group. The January meeting was an open meeting on "Public Health," with Dr. Fred-eric H. Leavitt, of Philadelphia, and Judge Schaeffer as speakers. The auxiliary was accepted by the Federation of Women's Clubs as an allied member.

Montgomery County.—In November the auxiliary had a tureen luncheon at the home of Mrs. Edgar S. Buyers, and Mrs. W. Burrill Odenatt, State Auxiliary president, outlined the plans for the year's work. Mrs. Milton F. Percival brought greetings from the Philadelphia County Auxiliary. Twenty-five dollars was realized from a welfare card party. In January an open meeting was held; on Feb. 7 a dinner dance was given. Fifty new garments and 20 used garments were given to the county welfare association.

Delaware County.—The auxiliary held 2 card parties and a bond demonstration for the Medical Benevolence Fund. Auxiliary members were guests of the Medical Society at their annual dinner meeting. *Hygeia* has been placed in 4 rural schools. Ten dollars was contributed to the Chester Hospital to redecorate the solarium. A talk on Oberammergau was given by Miss Oliver and a book review of *Asylum* was given by Mrs. Whitney.

Schuylkill County.—Much philanthropic work was accomplished in December through various hospitals in the county.

DISTRICT NO. 3—MRS. HARRY M. KRAEMER

Counties: Carbon, Monroe, Lackawanna, Lehigh, Northampton, Wayne, Luzerne, and Pike.

Mrs. Kraemer, the new district councilor, has been contacting the presidents of the counties of the district. Carbon County does not seem to have a president. Lackawanna, Lehigh, and Luzerne are active along all lines of auxiliary work. In Lackawanna at their November meeting a play was presented for the Pennsylvania Association for the Blind. In December the auxiliary entertained at luncheon honoring Mrs. W. Burrill Odenatt.

DISTRICT NO. 4—MRS. HENRY F. HUNT

Counties: Bradford, Montour, Susquehanna, Snyder, Sullivan, and Wyoming.

The Woman's Auxiliary to the Montour County Medical Society is still active, holding meetings quarterly.

DISTRICT NO. 5—MRS. S. DANA SUTLIFF

Counties: Adams, Fulton, Lebanon, Dauphin, Franklin, Lancaster, and York.

The Dauphin County Auxiliary has educational programs and does much philanthropic work. On Nov. 19 the members of the Academy of Medicine entertained the wives at a dinner-dance at the Penn Harris Hotel. A Christmas party, with husbands as guests, was held at the Civic Club. A one-act play, "Woman of Character," was presented. A Health Institute afternoon is planned for May 21 at the Academy of Medicine.

The York County Auxiliary is contemplating a health institute this year. It is promoting and encouraging the sale of *Hygeia*. At the January meeting Dr. Louis S. Weaver spoke on "Cancer and Tumor Clinics in Hospitals."

DISTRICT No. 6—MRS. WILLIAM G. FALCONER

No report.

DISTRICT No. 7—MRS. JOHN H. PAGE

Counties: Lycoming, Tioga, Clinton, Potter, and Elk-Cameron.

All auxiliaries in this district are active. The Lycoming County Auxiliary's annual dance in December was the most successful ever sponsored by the auxiliary. They will completely furnish the Urological Department at the Williamsport Hospital with necessary surgical instruments.

The other counties report their work along health, *Hygeia*, and the Medical Benevolence Fund.

DISTRICT No. 8—MRS. JAMES D. STARK

Counties: Mercer, Erie, Warren, Crawford, and McKean.

The Erie County Auxiliary distributed many baskets of food and sewing to the needy. They helped with the Red Cross roll call. Plays and books were reviewed by auxiliary members. On Feb. 12 the annual benefit party was held to purchase glasses for the needy children.

The Warren County Auxiliary during October and November sewed for the hospital and the Children's Home. A series of lectures was given in February by a member of the American Social Hygiene Society.

DISTRICT No. 9—MRS. WILLIAM H. NIX

Counties: Armstrong, Butler, Clarion, Jefferson, and Venango.

The Indiana County Auxiliary has been active with meetings, both social and educational. Plans have been formed for a historical meeting, and the auxiliary will also have a meeting with the Parent-Teachers' Association.

DISTRICT No. 10—MRS. HOWARD A. POWER

Counties: Allegheny, Beaver, Lawrence, and Westmoreland.

The Allegheny County Auxiliary held a hobby meeting in the fall with Mrs. W. Burrill Odenatt as guest of honor. A lecture was given by Mr. Elmer Steffan on "Special Education for Talented Children." In December they gave their annual big party for the Medical Benevolence Fund. They had an afternoon "with Shakespeare." Mrs. David B. Ludwig presented her choice exhibit of old surgical instruments. The auxiliary celebrated its tenth anniversary in January. It has an increase of 41 new members. The sum of \$276.44 was realized for the Medical Benevolence Fund.

The Westmoreland County Auxiliary held a public health meeting, and Mrs. Augustus S. Kech was the guest speaker for November. Fifty-four dollars was paid out for glasses. The annual dinner-dance was held in December.

DISTRICT No. 11—MRS. STANLEY A. E. BRALLIER

Counties: Bedford, Cambria, Fayette, Greene, Somerset, and Washington.

The Cambria and Washington county auxiliaries are active in educational and philanthropic work. Greene County has a very instructive program for the year from February to January.

Respectfully submitted,

(MRS. D. W.) GRACE E. THOMAS,
Chairman, District Councilors.

COUNTY AUXILIARY REPORTS

Berks.—The Christmas meeting of the auxiliary was set aside as a reception for new and prospective members. The program was presented by the Music and Dramatic Division of the Mt. Penn Woman's Club. "The Vision of Scrooge," was effectively portrayed in music and pantomime.

Following the custom of the last 5 years the January meeting was an open meeting on public health, to which 3 representatives from each woman's club were invited; 85 were present to hear addresses delivered by Dr. Frederic H. Leavitt, of Philadelphia, on "Why Do Our Children Behave That Way," and Judge Paul N. Schaeffer, of Reading, on "Delinquent Children."

At the February meeting, Mrs. Edward Meter, foods editor of *The Forecast*, spoke on "Feeding Our Doctors."

At the March meeting, Mr. Stanley Fink, principal of the Tyson-Schoener School, discussed "Leisure Time." The recreation center at Mr. Fink's school, supervised by the Recreation Department and supported by the Junior League of Reading, is a unique experiment which has attracted nation-wide attention. There was a musical program.

A new venture was the First Annual Medical Ball held at the Wyomissing Club, Feb. 8, which was a formal dinner-dance.

Having covered half the year's work the president summarized the work of the auxiliary to date: Establishment of a Speakers' Bureau under the auspices of the Medical Society; affiliation with the Federation of Women's Clubs and Allied Organizations; 11 new members; 63 subscriptions to *Hygeia*; broadcasts on health topics every Tuesday, 10:15-10:30 a.m., over station WEEU, Reading; participation in the work of the Emergency Child Health Committee under the auspices of the Medical Society; survey of members to ascertain their affiliation with other organizations, showing 129 members represented in 36 organizations and holding 23 official positions.

Dauphin.—Health Institute Day will be observed again in April. A number of speakers will take part in the program, one of whom will be Dr. Alexander H. Colwell, president of The Medical Society of the State of Pennsylvania. This is being sponsored by the Committee on Public Relations.

The auxiliary voted to have *Hygeia* placed in the Harrisburg Public Library, the Y. M. C. A., and the libraries of the senior high schools. At the last meeting of the auxiliary the program was devoted to Drama, at which time a number of current plays were reviewed.

The annual meeting will be held in May, when election of officers will take place and the chairmen of standing committees will be appointed.

Delaware.—On Feb. 13, Mrs. W. Burrill Odenatt and Mrs. Augustus S. Kech were guests of the auxiliary at an evening meeting held at the Chester Hospital. Mrs. Kech was the speaker of the evening.

Preceding the meeting, Mrs. Odenatt, Mrs. Kech, and the members of the executive board were entertained at dinner by Mrs. Walter A. Landry.

Mrs. Francis G. Miller and Mrs. John B. Klopp entertained the executive board at luncheon preceding the regular board meeting of the month. At this meeting plans were made for the next card party for the benefit of the Medical Benevolence Fund.

A party was held on Feb. 28, at the home of Mrs. C. Irvin Stiteler.

Franklin.—At the annual meeting held Feb. 18, at the Trinity Lutheran Church in Greencastle, the doctors were the guests of honor. Dr. Albert Linsey Roland, head master of the Shippensburg State Teachers College, gave an address on "The Physician and Society."

Indiana.—The meeting of the auxiliary was held Feb. 13, in the form of a Valentine card party, at the College Inn at 8 p. m. The party was a benefit affair to assist the Medical Benevolence Fund.

Lackawanna.—The meeting of the auxiliary was held Jan. 14 in the Chamber of Commerce building. Dr. Frederick J. Bishop gave an address.

At the meeting of the auxiliary held Feb. 11, at the Chamber of Commerce building, Dr. John J. Brennan, chairman of the legislative committee of the Lackawanna County Medical Society, gave a talk on the Medical Benevolence Fund and current legislation of interest to the medical profession.

On Mar. 9, the auxiliary entertained more than 100 members at a reception and tea for new members in the Chamber of Commerce building. Mrs. I. C. Rosenthal spoke on "Personality and Charm." A musical program was featured.

The entertainment committee is planning a card party to be held Apr. 14, in the Platt-Woolworth auditorium. The proceeds will be donated to the Medical Benevolence Fund.

Lehigh.—At the February meeting, with 125 members and guests present, the auxiliary entertained at a Washington bridge-tea.

Luzerne.—On Feb. 13, the auxiliary held their second annual dance in the Hotel Sterling ballroom; there were several hundred guests. The proceeds will serve as a contribution toward the Medical Benevolence Fund.

Lycoming.—The meeting of the auxiliary was held Jan. 10, at the Woman's Club, preceded by the usual luncheon. The president, Mrs. James H. Burrows, presided. According to the new by-laws adopted in October by the State Auxiliary, new officers will be elected in May instead of January as has been the custom. The present officers, therefore, will continue to serve for an additional 6 months.

The net receipts of the Christmas card party and dance were \$700. It was decided to donate \$400 to the Williamsport Hospital, to be used for equipment in the Urological Department.

Mrs. Roy L. Simon was elected to membership.

Philadelphia.—At the meeting of the auxiliary held Feb. 11, Dr. George E. Pfahler spoke on the progress made in the fight against cancer through the use of roentgen ray. His address was illustrated with lantern slides, which may be procured for the use of any group. The public relations committee of the various auxiliaries should bear this in mind.

Dr. Horace Pettit, of the Bacteriological Department of the University of Pennsylvania, spoke of the expedition made by Dr. Pepper and himself to Alaska in the spring of 1935 to procure specimens from the victims of the influenza epidemic raging there. Most of this journey was made by airplane and extended to Point Barrow. Through the aid of United Airways this journey was made successfully and in record time. Films taken on the trip were shown.

At the business meeting it was announced that the Medical Welfare Committee had thus far in the season

cleared over \$1000 for the benefits they sponsor. This is exclusive of dues and special gifts.

At the meeting of Mar. 10, Dr. Francis F. Borzell spoke on "Medical Economics." A musical program was presented, and an illustrated address, "Throughout the Seasons in the Flower Garden," was given by Mr. J. Stafford Mattis. As it was the eleventh birthday of the auxiliary, an especially dainty tea was served.

Schuylkill.—The auxiliary, with 30 members present, gave a luncheon at the Necho-Allan Hotel, Feb. 11, in honor of Mrs. W. Burrill Odenatt of Philadelphia, the president of the State Auxiliary. Dr. Arthur B. Fleming, secretary of the Medical Society, Dr. Charles V. Hogan, treasurer, and Dr. Wm. V. Dzurck, chairman of the Advisory Board, were also honor guests.

Washington.—The annual joint meeting of the auxiliary and the Medical Society was held at the George Washington Hotel, Jan. 15, with a dinner. A musical program followed. Judge Howard W. Hughes spoke on "Medical Testimony," and Dr. Wm. S. Fulton, of Wheeling, W. Va., gave an account of his travels in Mexico.

York.—The meeting of the auxiliary was held in the Professional Building, Feb. 6. Mrs. Pius A. Noll, the president, presided. Mrs. Parker N. Wentz was elected chairman of the Welfare Committee. It was planned to raise money at card parties given by members of the auxiliary to purchase the *Hygeia* magazine for distribution in the schools in York County. A collection was taken, the proceeds of which were given to the Welfare Committee to be used for the children in the children's ward at the York Hospital. Bridge was played and refreshments were served.

The auxiliary held a luncheon on Mar. 5, in connection with the monthly meeting at the Y. W. C. A., which was attended by 24 members. A business meeting was held in the Professional Building, in charge of Mrs. Pius A. Noll, president. Plans were made for the health institute meeting to be held in April. A collection was taken again, the proceeds to be used for the children in the children's ward at the York Hospital. There were games and prizes.

Medical News

Births

TO DR. AND MRS. JAMES R. NEALON, of Plymouth, a daughter, Feb. 13.

TO DR. AND MRS. MEYER ZELTZER, of Erie, a daughter, Ellen Carol, Feb. 7.

TO DR. AND MRS. JOSEPH P. DOUGHERTY, of Ashley (Luzerne Co.), a daughter, Feb. 8.

TO DR. AND MRS. WILLIAM H. MAYER, of Pittsburgh, a daughter, Ann Virginia, Feb. 29.

TO DR. NATHAN M. AND ESTHER COHEN SMOLENS, of Philadelphia, a daughter, Faith Smolens, Feb. 10.

Engagements

MISS JEAN RICHARDSON FAGANS, of Douglaston, L. I., and Dr. E. Raymond Ambler, of Jenkintown.

MISS DOROTHY LEE EVANS, daughter of Dr. Alexander R. Evans, of Ardmore, and Dr. Todd O. Munson, of Boston.

MISS DOROTHY BATLEY, of Camp Hill, and Dr. William D. Frazier, son of Dr. Charles Harrison Frazier, of Philadelphia.

MISS SARAH JANET GARNER, daughter of Dr. and Mrs. Albert Rowland Garner, of Norristown, and Mr. Joseph Scheidt Rambo, also of Norristown.

Marriages

MISS LUCY J. ERWIN, of Bethlehem, to Dr. Floyd W. Shafer, of Gilbert, Feb. 19.

MISS DOROTHY E. STONEBACK to Dr. Lloyd A. Stahl, both of Allentown, Jan. 1.

MISS MARY L. BRENNAN, of Carbondale, to Dr. Paul Clark McAndrew, of Scranton, Jan. 18.

MISS ELIZABETH RUTAN, of Sewickley, to Dr. Hubert A. Royster, Jr., of Philadelphia, Jan. 17.

MISS MARGUERITE HANLEY, daughter of Dr. and Mrs. Paul D. Hanley, of Pottstown, to Ralph C. Gifford, of Louisville, Ky., Feb. 15.

Deaths

HOWARD S. ALLEN, Delta (York Co.); University of Maryland School of Medicine, 1931; aged 29; died Mar. 7. He was a member of his county and State medical societies and the A. M. A.

GEORGE W. BEANE, McKees Rocks; Bellevue Hospital Medical College, New York, 1883; aged 74; died in Lake Worth, Florida, Mar. 5. Dr. Beane was a member of his county and State medical societies and the A. M. A.

GEORGE HENRY BICKLEY, Philadelphia; Hahnemann Medical College of Philadelphia, 1894; aged 63; died Mar. 19, from heart disease. Dr. Bickley served on the medical staff of the Hahnemann Hospital for more than 40 years. He is survived by his widow, a brother, and a sister.

HOMER C. BLOUGH, Johnstown; University of Maryland School of Medicine, 1926; aged 43; died Feb. 22. He was a member of his county and State medical societies and a Fellow of the A. M. A.

JOSEPH S. COHEN, Easton; University of Pennsylvania School of Medicine, 1907; aged 51; died Mar. 2. Dr. Cohen was a member of his county and State medical societies and a Fellow of the A. M. A.

EDWARD A. CRUEGER, Philadelphia; Medico-Chirurgical College of Philadelphia, 1894; aged 74; died Mar. 12, from heart disease. Dr. Crueger is survived by his wife and 2 children. He was a member of his county and State medical societies and a Fellow of the A. M. A.

EDWIN EARECKSON, Philadelphia; Jefferson Medical College, 1882; aged 79; died Feb. 27, following a lengthy illness. Dr. Eareckson was born in Baltimore and was graduated from the Philadelphia public schools, and the Boys' Central High School.

HARRY S. FALK, Erie; Medico-Chirurgical College of Philadelphia, 1899; aged 62; died Feb. 12. He was a member of his county and State medical societies and a Fellow of the A. M. A.

HERBERT HERSHEY FARNSLER, Harrisburg; Medico-Chirurgical College, Philadelphia, 1904; aged 57; died at the Harrisburg Hospital, Mar. 14. Dr. Farnsler was a member of the American Academy of Ophthalmology and Oto-Laryngology, the American Board of Oto-Laryngology, and the American College of Surgeons. He was also a member of his county and State medical societies and a Fellow of the A. M. A. He is survived by his widow, a son, and a daughter.

JULIA J. GRIFFITH, wife of Dr. J. P. Crozer Griffith, of Philadelphia, died Feb. 26.

RAYMOND E. HEACOCK, Bethlehem; Eclectic Medical College, Cincinnati, O., 1911; aged 48; died Mar. 6,

from heart disease. Dr. Heacock was a native of Easton, Pa., receiving his early education in the Easton public schools, also Stoudt's Valley rural school, and Lerch's preparatory school in Easton. Upon graduation he spent one year teaching school at Raubsville and then entered medical school. He practiced in Tatamy for nearly a year and then moved to Bethlehem, taking over the practice of the late Dr. Samuel J. T. Ritter. Shortly following his graduation from medical school he married the late Miss Matye Willis of Georgetown, Ky., who died in 1915. On Jan. 1, 1917, he married Miss Dorothy E. Jewell, who with 3 children survive. In addition there is a son by the first marriage who is now in the Army Medical Corps at Carlisle, Pa. Dr. Heacock was a member of his county and State medical societies and the A. M. A.

G. STEWART KIRBY, Mauch Chunk; Hahnemann Medical College, Philadelphia, 1882; aged 76; died Mar. 7. Dr. Kirby began practice at Pleasantville, N. J., and from there he went to Mauch Chunk to succeed his brother, the late Dr. Russell R. Kirby.

HORACE LANDES KULP, Philadelphia; Hahnemann Medical College of Philadelphia, 1895; aged 63; died suddenly Mar. 22, from a stroke. Two sisters survive.

GEORGE S. MARBARGER, New Ringgold (Schuylkill Co.); Jefferson Medical College, 1894; aged 75; died at his home of a stroke, Mar. 7.

Dr. Marbarger was a son of the late Elizabeth Seltzer and Peter Marbarger, and was born and raised in the vicinity of New Ringgold. He received his preliminary education in the Keystone State Teachers College, Kutztown, from which institution he was graduated in 1887. He entered practice in New Ringgold where he remained throughout his life.

He served as a member of the school board, was borough registrar for 27 years, and served as secretary of the town council for many years, which post he held at the time of his death. He was practicing until the day he sustained the stroke.

His first wife, the former Miss Amanda Gottschall, died a number of years ago. A widow, a son, a brother, and a sister survive.

He was a member of his county and State medical societies and the A. M. A.

HENRY IRVING MARSDEN, Somerset; Medico-Chirurgical College of Philadelphia, 1898; aged 64; died Dec. 20, 1935. He was a member of his county and State medical societies and the A. M. A.

MRS. MARTHA JANE MEYER, of Grove City, aged 81, died recently. She was the widow of Dr. L. G. Meyer, who practiced in Pardoe until his death 46 years ago. Five children survive.

HENRY J. E. NEWNAM, Carbondale; Jefferson Medical College, 1905; aged 53; died from pneumonia, Mar. 14, at St. Joseph's Hospital, Carbondale. Dr. Newnam served as surgeon with the Reading Company for 17 years and resigned from that position last year to be medical advisor to the State Hospital for the Criminal Insane at Fairview. He is survived by his wife.

CHARLES B. SCHOALES, Philadelphia; University of Pennsylvania Medical School, 1886; aged 71; died Mar. 17, after a brief illness. Dr. Schoales' father was Dr. Joseph D. Schoales, a major in the medical corps of the Union Army during the Civil War. His grandfather was Dr. Marcus A. Schoales, and his grandfather on his mother's side was Rear Admiral Charles Boardman of the United States Navy. Dr. Schoales was a member of his county and State medical societies and a Fellow of the A. M. A. He was unmarried and is survived by 3 sisters.

ALICE M. SEABROOK, Beverly Hills, Calif.; Woman's Medical College of Philadelphia, 1895; aged 73; died at Beverly Hills, Calif., Mar. 10. Dr. Seabrook was active in Philadelphia for a number of years, and was

formerly superintendent of the Woman's Hospital of Philadelphia, having been appointed as superintendent in 1903, retiring in 1920 and moving to California. From 1896 to 1902 she was superintendent of nurses at the Methodist Hospital, Philadelphia. In February, 1900, she organized the Nurses' Alumni Association at the Methodist Hospital. For a number of years she was resident nurse at the Carlisle (Pa.) Indian School. She was a member of The Medical Society of the State of Pennsylvania and a Fellow of the A. M. A.

PHILIP JOSEPH SHERIDAN, Oil City; New York Homeopathic Medical College, 1908; aged 51; died Mar. 12, following an illness of 2 years. He was a member of his county and State medical societies and a Fellow of the A. M. A. He was in military service during the World War.

JOHN MILTON SHRIVER, Waynesburg; Jefferson Medical College, 1880; aged 81; died Dec. 17, 1935, of heart disease.

EDGAR SYDENSTRICKER, New York City, scientific director of the Milbank Fund, and formerly chief statistician of the United States Public Health Service, died Mar. 19, of cerebral hemorrhage; aged 54.

Mr. Sydenstricker was an organizer of the health section of the League of Nations at Geneva in 1923 and 1924. His full title at that time was Chief of Service of Epidemiological Intelligence and Public Health Statistics.

For about a quarter of a century Mr. Sydenstricker was a notable figure as investigator, research director, and writer in the fields of vital statistics, public health, and sociology.

One of his most notable scientific contributions was the development of methods to measure the effectiveness of procedures used by health departments throughout the world. While on the staff of President Roosevelt's Committee on Economic Security, he formulated the plans to give security to the population of the United States against the economic effects of sickness. The development of an expanded program of public health and disease prevention came largely as a result of his work.

JACOB D. UPDEGROVE, Phillipsburg, N. J.; University of Pennsylvania School of Medicine, 1890; aged 73; died Mar. 22. Dr. Updegrave practiced in Easton, Pa., for 40 years and was retired at the time of his death. He was a member of the Northampton County Medical Society and the State Society, and a Fellow of the A. M. A.

ERNEST LESLIE WARD, Elkland; Medico-Chirurgical College of Philadelphia, 1902; aged 59; died suddenly, Jan. 1, of coronary thrombosis. He was a member of his county and State medical societies and the A. M. A.

ABRAHAM T. WELKER, Collomsville (Lycoming Co.); University of Pennsylvania School of Medicine, 1886; aged 79; died Feb. 7. Dr. Welker was born in Chapel, Berks Co., Apr. 26, 1857. Upon graduation he opened an office at Collomsville where he has since practiced. In 1889 he married Miss Mabel Dougherty, who survives him. On Aug. 12, 1932, he was made a nestor of the Lycoming County Medical Society. He was a member of his State medical society and the A. M. A.

WILLIAM HOLLAND WILMER, Washington, D. C.; University of Virginia School of Medicine, 1885; aged 73; died Mar. 12, from coronary thrombosis. Dr. Wilmer was recognized as one of the nation's outstanding authorities on diseases of the eye. He was director of the Wilmer Ophthalmological Institute at Johns Hopkins University from the time of its founding in 1922 until his retirement in 1934, when he returned to Washington, D. C., to practice. Dr. Wilmer began practice at Washington in 1889 and from 1906 to 1925 was professor of ophthalmology at Georgetown University. He saw overseas service in the Medical Reserve Corps of the United States Army. He was awarded the dis-

tinguished service medal of the United States in 1919 and was made commander of the French Legion of Honor in 1924. He is survived by his wife, a daughter, and 2 sons.

Miscellaneous

THE ANNUAL STAFF BANQUET of the Nesbitt Memorial Hospital, Wilkes-Barre, was held at the Westmoreland Club, Feb. 11.

DR. JOSEPH GOLDFINE, of Philadelphia, was recently sentenced for committing a criminal abortion on a woman who died.

THE 1936 ANNUAL MEETING of the Association of Military Surgeons will be held at the Book-Cadillac Hotel, Detroit, Mich., Oct. 29-30-31.

MEMBERS OF THE State Medical Society are cordially invited to attend the luncheon and conference to be held at the Mercy Hospital, Wilkes-Barre, Apr. 23.

AT THE MEETING of the Northumberland County Medical Society held Feb. 5, the question regarding 8-hour duty for graduate nurses was favorably considered.

DR. SIGMUND S. GREENBAUM, associate professor of dermatology and syphilology, University of Pennsylvania Graduate School of Medicine, has been appointed professor in the department.

THE WEST PHILADELPHIA MEDICAL ASSOCIATION and West Branch of the Philadelphia County Medical Society gave a reception, Feb. 25, to Dr. James W. McConnell, recently elected professor of neurology, at Temple University.

DR. ROGER C. GRAVES, by invitation, read a paper on "The Bladder Complications of Carcinoma of the Cervix and Treatment" at the meeting of the Philadelphia Urological Society held Mar. 23.

DR. GEORGE S. WATKINS, formerly practicing in Mechanicsburg, is now a medical examiner with the Pennsylvania Railroad Company. His present residence is 115 South 19th St., Harrisburg.

THE TWELFTH SCIENTIFIC SESSION OF THE AMERICAN HEART ASSOCIATION will be held May 12, 1936, from 9:30 a. m. to 5:30 p. m., at the Hotel Phillips, Kansas City, Mo. The program will be devoted to the subject of cardiac insufficiency.

DR. JOHN SPEER DONALDSON, of Pittsburgh, was appointed by Governor Earle, Feb. 28, chief surgeon of the State Hospital for Crippled Children at Elizabethtown, Pa., to succeed Dr. Francis S. Chambers, who recently resigned.

DR. GEORGE W. CRILE, of Cleveland, delivered an address before the North End Medical Society and North Branch of the Philadelphia County Medical Society, Feb. 27, on "Hypertension—Its Causes and Surgical Management." The discussion was opened by Dr. Leonard G. Rowntree.

THE FOUNDER'S DAY EXERCISES of the Philadelphia College of Pharmacy and Science were held Feb. 24. An address was delivered by Mr. John L. Haney, president of the Boys' Central High School, Philadelphia. Dr. Wilmer Krusen, president of the college, presided.

THE ANNUAL CONVERSATIONAL LECTURE of the Pathological Society of Philadelphia was delivered at the joint meeting of the Pathological Society of Philadelphia and the Philadelphia Roentgen Ray Society, Apr. 2, by Professor Lacassagne, assistant director, Radium Institute, University of Paris, Paris, France.

DRS. DAVID S. FUNK, John B. McAlister, and John F. Culp, of Harrisburg, were guests of honor at a dinner given by central Pennsylvania alumni of the University of Pennsylvania at the Harrisburger Hotel, Feb. 20.

More than 60 attended. Dr. McAlister graduated in 1887, Dr. Culp in 1886, and Dr. Funk in 1881.

THE CHILD RESEARCH CLINIC of the Woods Schools, Langhorne, conducted a conference at the Warwick Hotel, Philadelphia, Mar. 14. Dr. O. Spurgeon English, clinical professor of psychiatry, Temple University Medical School, delivered an address on "Future Dangers Facing the Emotionally Unstable Child."

DR. HAROLD L. FOSS, surgeon-in-chief of the Geisinger Memorial Hospital, Danville, Pa., was recently the guest at a dinner tendered by the Detroit Academy of Surgery, Detroit, Mich. Dr. Foss addressed the association on the subject of "Newer Ideas of the Diagnosis and Treatment of Heart Disease Associated with Hyperthyroidism."

AT THE MEETING of the North End Medical Society and North Branch of the Philadelphia County Medical Society held Mar. 26, Dr. Hugh Young, of Baltimore, Johns Hopkins Medical School, read a paper on "Urologic Problems of General Interest." A dinner in honor of Dr. Young preceded the lecture.

DR. MARIE K. FORMAD, of Philadelphia, was tendered a dinner by the Woman's Hospital of Philadelphia, at the Bellevue-Stratford Hotel, Mar. 17, in celebration of her 50 years in practice. A fund has been started in Dr. Formad's honor for the benefit of the hospital with which she has been connected for so many years.

DR. DAVID RIESMAN was the guest of honor at the ninetieth anniversary banquet of the Northern Medical Association of Philadelphia, Mar. 16. The association is the second oldest medical society in the State of Pennsylvania, having been founded in 1846. It was the first medical organization to open its membership to women.

DR. NORMAN R. GOLDSMITH, author of the popular feature, "Thoughts for Tomorrow," which appears bi-weekly in the *Pittsburgh Medical Bulletin*, is the author of a detective story entitled "The Atlantic City Murder Mystery." The story has no reference to the recent A. M. A. convention, but the mystery does have a medical solution.

DR. EUGENE M. LANDIS, of Philadelphia, was awarded the John Phillips Memorial medal of the American College of Physicians at the annual meeting of the college at Detroit, Mar. 4. Dr. Landis is assistant professor of medicine at the University of Pennsylvania Medical School. The award was made for outstanding medical research.

TEMPLE UNIVERSITY, OF PHILADELPHIA, celebrated Founder's Day on Feb. 22. The orator was President Franklin Delano Roosevelt, upon whom the university conferred the honorary degree of doctor of jurisprudence. The newly completed Sullivan Memorial Library was also dedicated. President Charles E. Beury, of Temple University, presided.

THE WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA celebrated its eighty-sixth anniversary of Founder's Day, Mar. 11. The speakers were Dr. James M. Anders, professor of medicine at the Graduate School of Medicine, Dr. Ellen C. Potter, former State Secretary of Welfare of Pennsylvania and now medical director of the Department of Institutions and Agencies of the State of New Jersey, and Dr. Chevalier Jackson, president of the college.

THE AMERICAN ASSOCIATION ON MENTAL DEFICIENCY composed of some 500 educators, psychologists, sociologists, and psychiatrists is holding its sixtieth annual meeting at the Hotel Jefferson, St. Louis, Mo., on May 1, 2, 3 and 4. The Friday sessions will be devoted to general and sociologic aspects of mental deficiency, the Saturday sessions to psychologic and educational topics with special stress on educational disabilities. The Monday sessions will be given over to research activities, medical aspects, and administra-

tive problems in mental deficiency. Everyone interested in the mentally defective or retarded child is cordially invited to attend these sessions. The complete program may be obtained from the secretary, Dr. Groves B. Smith, Godfrey, Illinois.

GHOULS DESECRATE PHILADELPHIA DEAD.—On the night of Mar. 13, ghouls opened tombs and caskets at the Laurel Hill Cemetery in a partly residential sector in the most terrible exhibition of vandalism Philadelphia has known in many years.

Among the mausoleums broken into was one where the body of the late Dr. Elwood R. Kirby was buried on Dec. 26, 1935. When the watchman came on duty the next morning he found Dr. Kirby's body lying on the ground stripped of clothing.

It seems almost impossible that vandals could smash the glass in the marble door, tear away the iron bars, and pound their way through the bronze inner door without attracting some attention from the noise.

It was averred that Dr. Kirby was buried with considerable jewelry, which statement was not true.

Three other mausoleums were also victims of this fiendish plot.

YALE UNIVERSITY SCHOOL OF MEDICINE.—According to the *United Press*, Yale University had a net excess of expenses over income of \$1,633,382.39 for the 1934-35 fiscal year, and a retrenchment program in every department of the university has been ordered.

A heavy cut in the income of the university from its funded investments has brought about a critical situation. The university's budget was cut \$1,000,000 last year, and a further reduction in the next budget is now under way. Sixty per cent of the university's income is from its investments, the rest coming from tuition and other payments.

The first retrenchment move has resulted in the resignation of Dr. Winthrop Morgan Phelps, from the staff of the Yale Medical School. He was head of the department of orthopedic surgery since 1932. Two other members of the medical school staff, Dr. Merrill K. Lindsay, widely known expert on the treatment of fractures, and Dr. Denis O'Connor, noted authority on joint injuries, in the future will subordinate their teaching to private practice, due to the fact that the condition of the university's finances has made it necessary to hold up regular grade advances for faculty members.

The financial report of the university shows that the School of Medicine alone suffered a debit balance of \$459,378.11 for the 1934-35 fiscal period.

PROMPTLY RESPONDING TO urgent appeals from the Pennsylvania stricken flood area, emergency shipments of typhoid fever vaccine, smallpox vaccine, tetanus antitoxin, and scarlet fever antitoxin were sent by plane, truck, and messengers in private cars by Sharp & Dohme, Philadelphia, to help in fighting threatened epidemics.

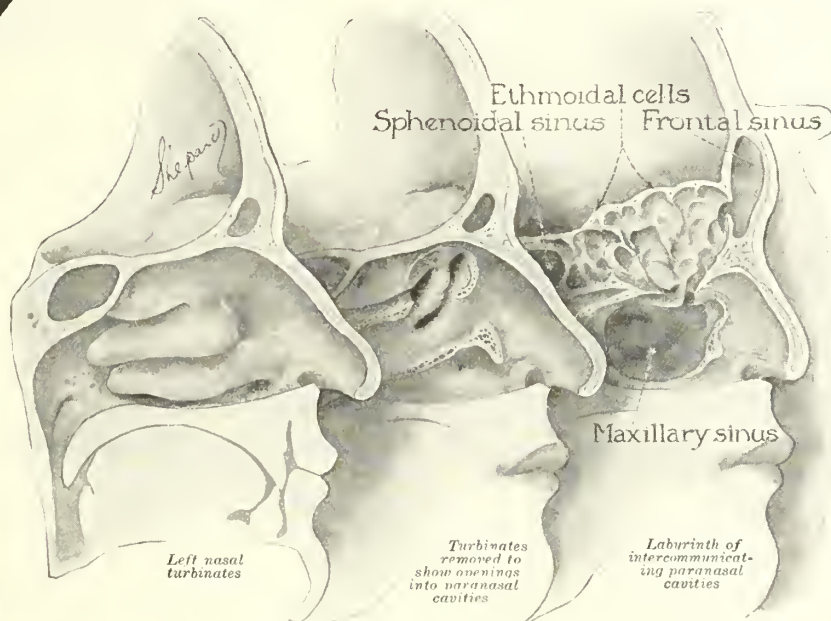
The most modern methods of communication, airplane and short wave radio, were utilized. Until a few years ago, it would have been impossible to bring needed life-saving drugs to the succor of stricken sections almost immediately. The first 2 plane loads leaving Wednesday afternoon, Mar. 18, 1936, landed at the Pittsburgh airport, where the drugs were turned over to medical and relief agencies as needed.

In the meantime, a truck reached Harrisburg at 2:15 a. m., Thursday, where the rising Susquehanna temporarily checked it. Headquarters were established at the Harrisburger Hotel. Red Cross, state, and local health authorities were contacted and co-operated with until it was possible to push on further toward Johnstown at 2 p. m., Thursday.

R. W. Bell, local Sharp & Dohme representatives at Williamsport, finding other means of communication blocked, sent out an urgent appeal for tetanus antitoxin for the Williamsport Hospital, over an amateur short wave station. This was picked up by Lewis

(Concluded on page xiv.)

PROLONGED VASOCONSTRICTION



For the relief of nasal congestion

NEO-SYNEPHRIN HYDROCHLORIDE

(levo-meta-methylaminoethanolphenol hydrochloride)

possesses the advantage of sustained action as well as promptness.

Neo-Synephrin Hydrochloride is effective on repeated administration, so that free breathing may be accomplished during the ordinary course of a cold.

DOSAGE FORMS:

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MEDICAL NEWS

(Concluded from page 560.)

Nagey, of Phoenixville, at W3FFX, and relayed by telephone to the laboratories.

The entire weight of the 2400 employees of Sharp & Dohme was thrown into the task of supplying emergency needs. Representatives from Ohio, Virginia, and local men from Philadelphia and the Pennsylvania and West Virginia districts were all equipped and instructed to co-operate in all ways with State Police, Red Cross, Coast Guard, and health officials, and in any manner possible to get to the worst sections as quickly as possible.

The supervisor of the Bell Telephone Company at Lock Haven, whose office was flooded and who telephoned perched up on a telephone pole, gave authorization from the local health officer to send sufficient material to care for the serious situation in the Lock Haven district. He reported very concisely possible landing places and conditions for both air and sea planes, which information was relayed at midnight to the Philadelphia Navy Yard, a Sharp & Dohme man delivering the shipment which left by a Navy plane at 6:30 a. m., Friday.

The Biological Laboratories at Glenolden, Pa., were ordered to stand by night and day for emergencies. Supplies of serums and vaccines were maintained there at all times in subterranean refrigerator rooms as large as a city block, where they can be immediately released when a catastrophe of this magnitude occurs.

An army plane was ordered from Washington to pick up supplies from Sharp & Dohme for Western Pennsylvania, and to survey the situation and report further needs. Flood conditions at the Washington Airport at the time of writing, Mar. 20, interfered with those plans.

Book Reviews

*From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and in-
viting our attention to merit.*

PHYSICAL DIAGNOSIS (seventh edition). By Warren P. Elmer, B.S., M.D., associate professor of clinical medicine, Washington University School of Medicine; assistant physician to Barnes Hospital; physician-in-charge, Missouri Pacific Hospital; consulting physician to Jewish Hospital, St. Louis, and St. Louis County Hospital, and W. D. Rose, M.D., late associate professor of medicine in the University of Arkansas, Little Rock, Arkansas. New matter, especially on aortic murmurs, silicosis, and diagnostic methods; several new illustrations have been added, making the work more complete and up to date. 919 pages. Illustrated. St. Louis: C. V. Mosby Company, 1935. Cloth, \$9 net.

A good textbook must not only contain the printed knowledge of the subject in hand, but must present it in such a fashion that the information is readily available, and must employ any other method to make the information clear, such as by diagram and illustration. A text on physical diagnosis must be especially noteworthy along these lines, as it is to be used by students and beginners. The text in question seems to have satisfied all of these requisites to a marked degree. The arrangement by chapters takes up the work in accordance with the primary methods of physical diagnosis. The anatomic charts, diagrams, and illustrations all serve to present the subject clearly and concisely. Then the chapters on diseases of the respiratory and circulatory systems are included toward the end of the book for the use of the more advanced student and practitioner. Thus a great deal of time is saved by having a large amount of information available in the one text,

(Concluded on page xvi.)

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CANNED FOODS AND THE PUBLIC HEALTH

III. Chemical Preservatives

• Some of our readers have inquired as to whether or not chemical preservatives are used in commercially canned foods. In certain instances, this question was inspired by the fact that "canning compounds" were formerly sold for use in home canning and preserving operations. Such compounds, however, are rarely used by the housewife of today, and never by commercial canners.

We wish to state here that *no preservatives are used in commercially canned foods.*

Spoilage of food is principally caused by the growth and multiplication in food of microorganisms such as yeasts, molds, or certain types of bacteria. These microorganisms depend upon the food they inhabit for their nutrition and their life processes produce changes in the chemical or physical characteristics of food, or both. These changes lead us to state that the food has "spoiled".

Like other living organisms, these spoilage microorganisms can grow and multiply in a food only as long as conditions remain favorable for their existence. If any environmental factor, such as temperature, moisture or acidity, becomes unfavorable, these spoilage organisms are destroyed, or their development is inhibited.

All methods of food preservation have a common underlying principle; they all alter some factor or factors in the food environment so as to render conditions unfavorable

for the growth or development of spoilage organisms in the food.

Thus, foods may be preserved by freezing or refrigeration, which serves to lower the temperature below that optimum for growth of certain spoilage organisms; dried foods keep because the moisture content has been reduced to an unfavorably low level; certain fermented foods keep because of the development of high acidity. All of these methods produce changes in the environment in which the food spoilage organisms must live.

Commercial canning is a method of food preservation in which the temperature factor in the environment is raised to a level above that optimum for growth of spoilage microorganisms. Thus, canned foods keep because in their preparation they are subjected to heat processes in hermetically sealed containers. The thermal processes raise the temperature of the foods to those temperatures at which the most resistant spoilage organisms present cannot grow or survive. (1)

The hermetic seal insures protection against future infection of the food by such organisms.

Thus, commercial canning is a method of food preservation which has for its basis the thermal destruction of spoilage organisms; no chemical preservatives are needed to insure preservation of the foods, and, consequently, none are used.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

(1) The Microbiology of Foods, F. W. Tanner, Twin City Pub. Co., Champaign, Ill., 1932



The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Committee on Foods of the American Medical Association.

This is the eleventh in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.

BOOK REVIEWS

(Concluded from page xiv.)

and it saves the bother of referring to other texts and indices for the information.

RUSSELL A. HIBBS, PIONEER IN ORTHOPEDIC SURGERY, 1869-1932. By George M. Goodwin. New York: Morningside Heights. Columbia University Press, 1935. Price, \$2.

An extremely well-arranged, although brief, biography of a man who did much to develop the principles of fusion operations for tuberculous joints.

An appendix carries 4 representative contributions of Dr. Hibbs: (1) A method of lengthening the tendo achillis, (2) an operation for stiffening the knee joint, (3) an operation for progressive spinal deformities, and (4) a preliminary report of 20 cases of hip tuberculosis treated by an operation devised to eliminate motion by fusing the joints.

A complete bibliography of his writings closes a very interesting book that should be in the library of all orthopedic surgeons.

PSYCHOPATHOLOGY. By George W. Henry, associate professor of psychiatry, Cornell University Medical School, New York; attending psychiatrist, The New York Hospital, New York City. Wm. Wood and Co., Baltimore, Md. Price, \$4.

The medical and the nursing professions must realize the need for a knowledge of psychiatry and psychopathology, which is most essential. And it is necessary that this subject should be properly placed in the medical and nursing schools' curricula.

As stated in the preface, "It is a presentation of the nature and causes of personality disorder, together with a description of methods of examination." This book, written primarily for medical students, will be most helpful to the physician and the graduate nurse.

THE STOMACH AND DUODENUM. By George B. Eusterman, M.D., F.A.C.P., head of section in Division of Medicine, The Mayo Clinic; professor of medicine, The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; and Donald C. Balfour, M.B., M.D. (Tor.), LL.D., F.A.C.S., F.R.A.C.S., head of section in Division of Surgery, The Mayo Clinic; professor of surgery, The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; and members of the staff, The Mayo Clinic and The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. 958 pages with 436 illustrations. Philadelphia and London: W. B. Saunders Company, 1935. Cloth, \$10 net.

In this late book the subject has been very carefully covered in a clear and concise fashion. Every physician in general practice should have such a book in his library, and he should use it frequently in answering the many problems of the modern-day practice of medicine. It is also of great value to the surgeon and those doing specialized work. The plates, charts, and records give definite deductions in the management of cases.

A TEXTBOOK OF CLINICAL NEUROLOGY. By Israel S. Wechsler, M.D., professor of clinical neurology, Columbia University, New York; attending neurologist, Neurological Institute and the Montefiore Hospital, New York. Third Edition. Resnet. 826 pages with 162 illustrations. Philadelphia and London: W. B. Saunders Company, 1935. Cloth, \$7 net.

This work is complete, concise, easily readable, and well illustrated. It is highly recommended, especially for the general practitioner. The volume is well indexed and comprehensive in its clinical scope so that ready reference is an attractive feature. The print is large, and important findings are italicized. The sections devoted to treatment are concise, decisive, and include the newest therapeutic additions.

The last part of the book comprising 100 pages is a most complete and attractively written outline of the neuroses. It should prove of greatest value to the general practitioner who has either been too busy to keep up with the progress in functional nervous disorders or who has given up such further reading because of the existent confusion in the literature.

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.. THE .. PENNSYLVANIA MEDICAL JOURNAL

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No. 8

CANCER OF THE BREAST*

With Particular Reference to Irradiation as a Factor in the End-results

ALLEN GRAHAM, M.D., CLEVELAND, OHIO

The end-results in cases of cancer of the breast treated by surgical operations are dependent upon a number of factors, among which the following are of primary importance: (1) The degree of malignancy of the neoplasm, (2) the extent and character of involvement at the time of operation, and (3) the operative procedure.

In individual cases other factors such as the age of the patient or the association of pregnancy and lactation may be highly important, but when dealing with a large series of cases in terms of averages, these 2 factors play only a small part in determining the clinical end-results, especially if they are compared to that most important of all factors—the extent and character of involvement at the time of operation. Even the degree of inherent malignancy of the neoplasm is secondary in importance to the extent and character of involvement.

Customarily the clinical end-results are expressed in terms of the percentage of patients known to be alive and free from cancer at the end of 5 years. This may be taken as a measure of the success of the treatment. Experience has shown that recurrences or metastases develop subsequently in only a comparatively small percentage of patients who survive for 5 years. In this small percentage of cases the subsequent occurrence of cancer is due not infrequently to the development of a new cancer in the remaining breast rather than to recurrence or metastasis from the breast first affected.

The percentage of patients who are dead or alive less than 5 years with clinical evidence of cancer may be taken as a measure of the inefficacy of the treatment or the incurability of the

cancer at the time treatment was instituted. The percentage with local recurrences in the field of operation is of similar import.

The duration of life following operation may be utilized as one measure of the comparative benefit to be derived from various types of treatment. The postoperative longevity of the patients who have died can be determined quite accurately, but the longevity necessarily is of changing value for the patients who were alive when last heard from.

In addition to the foregoing criteria by which the end-results may be judged, in this study the presence of clinical evidence of cancer in the follow-up period, irrespective of the element of time, will be utilized as an indication of the incurability of the cancer or as an indication that the therapeutic measures which were instituted failed to cure.

The extent to which irradiation in patients treated by operation has modified the end-results in the direction of an improvement is extremely difficult to evaluate because of the many variable factors which enter into the problem.

In a previous paper,¹ data were presented in brief tabular form which indicated the general end-results in a series of cases of cancer of the breast, some of which were treated by operation only and the remainder by operation and irradiation, during the years 1895 to 1930 inclusive. The scope of that paper did not permit the presentation of as complete data as was desirable to substantiate the tentative conclusions which were drawn and stated as follows: "Hence, we must conclude, from our experience and from an analysis of a comparatively large series of patients operated upon from 1895 to 1930, that there is no significant general indication of improvement in the clinical end-results of the

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

treatment of cancer of the breast attributable to irradiation insofar as can be measured by the criteria previously mentioned in the text."

The purpose of the present paper is to supply additional data bearing upon the end-results, with particular reference to the rôle of irradiation in the achievement of the results, and to suggest a basis for prognosis in patients treated by surgical operations.

MATERIAL

In the previous paper, the results tabulated were based upon an analysis of the records of 458 cases of malignant tumors of the breast of all types, both unilateral and bilateral, which occurred in males and females, and in which the primary operations were performed by Dr. George Crile during the years 1895 to 1930 inclusive. Among those cases there were 3 of carcinoma in the male breast, and in the female breast there were 9 cases of sarcoma, 9 of Paget's disease, 5 of sweat-gland cancer, and 27 of papillary carcinoma. The foregoing special types of malignant tumors will be excluded from the discussion in the present paper. The remaining 405 cases of primary unilateral and bilateral carcinomata may be regarded as representative of the various clinical, pathologic, and therapeutic phases of the problem of cancer of the breast encountered in everyday practice.

The series of 405 patients has been divided into 2 groups for the purpose of comparison: (1) The patients treated by surgical operation only, and (2) the patients treated by operation and irradiation. The follow-up periods of postoperative survivals are given according to the records of Nov. 15, 1933. Changes of status since that date are not recorded in this paper. It is possible to obtain 1- and 3-year results for all patients in the series, 5-year results for those operated upon prior to 1929, 7½-year results for those operated upon prior to 1926, and 10-year results for those operated upon prior to 1921.

IRRADIATION

Since the efficacy of the irradiation employed in this series of cases is to be tested by an analysis of the clinical end-results in traced patients, the data which follow are calculated upon the same basis of traced patients rather than upon the total number of patients operated upon.

Incidence of Irradiation.—Of 329 traced patients treated from 1895 to 1930, 61.7 per cent were irradiated. Of 306 traced patients treated from 1895 to 1928, for which a 5-year follow-up is possible 58.8 per cent were irradiated.

Source of Irradiation.—Of 180 traced irra-

diated patients treated from 1895 to 1928, radium alone was the source of irradiation in 2.8 per cent, radium and roentgen ray in 8.9 per cent, and roentgen ray alone in 88.4 per cent. The total percentage receiving radium irradiation was 11.7, and the total percentage receiving roentgen irradiation was 97.2.

Preoperative Irradiation.—Preoperative roentgen-ray treatment was the only irradiation employed in 2.2 per cent of 180 irradiated traced patients; preoperative and postoperative roentgen-ray treatment was used in 5.0 per cent, and preoperative and postoperative roentgen ray and radium was used in 1.1 per cent. Preoperative irradiation was used in 8.3 per cent of the irradiated patients.

Postoperative Irradiation.—Roentgen-ray treatment immediately following operation was the only irradiation employed in 63.3 per cent of 180 traced irradiated patients, radium only was used in 0.6 per cent, and roentgen-ray treatment immediately after operation was combined with other roentgen-ray or radium treatment in 23.9 per cent. Thus irradiation in some form was administered immediately following operation to 87.8 per cent of the irradiated group.

Roentgen-ray or radium treatment of recurrences or metastasis as the only form of irradiation was employed in 8.3 per cent.

It is evident, therefore, that the principal source of the irradiation employed in this series was derived from roentgen rays. It is equally evident that in approximately 90 per cent of the irradiated patients, the treatment was instituted immediately or very shortly after operation.

It is to be clearly understood that the palliative benefits of roentgen irradiation are not in question in this paper. Only the preventive and curative effects are considered.

GENERAL END-RESULTS

Of 380 patients with cancer of the breast, exclusive of sarcoma, Paget's disease, sweat-gland cancer, and papillary carcinoma, upon whom the primary operation was performed by Dr. Crile during the years 1895 to 1928 inclusive, and for which a 5-year follow-up is possible according to the records of Nov. 15, 1933, 170 patients (44.7 per cent) were treated by surgical operation only, and 210 (55.3 per cent) were treated by operation and irradiation. The list includes cases of concurrent and consecutive bilateral primary carcinomata as well as the unilateral cases.

The data pertaining to the patients treated by operation only and those treated by surgery and irradiation are entered in separate columns of Tables I, II, and III for comparison with the

TABLE I

380 PATIENTS OPERATED UPON, 1895 TO 1928

	Operation only		Operation and irradiation		Total	
	Cases	Per cent	Cases	Per cent	Cases	Per cent
Patients operated upon ...	170	44.7	210	55.3	380	100.0
Dead in hospital	4	2.4	3	1.4	7	1.8
Dead—date and cause unknown	7	4.1	5	2.4	12	3.2
Not traced	33	19.4	22	10.5	55	14.5
Patients traced	126	74.1	180	85.7	306	80.5
Dead	67	39.4	114	54.3	181	47.6
Alive when last heard from	59	34.7	66	31.4	125	32.9
Traced patients alive 5 years or more	55	43.6	62	34.4	117	38.2

total treated with and without irradiation. For the sake of convenience the patients treated by operation only are frequently referred to as non-irradiated and those treated by operation and irradiation as irradiated.

Table I shows the numbers and percentages of patients operated upon; those who died in the hospital; those who died after discharge from the hospital, the date and cause of death being unknown; those who were not heard from after discharge from the hospital; and those traced for periods of time varying from a few months to many years. It is for these traced patients only that the postoperative longevity can be expressed in months or years. The table also includes the numbers and percentages of traced patients who were dead and those who were alive when last heard from, as well as the number of traced patients who survived 5 years or more.

Table II shows the numbers and percentages of traced patients who died in 1 to 5 years, 5 to 10 years, and after 10 years, as well as the cause of death. In no respect are the results shown in this table more favorable for the irradiated than for the nonirradiated patients.

Table III shows the numbers and percentages of traced patients who were alive when last heard from, in follow-up periods of 1 to 5 years, 5 to 10 years, and after 10 years, and also the presence or absence of clinical evidence of cancer as revealed by the follow-up. The results are at least as favorable in the nonirradiated as in the irradiated group.

From the combined data in Tables II and III, the following facts are of interest: In the non-irradiated and irradiated groups respectively, 94.2 and 96.2 per cent of the deaths which occurred in less than 5 years were due to cancer; 43.7 and 66.6 per cent of the deaths which occurred after 5 years were due to cancer; and

82.1 and 90.3 per cent of the total deaths occurring before and after 5 years were due to cancer.

In the nonirradiated and irradiated groups respectively, 70 and 56 per cent of the patients who were alive but who were followed less than 5 years were free of cancer; 92.3 and 87.8 per cent of those who were alive more than 5 years were free of cancer; and 84.8 and 75.8 per cent of those who were alive less than and more than 5 years were free of cancer.

During the period of postoperative observations, clinical evidence of cancer was noted as occurring in less than 5 years in 42.9 per cent of the nonirradiated and in 55.6 per cent of the irradiated patients; after five years in 7.9 per cent of the nonirradiated and in 10.6 per cent of the irradiated patients. In the entire follow-up period, irrespective of the duration, clinical evidence of cancer was noted in 50.8 per cent of the nonirradiated and in 66.1 per cent of the irradiated patients.

Of patients followed less than 5 years, dead or alive, 13.5 per cent of the nonirradiated and 10.0 per cent of the irradiated were free of cancer; of those followed more than 5 years, dead or alive, 35.7 per cent of the nonirradiated and 23.9 per cent of the irradiated were free of cancer; of the total followed less than and more than 5 years, dead or alive, 49.2 per cent of the nonirradiated and 33.9 per cent of the irradiated were free of cancer.

The data in Tables II and III, if taken at face value, show an apparent advantage of ap-

TABLE II

PER CENT DEAD WITH AND WITHOUT CANCER
306 Traced Patients, 1895-1928

	Operation only		Operation and irradiation		Total	
	Cases	Per cent	Cases	Per cent	Cases	Per cent
Number of patients traced	126		180		306	
Dead of cancer:						
0 to 1 year	19	15.1	31	17.2	50	16.3
1 to 2 years	14	11.1	24	13.3	38	12.4
2 to 3 years	4	3.2	14	7.8	18	5.9
3 to 4 years	6	4.8	11	6.1	17	5.6
4 to 5 years	5	4.0	9	5.0	14	4.6
1 to 5 years	48	38.1	89	49.4	137	44.8
5 to 10 years	5	4.0	10	5.6	15	4.9
10+ years	2	1.6	4	2.2	6	2.0
Total	55	43.6	103	57.2	158	51.7
Dead of other causes:						
0 to 5 years	3	2.4	4	2.2	7	2.3
5 to 10 years	5	4.0	4	2.2	9	2.9
10+ years	4	3.2	3	1.7	7	2.3
Total	12	9.5	11	6.1	23	7.5
Total known dead of all causes	67	53.2	114	63.3	181	59.2

proximately 10 to 12 per cent* in favor of the patients who were treated by operation only.

Insofar as can be determined from a consideration of the data in Tables I, II, and III, and in the foregoing text, there is no indication that the clinical end-results were better in the irradiated than in the nonirradiated cases, as judged by any of the criteria applied.

GENERAL END-RESULTS IN SUCCESSIVE 5-YEAR PERIODS FROM 1895 TO 1928

In Table IV the follow-up data pertaining to 306 traced patients, 180 (58.8 per cent) of whom were irradiated, are arranged in successive 5-year chronological periods from 1895 to 1928. The percentages are given for the patients who were known to be dead, known to be alive, and for those who were lost alive† in the follow-up, at the end of 1, 3, 5, 7½, and 10 years, in the groups treated by operation and by operation and irradiation.

TABLE III

PER CENT ALIVE WITH AND WITHOUT CANCER
306 Traced Patients, 1895-1928

Number of patients traced	Operation only		Operation and irradiation		Total	
	Cases	Per cent	Cases	Per cent	Cases	Per cent
Alive with cancer:						
0 to 1 year	4	3.2	4	2.2	8	2.6
1 to 2 years	1	0.8	4	2.2	5	1.6
2 to 3 years	1	0.8	3	1.7	4	1.3
3 to 4 years	0	....	0	....	0	....
4 to 5 years	0	....	0	....	0	....
1 to 5 years	6	4.8	11	6.1	17	5.5
5 to 10 years	3	2.4	2	1.1	5	1.6
10+ years	0	....	3	1.7	3	1.0
Total	9	7.2	16	8.9	25	8.1
Alive—cancer-free:						
1 to 5 years	14	11.1	14	7.8	28	9.2
5 to 10 years	12	9.5	26	14.5	38	12.4
10+ years	24	19.0	10	5.6	34	11.1
Total	50	39.6	50	27.8	100	32.7
Total known living	59	46.8	66	36.7	125	40.8

The arrangement in successive chronological periods affords an opportunity for noting improvements in the end-results which may be attributable to advancement in surgical technic, methods of diagnosis, increasing skill of the surgeon, and to the earlier treatment of patients as a result of the educational campaign which has been carried on. It also affords an opportunity

for noting improvements in the end-results which may be attributable to increasing utilization of irradiation, improvements made in physical equipment, the use of increased voltage, refinements in administration, increasing control of dosage, and increasing experience and skill of radiation therapists.

As will be noted on examination of the table, the percentage of irradiated patients has steadily increased from zero (1895-1900) to more than 90 per cent (1921-1925) in the successive 5-year periods. Although not shown in the table, 100 per cent of the patients operated upon during the years 1929 and 1930 were sent immediately for postoperative roentgen irradiation.

In the table the figures in the follow-up columns express the percentages of patients who were dead, alive, and lost alive at the end of from 1 to 10 years, irrespective of the presence or absence of cancer. The comparative figures for the presence or absence of cancer in the dead and living before and after 5 years in the irradiated and nonirradiated groups, based upon the records of the same patients, were given in the text of the preceding section and in Tables II and III and need not be repeated here. Fractions of 1 per cent have been omitted from the table in order to conserve space.

Examination of the standard 5-year follow-up column and the summary for each of the follow-up columns discloses that without exception the percentage of known dead is lower in the nonirradiated than in the irradiated group; that, with but one exception in the successive 5-year chronological periods and but one exception in the entire summary, the percentage of known living in the nonirradiated group is equal to or greater than that in the irradiated group.

There are very distinct variations in the percentages of dead and living in both the nonirradiated and irradiated groups in the individual chronological periods. It is of interest to note that the best results for both the irradiated and nonirradiated patients are recorded in the 1911-1915 period. In this period the percentage of both irradiated and nonirradiated patients known to be alive at the end of 5 years is higher than in any other chronological period or in the average (summary) for the entire series. The number of traced nonirradiated and irradiated patients is approximately equal: of the total treated, 47.0 per cent were irradiated. It is to be expected that the variations in the results in the individual chronological periods will be of considerable magnitude, due in part to the small number of patients involved in each period.

* Although the irradiated patients appear to be at a distinct disadvantage as judged by the tests applied, the difference is not fundamentally related to the fact of irradiation, as will be shown later.

† By lost alive is meant those patients who were alive when last heard from but who were not followed for the entire follow-up period.

TABLE IV

306 TRACED CASES ARRANGED IN SUCCESSIVE 5-YEAR PERIODS FROM 1895 TO 1928
Comparative Percentages of Nonirradiated and Irradiated Patients Known to Be
Dead, Alive, and Lost Alive* in the Follow-up

Successive 5-year periods	Number of patients traced			Per cent irra- diated		Follow-up—Years postoperatively									
	O	OI	Total			1		3		5		7½		10	
						O	OI	O	OI	O	OI	O	OI	O	OI
1895-1900	23	0	23	None	Per cent dead	22	0	44	0	48	0	48	0	52	0
					Per cent alive	78	0	56	0	48	0	35	0	22	0
					Per cent lost	0	0	0	0	4	0	17	0	26	0
1901-1905	37	11	48	22.9	Per cent dead	24	18	43	36	46	64	54	64	59	64
					Per cent alive	73	73	43	46	35	18	22	18	14	18
					Per cent lost	3	9	14	18	19	18	24	18	27	18
1906-1910	18	22	40	55.0	Per cent dead	11	18	17	50	39	64	39	64	39	64
					Per cent alive	82	82	61	41	39	27	39	27	39	27
					Per cent lost	7	0	22	9	22	9	22	9	22	9
1911-1915	26	23	49	47.0	Per cent dead	4	9	19	26	34	39	42	43	46	43
					Per cent alive	85	91	69	70	54	57	46	48	38	35
					Per cent lost	11	0	12	4	12	4	12	9	16	22
1916-1920	11	23	34	67.0	Per cent dead	0	13	9	39	36	48	46	57	46	65
					Per cent alive	91	83	73	57	46	43	27	30	27	9
					Per cent lost	9	4	18	4	18	9	27	13	27	26
1921-1925	6	71	77	92.2	Per cent dead	17	20	17	42	17	49	17	53	0	0
					Per cent alive	66	76	66	47	50	34	33	27	0	0
					Per cent lost	17	4	17	11	33	17	50	20	0	0
1926-1928	5	30	35	85.7	Per cent dead	40	20	40	40	40	57	0	0	0	0
					Per cent alive	60	77	40	50	40	23	0	0	0	0
					Per cent lost	0	3	20	10	20	20	0	0	0	0
Summary: 1895-1928	126	180	306	58.8	Per cent dead	16	17	30	40	40	52	46	55	50	58
					Per cent alive	78	80	57	51	44	34	33	30	26	23
					Per cent lost	6	3	13	9	16	14	21	15	24	19

O = treated by operation only. OI = treated by operation and irradiation.

* By lost alive is meant the patients who were alive when last heard from but who were not followed for the entire time indicated in the vertical columns.

The results tend to become more uniform in the summary, which deals with larger numbers of cases.

That the results in the individual chronological periods are not directly related to, or at least are not determined by the factor of, irradiation is indicated by the fact that the variations in the results do not fluctuate in the same direction as the incidence of irradiation. For example, the results in 1921-1925 when 92.2 per cent of the patients were irradiated are not better than those of 1895-1900 when none of the patients were irradiated. Moreover, the best results were noted in 1911-1915 when only 47.0 per cent of patients were irradiated.

The same lack of a definite relationship between the incidence of irradiation and the end-results is shown more graphically in Fig. 1, based upon the same group of cases used in Table IV.

It will be noted in Fig. 1 that the percentage of irradiated patients has increased from zero to more than 90 per cent in the successive chronological periods while the clinical end-results have fluctuated quite independently in the successive periods and certainly have not shown

anything suggestive of a continuous improvement.

The results in this figure are indicated by the 2 roughly horizontal lines showing the percentage of patients (nonirradiated and irradiated combined) who died in less than 5 years and the percentage who were dead or alive with clinical evidence of cancer in the follow-up. These 2 lines may be taken as a rough measure of the

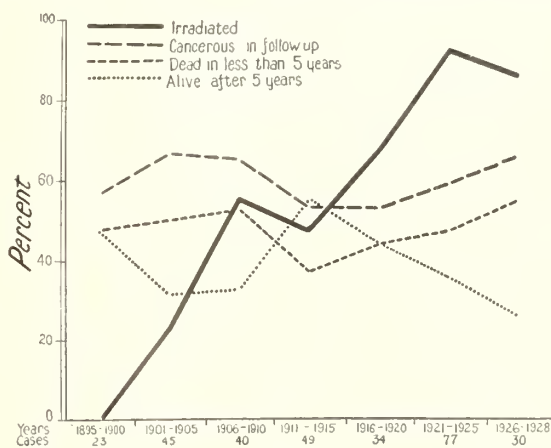


Fig. 1.—The fluctuations in the results of treatment in successive 5-year periods from 1895 to 1928 are unrelated to the incidence of irradiation; 306 traced patients.

unsuccessful results. The third horizontal line indicates the percentage of patients who survived 5 years or more and may be taken as a rough measure of the success of treatment.

There is a very distinct parallelism between the line showing the percentages of patients who died in less than 5 years and the line showing the percentage of clinical evidence of cancer in the follow-up. There is an inverse relationship between these 2 lines and the line indicating the percentage of 5-year survivals.

In this connection it is of interest to summarize the end-results in 2 comparable groups of patients at the extreme ends of the series in which there can be no possibility of personal bias in the selection, namely, those patients operated upon during the years 1895 to 1900, none of whom were irradiated, and those operated upon in 1929 and 1930. In the latter group every patient operated upon was sent immediately for roentgen irradiation, and approximately 30 per cent of the patients subsequently received roentgen irradiation for recurrences or metastases. The results in these 2 groups are shown in Table V.

Despite the fact that a complete 5-year follow-up is not possible for the patients in the 1929-1930 group, 100 per cent of whom received roentgen irradiation, the records now show that the percentage of known dead, the percentage of patients in whom the follow-up showed clinical evidence of cancer, and the percentage of local recurrence in the field of operation is equal to or greater than the corresponding percentages for the patients treated by surgery alone in the years 1895-1900. The most significant fact bearing upon and very largely determining the results shown in this table is, that the number (9) and percentage (39.2 per cent) of advanced cases (Group IV, to be explained later) among those traced are identical in the 2 groups.

Insofar as can be determined from a study of the percentages of known dead and known living at the end of 1, 3, 5, 7½, and 10 years, there is no general indication that the patients treated by operation only have fared less well than those who had irradiation in addition to the operation (Tables II, III and IV). Moreover, there is no substantial indication that the clinical end-results have been improved in the irradiated group in the successive 5-year periods from 1895-1930 (Fig. 1 and Table V).

Stopping at this point and accepting at face value the data presented in the tables would lead to the conclusion that the results in the irradi-

ated group are not as favorable as in the non-irradiated group. That such a conclusion is unwarranted is indicated by the fact that the end-results were shown not to be directly related to the incidence of irradiated patients nor to the advancements in the efficacy of the irradiation presumed to have been made between the time of discovery of the roentgen ray and the year 1930, which corresponds to the time period concerned in this study.

The method of analysis and the data presented seem legitimate so far as they go, but they do not go far enough. There are strong

TABLE V

A GROUP OF PATIENTS TREATED 30 YEARS AGO BY OPERATION ONLY COMPARED TO A SIMILAR GROUP TREATED RECENTLY BY OPERATION AND IRRADIATION, SHOWING PRACTICALLY IDENTICAL CLINICAL END-RESULTS

	1895-1900 Operation only		1929-1930 Operation and irradiation	
	Cases	Per cent	Cases	Per cent
Number of patients operated upon	26		24	
Per cent irradiated	None		100.0	
Traced	23	88.5	23	95.8
Dead of cancer in less than 5 years	11	47.8	11	47.8
Alive with cancer in less than 5 years	None	....	1	4.3
Total dead and alive with cancer in less than 5 years	11	47.8	12	52.2
Local recurrences in the field of operation	4	17.4	5	21.7
Survived 5 years or more	11	47.8	Incomplete follow-up	
Traced patients accounted for at the end of 5 years	22	95.6	Incomplete follow-up	

indications that some factor or factors of more fundamental importance than the irradiation have influenced the results. It is necessary to discover and to evaluate at least some of these suspected factors before a comparison of the results in the nonirradiated and irradiated groups can be considered legitimate. The factors involved must explain the differences in the end-results noted in the nonirradiated and irradiated groups and at the same time explain the differences in the end-results in both the nonirradiated and irradiated groups in the successive 5-year chronological periods. The most important factor discoverable in this study is the extent and character of involvement at the time of operation, as will be clearly shown in the succeeding discussion and tables.

EXTENT AND CHARACTER OF INVOLVEMENT AT THE TIME OF OPERATION AS A BASIS FOR PROGNOSIS IN SURGICALLY TREATED CASES OF CANCER OF THE BREAST

The 306 traced patients may be readily classified into the following groups according to the extent and character of involvement at the time of operation (Table VI):

Group I.—Any case in which a histologic diagnosis of carcinoma is made in the absence of a gross tumor in the breast, and in which the axillary nodes are not involved.

Group II.—A localized gross carcinoma in the breast without axillary metastasis and with the absence of the signs of incurability mentioned under Group IV.

Group III.—A localized gross carcinoma in the breast with early or moderate axillary involvement, but without the signs of incurability mentioned under Group IV.

Group IV.—Carcinoma of the breast with axillary metastasis and the presence of any one or any combination of the following signs: Infiltrating carcinoma in the breast; diffuse carcinomatous involvement of the breast; diffuse or extensive axillary metastasis; diffuse edema of the breast or overlying skin not due to obvious inflammation; multiple secondary nodules in the breast; metastatic nodules in the skin of the breast; ulceration of the carcinoma through the skin; and distant metastasis to the supraclavicular lymph nodes or elsewhere.

Unclassified.—It will be noted in Table VI that 15 per cent of the traced patients treated by operation only, 2.8 per cent of those treated by operation and irradiation, and 7.8 per cent of the total traced patients were unclassifiable. The failure to classify was not due to any inherent difficulty in the method of grouping but to inadequacy of the data recorded. This is particularly true for the patients operated upon 15, 20, and 25 years ago. In all of the unclassified cases in the series under consideration, the operations were performed prior to 1921. In this connection it should be borne in mind that 91.3 per cent of the nonirradiated and 43.9 per cent of the irradiated patients were operated upon prior to 1921. These facts adequately account for the relatively high percentage (15 per cent) of unclassified nonirradiated cases. It may be stated that, on the basis of the various tests applied, the values for the unclassified cases in terms of clinical end-results closely approximate those of Group III as defined above. These unclassified cases will not enter further into our discussion.

The requisites for satisfactory classification into the foregoing groups are adequate and accurately recorded clinical (physical) and gross pathologic findings. Histologic and cytologic details concerning the tumor or its metastases do not enter into the decisions. Microscopic confirmation of the presence or absence of secondary nodules in the breast, infiltration or multiple nodules in the skin, involvement of the pectoral muscles, and the presence and extent of axillary involvement or the absence of such involvement is necessary.

The basis for the grouping is largely objective and is dependent upon the observance and correlation of physical phenomena prior to and subsequent to operation. A more detailed consideration of the differentiation of the groups will be presented in a future publication. The method is applicable only to surgically treated patients.

This method of grouping separates the treated patients into those who are curable (Groups I and II), those who are incurable (Group IV), and those in whom the clinical end-results are intermediate between the curable and the incurable (Group III). In the curable patient the disease is in the early stage, in the incurable it is in the advanced stage, and in the intermediate group it is in the moderately advanced stage, generally speaking. The intermediate group cannot be so precisely defined as can the curable and the incurable. The absence of axillary metastasis is the most potent factor in separating the curable from the incurable patients, but it is not an infallible index.

Curability and incurability are not synonymous with longevity. For example, a patient with an obviously incurable scirrhus carcinoma of the breast with distant metastases may survive 10 years or more with no treatment what-

TABLE VI
CLASSIFICATION INTO GROUPS IN ACCORDANCE WITH THE EXTENT AND CHARACTER OF INVOLVEMENT AT THE TIME OF OPERATION
306 Traced Patients—282 Classified, 1895-1928

Treatment	Classified					Un-classified	Total traced cases
	Group I	Group II	Group III	Group IV	Total		
Operation only:							
Cases	4	39	23	41	107	19	126
Per cent	3.7	36.4	21.5	38.4	85.0	15.0	...
Operation and irradiation:							
Cases	1	44	59	71	175	5	180
Per cent	0.6	25.2	33.7	40.5	97.2	2.8	...
Total:							
Cases	5	83	82	112	282	24	306
Per cent	1.8	29.4	29.1	39.7	92.2	7.8	...

ever. On the other hand, a patient who has a carcinoma of only a few months' known duration and in whom all signs dependent upon clinical and pathologic interpretations are favorable may die of cancer within a few months following the most meticulously executed surgical operation with or without subsequent intensive irradiation. There are no infallible rules for predicting the outcome in individual cases. The best that can be done is to arrive at a reasonably reliable average for a series of cases.

The validity of the classification suggested above will be determined in the last analysis by the reliability with which the average clinical end-results can be prognosticated for the individual groups. The average results for an entire series of cases will be determined largely by the relative proportions of the individual groups entering into the total. The acceptability of this method of grouping will depend upon the facility and accuracy with which it may be applied by others who are interested in the problem. Its application does not require the services of an expert.

COMPARATIVE RESULTS IN CLASSIFIED PATIENTS
(GROUPS I TO IV) TREATED BY OPERATION
ONLY OR BY OPERATION AND
IRRADIATION

Comparative data relative to 107 patients with cancer of the breast who were treated by operation only and 175 patients who were treated by operation and irradiation are presented in Table VII. The total 282 cases are those which could be satisfactorily classified from the records; they are divided into 4 groups in accordance with the extent and character of involvement at the time of operation and pursuant to the plan defined in the preceding section.

It will be noted that the percentages of patients in the advanced group (Group IV) are approximately equal in the nonirradiated and irradiated groups treated, that the percentages of curable patients (Groups I and II) are distinctly higher in the nonirradiated group, and that the percentages of patients in the intermediate group (Group III) are distinctly lower in the nonirradiated cases. The relative proportions of these 4 groups entering into the totals of patients treated by operation only and by operation and irradiation necessarily must influence the end-results in any comparison of the totals of the 2 types of treatments. Group IV cases exert an unfavorable influence while Groups I and II exert a favorable influence, as is indicated by the data included in the table.

Age.—So far as can be determined by a study

of averages, it is apparent from the table that age is not an important factor in the end-results, either in the individual groups or in the total cases classified.

Preoperative Duration.—The average preoperative duration of the disease in months for the individual groups and the total cases classified are given in the table. These averages are computed on the basis of the information available in the records, but too great significance should not be attached to these values since clinical histories are notoriously unreliable as a guide to the determination of the actual length of time that a neoplasm has been present before the first examination. In a general way and with the above limitations in mind, it may be noted that the preoperative duration in the individual groups as well as in the total classified is at least as great in the patients treated by operation only as in those treated by operation and irradiation. It will also be noted that the longest durations are in the advanced stages (Group IV).

Average Postoperative Survival.—The average periods of postoperative observations for the individual groups and the total classified are shown in the table. There is a constantly decreasing period of known survival in progressing from the early to the advanced stages. The disparity in the average known survival between the nonirradiated and irradiated patients is least in Group IV for 2 reasons: (1) The relatively larger number of cases under consideration, and (2) the rapidity of progress and hence the relatively shorter period of postoperative observation necessary in order to obtain complete information. The figures given are based upon all patients traced, whether dead or alive, which also accounts for disparity of average durations. In the groups having a high percentage of dead, the duration can be determined more precisely than in the groups having a high percentage of living, the latter being a constantly changing value. The only significance to be attached to the actual figures given is that on the average, nonirradiated patients were traced at least as long after operation as were the irradiated patients.

Deaths in Less Than 5 Years.—The percentages of patients who died in less than 5 years from all causes among those treated by operation only and by operation and irradiation in the individual groups and the total are given in the table. It will be noted that there is a constantly increasing percentage of dead in progressing from the early to the advanced stages. It is noteworthy that the percentage of dead is

practically the same for the nonirradiated and the irradiated patients in each of the 4 groups, there being only a 3 per cent difference in Group II.

Alive 5 Years or More.—The percentages of patients known to be alive 5 years or more with and without clinical evidence of cancer in the nonirradiated and irradiated groups are shown in the table. It is of interest that there are practically no 5-year survivals in Group IV (incurable); approximately 25 per cent of the patients in Group III (intermediate) survived 5 years, from 55 to 62 per cent of those in Group II, and from 75 to 100 per cent of those in Group I. Any differences in results between the nonirradiated and irradiated patients are probably without significance. The results are at least as favorable in the nonirradiated as in the irradiated patients.

Postoperative Clinical Evidence of Cancer.—The percentages of patients dead and alive in less than 5 years with clinical evidence of cancer are shown in the table. The values are practically identical for the nonirradiated and irradiated patients in the individual groups.

The percentages of patients in whom clinical evidence of cancer developed during the follow-up period irrespective of time are also shown in

the table, and these percentages are practically identical in the individual groups for the non-irradiated and irradiated patients.

When the axillary nodes were involved, the percentage of patients in whom the follow-up showed clinical evidence of cancer varied from 53 to 57 per cent in Group III and from 97 to 100 per cent in Group IV. It is presumed that the axillary nodes are not involved in Groups I and II.

When the axillary nodes were not involved, 100 per cent of the patients in Group I were found to be cancer-free in the follow-up and from 86 to 97 per cent of those in Group II. It is presumed that the axillary nodes are involved in Groups III and IV.

Local Recurrence in the Field of Operation.—The percentages of patients in whom positive local recurrence developed in the field of operation are given in the table for the individual groups and for the total classified. The figures for all the patients irradiated and for those who had irradiation immediately after operation are given separately. There were no recurrences in the patients in Group I; from 3 to 7 per cent of the patients in Group II had recurrences, from 30 to 37 per cent of those in Group III, and from 15 to 27 per cent of those in Group IV.

TABLE VII

COMPARATIVE RESULTS IN 282 CLASSIFIED NONIRRADIATED AND IRRADIATED PATIENTS ARRANGED INTO GROUPS BASED UPON THE RELATIVE DEGREE OF ADVANCEMENT OF THE CANCER AT THE TIME OF OPERATION

	Group I		Group II		Group III		Group IV		Total classified	
	Operation only	Operation and irradiation	Operation only	Operation and irradiation	Operation only	Operation and irradiation	Operation only	Operation and irradiation	Operation only	Operation and irradiation
Cases classified	4	1	39	44	23	59	41	71	107	175
Per cent	3.7	0.6	36.4	25.1	21.5	33.7	38.4	40.6	0	0
Average age (years)	50	47	49	49	56	51	52	50	52	50
Average duration preoperatively (months)	12	6	20	9	14	14	41	20	26	15
Average postoperative survival (months)	160	205	149	106	85	63	17	20	85	57
Per cent dead in less than 5 years. Per cent alive 5 years or more ...	0 75	0 100	8 62	11 55	44 26	44 25	85 0	85 1	45 31	52 23
Per cent dead or alive with cancer less than 5 years	0	0	0	9	44	46	95	95	46	56
Per cent with cancer in follow-up.	0	0	0	11	57	56	98	99	51	65
Per cent with cancer in follow-up when axillary nodes were involved	0	0	0	0	53	57	97	100	0	0
Per cent free of cancer when axillary nodes were not involved ...	100	100	97	86	0	0	0	0	0	0
Per cent local recurrences	0	0	3	7	30	37	15	27	13	25
Per cent local recurrences after postoperative irradiation	0	0	0	5	0	30	0	22	0	21
Average postoperative duration of the dead (months)	0	0	119	99	69	50	18	20	47	38
Average postoperative duration of those dead of cancer in less than 5 years (months)	0	0	0	28	42	38	16	16	22	23

The lower percentage of recurrences in Group IV as compared to Group III is probably due to the longer period of survival in the latter group.

*Duration of Life (Dead with or without Cancer).—*The average duration of life of the patients who were known to be dead following operation, with and without clinical evidence of cancer, is approximately equal for the nonirradiated patients in the individual groups.

The average duration of life (months) of the patients who were known to be dead of cancer in less than 5 years following operation is equal in the separate groups.

Fig. 2 shows graphically the comparative percentages of patients in whom clinical evidence of cancer developed at the end of 1 to 10 years following operation in the nonirradiated and irradiated patients in Groups II, III, and IV. Group I is omitted because the follow-up showed all the patients to be cancer-free. Groups II, III, and IV are clearly differentiated with regard to end-results as indicated by the occurrence of cancer following operation. There is an insignificant difference in the end-results in the irradiated and nonirradiated patients in each group as judged by this criterion.

An analysis of the data presented in Tables VI and VII and in Fig. 2, comparing the clinical end-results in 4 groups in which the degree of advancement of cancer in the nonirradiated and irradiated patients was approximately equal, shows no unequivocal improvement in the clinical end-results attributable to irradiation as judged by the criteria set forth in the tables.

That the clinical end-results are definitely related to and are very largely determined by factors other than the irradiation is illustrated in Fig. 3. The height of the vertical columns represents the percentages or relative proportions of curable, intermediate, and incurable patients in the total traced classified cases treated in the successive 5-year chronological periods from 1895 to 1928. The percentage of patients irradiated is indicated by the gradually ascending line. The horizontal line representing the percentage of patients who were dead or alive with clinical evidence of cancer in less than 5 years parallels the percentage (height of the Group IV column) of incurable patients in each chronological period and is independent of the percentage irradiated. Conversely, the horizontal line indicating the percentage of 5-year survivals parallels the percentage (height of the columns for Groups I and II combined) of curable patients treated in each chronological period and is independent of the percentage of patients irradi-

ated. These relationships are uniform throughout the figure.

This figure furnishes a basis for explaining the variations in the clinical end-results in the individual chronological periods as well as the differences in the results previously noted in the patients treated by operation only and in those treated by operation and irradiation.

SUMMARY

A series of 458 patients, males and females, who had primary malignant tumors of the breast of all types, unilateral and bilateral, operated upon during the years 1895 to 1930 inclusive has been studied. The general end-results of the entire series have been published elsewhere. The more definitive end-results given in this paper are based largely upon the patients treated from 1895 to 1928 exclusive of cases of cancer of the breast in males, and sarcoma, Paget's disease, papillary carcinoma, and sweat-gland cancer in females.

A 5-year follow-up is possible for patients operated upon from 1895 to 1928. The follow-up data have been presented with the aid of tables and figures arranged to show the results in successive 5-year periods and in the totals for patients treated by operation only and by operation and irradiation.

The irradiation employed has been analyzed with reference to source, incidence, and time of application.

All cases have been included in which the postoperative course could be reduced to tabular or figure form, irrespective of the stage of the disease at the time treatment was begun. No allowance has been made for poorly executed or inadequately applied treatment, whether by operation or by irradiation.

The criteria which have been applied in evaluating the end-results are as follows: Determination of the percentage of patients known to be dead or alive at the end of 1 to 10 years of follow-up, with and without clinical evidence of cancer; the percentage who died of cancer in less than 5 years; the percentage dead and alive with cancer who were followed less than and more than 5 years; the average known duration of life following operation; the average postoperative duration of life of the known dead, and of those who died of cancer in less than 5 years; the percentage in whom the follow-up showed clinical evidence of cancer irrespective of postoperative duration; and the percentage of local recurrences in the field of operation. The average age and the average preoperative duration of the cancer are given for the classified cases only.

A basis for grouping surgically treated patients for comparative prognostic purposes in accordance with the extent and character of involvement at the time of operation has been discussed and illustrated. The method has been utilized for contrasting the results in groups of nonirradiated and irradiated patients which are comparable in regard to the severity or degree of advancement of the cancer. The method is simple, logical, and easily applied.

The influence of varying proportions of favorable and unfavorable cases upon the end-results has been discussed and illustrated.

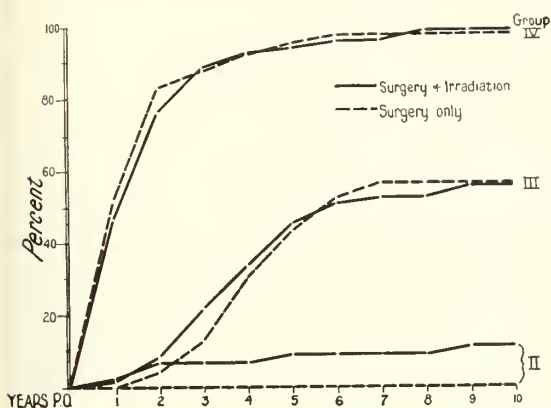


Fig. 2.—The comparative percentages of nonirradiated and irradiated patients in whom clinical evidence of cancer developed in 1 to 10 years; 282 classified traced patients (1895-1928). Groups II, III, and IV. (Group I is omitted, because all patients in this group remained cancer-free.)

CONCLUSIONS

1. In the series of cases of primary cancer of the breast studied, there was no general indication that the clinical end-results were better in the patients who were treated by operation and irradiation than in those who were treated by operation only, as judged by the criteria mentioned in the summary. This was found to be true whether the comparisons were made of the totals for the nonirradiated and irradiated patients for the entire time period—1895-1930—or for successive 5-year periods.

2. The clinical end-results for both the nonirradiated and irradiated groups fluctuated considerably in the various successive 5-year periods. That these fluctuations were not directly related to or determined by the irradiation was indicated by the fact that the variations in the results in both the nonirradiated and irradiated groups occurred in the same direction, while the results in the combined groups did not vary in conformity with the incidence of irradiation.

3. In a consideration of the general end-results, there was noted an apparent variable difference of approximately 10 to 12 per cent in favor of the nonirradiated patients. Since the

difference did not appear to be directly related to the irradiation, a more satisfactory explanation was sought and found in the variations in the relative proportions of favorable and unfavorable cases in the various 5-year periods and in the totals for the nonirradiated and irradiated groups.

4. When the method of classification suggested in the text was applied to patients having cancers of approximately equal advancement, the clinical end-results as judged by the criteria previously mentioned were found to be so approximately equal in the nonirradiated and irradiated patients as to be probably without significant difference for the individual classified groups. There remained distinct differences in the results between the total classified nonirradiated and irradiated patients owing to inequalities in the relative proportions of the classification groups entering into the totals.

5. Comparisons of methods of treatment of cancer of the breast based upon analyses which do not take into account the relative proportions of favorable and unfavorable cases entering into the totals are prone to lead to erroneous conclusions.

6. In our experience up to 1930, there is no substantial indication that the roentgen irradiation employed has prevented recurrences, cured recurrences, or cured metastases. The foregoing statement has no bearing upon the unquestioned benefits of roentgen irradiation as a palliative therapeutic agent.

7. The fundamental principle underlying the treatment of cancer of the breast is complete eradication or complete destruction of the neoplasm before it has become disseminated beyond the possibilities of removal or destruction. Any therapeutic procedure or combination of proce-

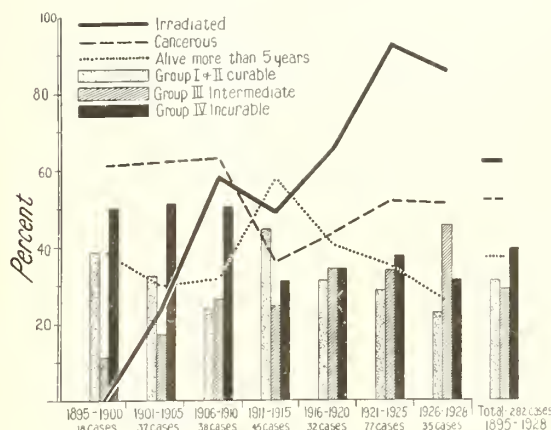


Fig. 3.—There is a direct relationship between the results and variable proportions of early and advanced cases, and lack of relationship to irradiation in successive 5-year periods from 1895 to 1928; 282 classified traced patients.

dures which meet the requirements of this principle will give favorable results.

8. Delay is the greatest menace with which patients with cancer of the breast are confronted. Poorly executed or inadequately applied treat-

ment, whether by operation or irradiation, is second only to delay as a menace.

Cleveland Clinic.

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THE DIAGNOSIS AND TREATMENT OF CANCER OF THE BLADDER BY MEANS OF THE ROENTGEN RAY*

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The diagnosis of tumors of the bladder can be made by cystoscopy, and there is no thought of eliminating this method of diagnosis. In dealing with such a serious problem as cancer of the bladder, no method that will give additional information should be neglected. I have been using the roentgen rays in the study of tumors of the bladder since 1908. Tumors of the bladder can be demonstrated by the roentgen rays after filling the bladder with air. Tumors as small as the end of the finger and as large as a fist have been shown by this method. It is particularly desirable to have a photographic record of such tumors, for then it is possible to make progressive studies of the disappearance of such tumors under roentgen-ray treatment.

This method of examination also has a special advantage over that of cystoscopy, because the degree of infiltration of the bladder wall can be detected more or less. It is well known that, if a tumor of the bladder has not infiltrated the bladder wall and the surrounding tissues, there is more opportunity of curing it. The papillary type of cancer is more responsive to irradiation than the infiltrating variety, and more rapid results are obtained. Furthermore, the study of the tumor by the pneumocystogram gives the radiologist a more definite idea as to the location and enables him to direct the rays more accurately into the base of the tumor by cross-firing on this point, whereas if the patient has a tumor of the bladder as observed cystoscopically, it is impossible to take the greatest advantage of the cross-fire method. Sometimes there is so much bleeding in the urine that the cystoscopist experiences difficulty in getting a clear view of the tumor tissue. In the diagnosis and treatment of tumors of the bladder, it is advisable to have close co-operation between the urologist and the radiologist.

METHOD OF EXAMINATION

Briefly, the examination of the bladder by pneumocystography requires the following:

1. Place the patient in the supine posture upon the Potter-Bucky diaphragm and arrange the tube and compression band for an examination of the bladder.
2. Careful antiseptic cleansing of the urethra.
3. The introduction of a sterile, well-lubricated soft rubber catheter of the largest size that the urethra will take.
4. The drainage of any retained urine. Note the quantity and character of this urine.
5. Passage of a rectal tube to remove any retained gas in the rectum, and then removal of the rectal tube.
6. With an atomizer bulb attached to a properly fitting glass tube, inject air gently into the bladder until the patient complains of desire to urinate or until percussion indicates that the bladder is distended.
7. Allow the air to escape 2 or 3 times. This will commonly remove some additional residual urine. It is desirable to eliminate all possible residual urine.
8. Clamp the soft rubber catheter with a pair of hemostatic forceps and attach these forceps with adhesive plaster to the thigh so that the catheter will not come out and the air will not be expelled.
9. With the central beam of roentgen rays directed downward and forward and with the patient in the supine posture, make 3 or 4 8x10 inch negatives.
10. Turn the patient to the prone position on the Potter-Bucky diaphragm most cautiously so as not to have the catheter and the air expelled.
11. Make 3 or 4 8x10 inch negatives with some variation of exposure value with the central beam of rays directed obliquely upward so as to project the neck of the bladder clear of the pubic bone. A film made in the prone position usually shows the tumors best, because they

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

usually involve the posterior wall of the bladder and in this position are therefore surrounded by air.

12. Rotate the patient in the oblique prone position, first on one side and then the other, and pass the central ray through the median line of the bladder, making one 8x10 inch film in each position.

13. Rotate the patient cautiously to the back, remove the clamp, allow the air to be expelled, and withdraw the catheter.

14. The patient can then leave the table and either undergo treatment or go home.

In only one case out of several hundred has there been any chill or other unpleasant symptoms following these examinations. There is no real danger from embolism following this procedure if the work is carefully done.

yet been devised for the treatment of cancer of the bladder. Since all tumors are potentially cancerous, it is evident that no tumor or new growth in the bladder can be ignored. Some of the results obtained by a combination of destruction of the small benign tumors by the urologist preceded and followed by roentgen therapy leads to the conclusion that roentgen therapy should be considered by the urologist in conjunction with his own work in every new growth in the bladder. In practically all cases that I have treated, the patient has gone back and forth from my office, and in nearly all instances has carried on his or her usual occupation. Dr. Vastine and I previously reviewed the results obtained by us with the use of various combinations of irradiation and electrocoagulation, and local applications of radium either on the sur-

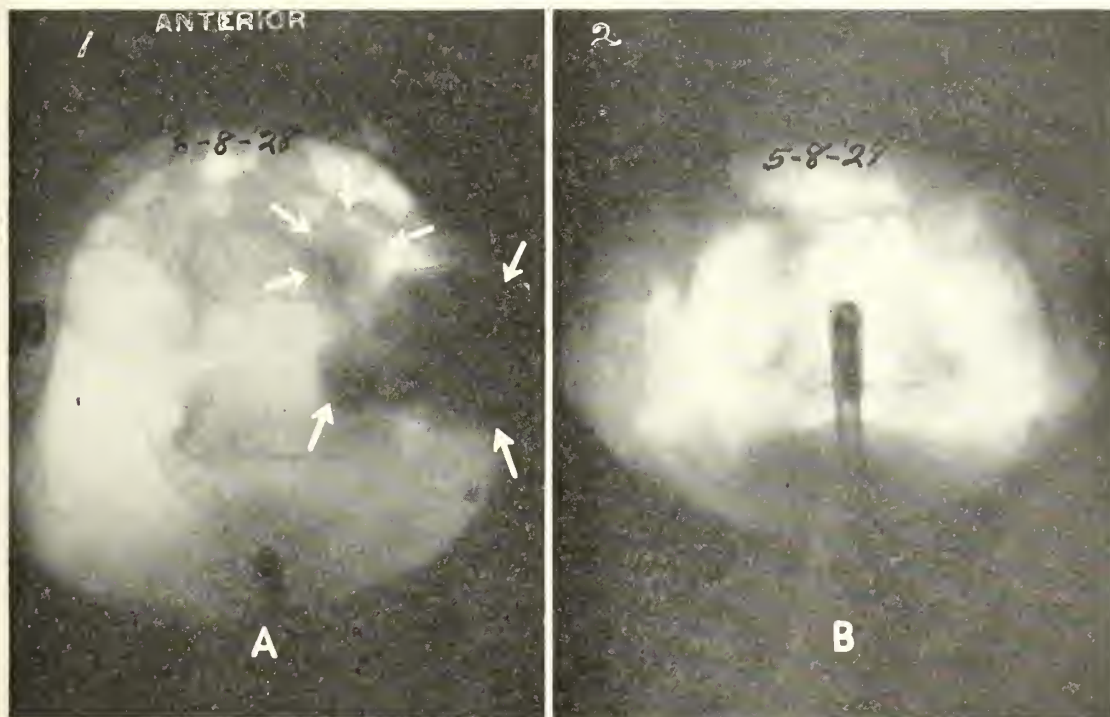


Fig. 1

(A) Pneumocystogram of a man, age 49, referred Mar. 21, 1925, on account of carcinoma of the glans penis, which had existed for one year. This was treated successfully by radium, roentgen rays, and electrocoagulation. Three years later, June 8, 1928, patient returned with the history of hematuria for 6 months. Pneumocystogram shows an ulcerating broad-based tumor of irregular density occupying the left wall of the bladder and extending over toward the region of the left ureter, projecting into the bladder 5 cm., with a base of 3 cm. A second tumor on the posterior wall of the bladder was approximately 2 cm. in diameter.

TREATMENT

My previous papers upon this subject will give other details and arguments regarding this work. This method of treatment is the most agreeable and most helpful of anything that has

(B) The bladder after treatment by high-voltage roentgen therapy, assisted by cystoscopic electrocoagulation done by Wilbur H. Haines. This pneumocystogram was made May 8, 1929, showing the bladder wall normal. The patient is still well nearly 7 years later. Other patients have been treated successfully more recently without any electrocoagulation.

face or interstitially. None will produce the results that can be obtained by this method providing the work is carefully, thoroughly, and skillfully done. No two cases of cancer of the bladder can be treated exactly alike until we find that two cases are identical clinically and pathologically. The treatment will vary with the con-

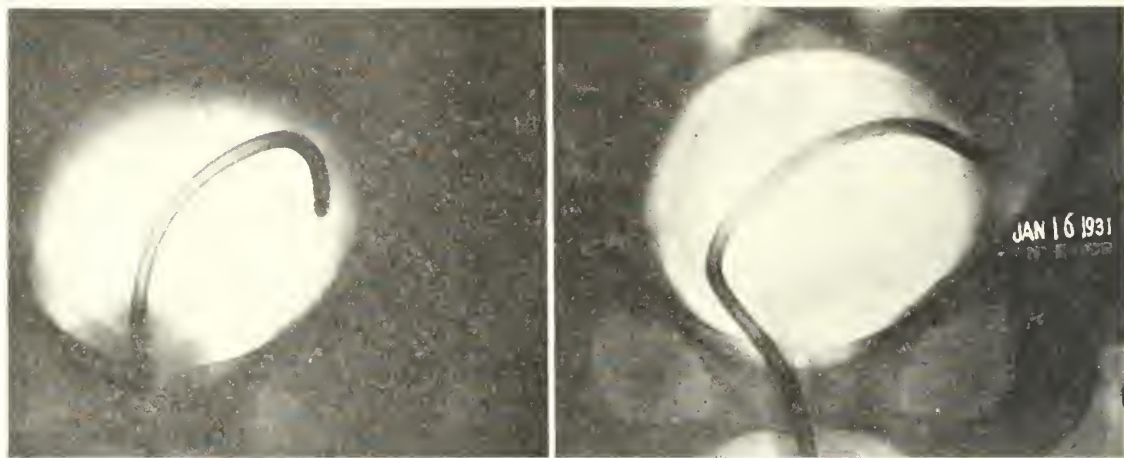


Fig. 2

Female, age 55, was referred June 13, 1930, on account of hematuria for several months. Pneumocystogram shows a tumor irregular in outline, with a broad infiltrating base about the size of a hen's egg surrounding the urethra. The patient was given high-voltage roentgen treatment. After 3 months, on Sept. 10, re-examination showed that five-sixths of the tumor had disappeared. All the patient's symptoms had gone.

After 6 months, on Jan. 16, 1931, the patient was re-examined and all the tumor had disappeared. The patient is well today, more than 5 years after treatment, and she had no other form of treatment except high-voltage roentgen rays.

dition of the patient and the location and extent of the disease. It is possible, therefore, only to outline general principles as follows:

1. It should be the aim to introduce as much radiation effect into the tumor area as is possible without damage to the normal surrounding structures.

2. This effect must be kept up more or less continuously during a period of at least 3 or 4 weeks and at times 3 or 4 months in the more resistant type of tumor. Even if the tumor shows only little response at the end of 3 or 4 months, this does not mean failure.

3. In order to accomplish these 2 results, it is advisable to treat the patient daily for 3 or 4 weeks. In each instance, however, the individual dose and the total dosage given through each portal of entry must be measured, and the total dosage delivered to the tumor from day to day must be estimated.

4. We commonly use 4, 5, or 6 portals of entry, directing the rays toward the tumor, so as to do as little damage to the normal tissues as possible. This requires careful alignment of the beam of rays so that no excessive dosage will be delivered to the subcutaneous tissues or the rectum.

5. In women there is the advantage of the vagina being located near the posterior wall of the bladder. Therefore, it is our custom in women to supplement the high voltage roentgen-ray treatment by a special radium tampon introduced into the vagina carefully, using 2 mm. of platinum as filtration and carefully guarding the rectum with 3 mm. of additional lead protection, and using as much distance as the vagina will

permit, which is usually about 2 cm. in each direction.

6. In order to protect the normal tissues, at least 2 mm. of copper filtration is advisable and 50 cm. distance.

7. When using the high voltage roentgen rays, we commonly give 300 r in each daily dose.

Perhaps it would be advantageous at times if these patients could be treated twice daily. Keeping the above principles in mind and with the use of the saturation curve, we have been able to treat these patients with practically no damage to the normal tissues and with remarkable success.

RESULTS OF TREATMENT

For the present I am able to give you only my rather enthusiastic impression of the results that can be obtained, for I have no extensive statistics available. However, there are patients who have remained well as long as 7 years, and by means of pneumocystograms the progressive reduction and final disappearance of the tumor can be observed. There can be no doubt that this disappearance is due to the irradiation. It is also a remarkable fact that when these patients are examined by the urologists, as has been observed by Drs. Mackinney, Bothe, Birdsall, and others, the bladder wall has a normal or almost normal appearance. In one case, even though the patient was cured of the large carcinoma about the ureter and posterior wall of the bladder and even though some small papillomata developed around the neck of the bladder later, there was no evidence of recurrence of the original tumor.

The hematuria is usually relieved in 3 or 4 weeks, sometimes sooner. At the end of the month the patient is usually symptom-free. Compare this effect with the results that are obtained by any other method. It is a very great advantage if all of these patients can be kept under observation by the urologist during and following the roentgen therapy, for I never feel entirely satisfied until the urologist tells me that all of the tumor tissue is gone.

1930 Chestnut Street.

ABSTRACT OF DISCUSSION

THEODORE R. FETTER (Philadelphia): There should be no doubt of the efficacy of pneumocystography in the diagnosis of bladder tumors as presented by Dr. Pfahler. Cystoscopy, however, remains the most important single diagnostic procedure in bladder tumors.

The cystoscopist, when referring a case of bladder tumor to the radiologist for therapy or for further diagnostic data, should include a thorough detailed report of the tumor as observed by direct inspection of the bladder. Thus, it is necessary to have close co-operation between the urologist and the roentgenologist. It is the practice at Jefferson Medical College Hospital to discuss each case of bladder tumor with Dr. Willis F. Manges or his assistants before therapy is instituted.

It is true that the average cystoscopist may experience difficulty in noting the degree of infiltration of the bladder wall due to a growth; but if he will insert his finger in the rectum or vagina while the cystoscope is in place and carefully palpate the bladder base, he invariably will obtain additional data as to the degree of infiltration. The cystoscopic picture of the infiltrating carcinomata presents a variable view. This type of tumor is nodular, ulcerated, with possibly areas of necrosis or bleeding, an intensely angry-looking neoplasm; the remaining bladder mucosa presents signs of various grades of inflammation. The benign papilloma or the papillary noninfiltrating carcinoma is an apparently innocent-looking growth, its fronds waving gently to and fro in the distending medium, and the surrounding mucous membrane pale.

There are several conditions of the bladder in which a pneumocystogram may lead to an erroneous conclusion. The contracted, irregularly shaped bladder due to tuberculosis should be remembered. Just recently a member of our staff presented such a case in which a diagnosis of bladder tumor had been made from the pneumocystogram.

A severe infection of the bladder mucosa due to the *Alcaligenes* produces a marked change of the bladder wall, wherein the cystoscopic picture may resemble a bleeding papillary carcinoma with the remaining mucosa intensely inflamed and covered in areas with incrustations or mucopurulent débris.

To be successful in the treatment of bladder tumors the physician must be thoroughly versed in the various procedures recommended by outstanding clinics. It is impossible to be dogmatic in their management. The various types of bladder tumors require different methods of approach in their treatment. Personal experience with a particular type of treatment should be tempered by a knowledge of the experience of other clinicians.

I am thoroughly in accord with Dr. Pfahler that transurethral treatment of bladder tumors by electro-

coagulation should be preceded and followed by roentgen therapy. There is no doubt that the deep therapy has an untold value in the management of the benign papilloma, particularly in preventing spread, likewise in the multiple benign papillomata and the noninfiltrating papillary carcinomata. In the infiltrating papillary carcinomata variable results are reported. Deep therapy should be instituted, but too much should not be expected from its use. Some cases respond in a very satisfactory manner; others do not. The matter of dosage and the technic involved should be left to the radiologist.

There are, however, many other methods available for the treatment of bladder tumors. The urologist must study each case carefully in order to carry it to a successful conclusion.

LLOYD B. GREENE (Philadelphia): I should like to refer to the incidence of pain from roentgen-ray treatment. I recently had a case of a man who suffered most intensely from roentgen-ray treatment of tumors. His suffering lasted for a period of 6 or 8 months.

If the papilloma is large, we open the bladder. If the tumor extends outside the bladder, then the patient is dying of carcinomatosis.

ELMER HESS (Erie): Dr. Pfahler has detailed a group of successful cases, but he has not discussed any failures. He has shown us that we can have great successes in spite of the many failures that we must have. The important thing is to get the patient for cystoscopic examinations after the first hemorrhage. Until we do there will be the same mortality and morbidity as now exists. It is immaterial that a man reports only successes, even though he is bound to have a lot of failures and fails to show them. These are successes even though they may be a very small percentage of a large series of cases. Before the use of roentgen-ray therapy, radium, and fulguration, the mortality in my cases was high. Since I have been treating them cystoscopically, the results have changed and a large percentage of my patients are alive and well. These patients should be watched cystoscopically, not roentgenologically.

DR. PFAHLER (in closing): I should like to emphasize everything that Dr. Hess has said. The most important point is early diagnosis, and toward that end I speak now as chairman of the Commission on Cancer. The Commission has made a film on cancer control. That film is intended to show what is available for doctors and others to use for the education of the layman. If this film will be shown wherever possible, cases of cancer of the bladder will come under observation earlier for diagnosis and treatment. The film is available to show to any lay group or even in a store on a busy street. People will stop to see a picture or something in motion when they will not read a pamphlet or listen over the radio or even read about it in the newspaper. Every frame in that film tells a story. If a person looks at only one picture, there is a message even in that. If you can get your county medical societies or your cancer control committees to make use of the film, progress will result.

Much will depend upon skill and judgment in applying the technic outlined to the particular case under consideration. Harm can be done, as has been suggested, but there have been no serious symptoms with the technic that we have used during the past few years, and our results have been so pleasing that it is quite natural that we should have a certain amount of enthusiasm.

MODERN TREATMENT OF HUMAN INFERTILITY*†

BRADFORD GRFEN, M.D., PHILADELPHIA

The ability to reproduce has always been a matter of vital importance in history, politics, and society.

Until comparatively recently, failure to conceive has been looked upon as the fault of the wife and all corrective measures have been directed toward the female partner. Careful study has shown, however, that the causes of infertility are about equally distributed between the male and female partners; hence, any logical treatment should be directed at both husband and wife.

According to present-day statistics, an average of no less than 4 possible causes are found in each couple that present themselves to a physician to determine why they do not have children.

MALE FACTORS

In considering the male causes, a fresh specimen of semen is absolutely essential. It should be collected after a moderate period of abstinence and examined at once for total volume, viscosity, turbidity, chemical reaction, and precise evaluation of the spermatozoa. The volume in normal individuals is 3 to 6 c.c., being increased by continence and decreased by repeated coition. Turbidity gives an index of cell content and formed elements. The pH ranges between 8.0 and 8.4, although fertile specimens have been found with a pH as low as 7.4 and as high as 9.0. Undue viscosity signifies either increased production of prostatovesicular mucus or decreased mucolytic power. Increased prostatovesicular mucus suggests chronic infection or congestion of prostate and vesicles, which should be treated in the usual manner since undue viscosity is a decided impediment to motility and endurance of the sperm. In normal specimens of semen, the sperm count should range between 75 and 200 million per c.c. with at least 70 per cent actively motile and another 10 per cent motile but sluggish. The incidence of morphologically abnormal forms should be less than 15 per cent. If above this figure, some demonstrable constitutional depression is suggested.

An abnormal semen calls for a thorough general examination with especial emphasis upon infection and endocrine imbalance. All possible

foci of infection should be cleared up. A diet containing an abundance of vitamins, particularly vitamin B and vitamin E, with balanced protein, fat, and carbohydrate should be prescribed. Plenty of rest, fresh air, and exercise with moderate abstinence from coition are of importance. Injections of anterior pituitary-like sex hormone have produced good results when used to increase the sperm count and percentage of motile sperm and to decrease the percentage of abnormal forms.

An evaluation of the endocrine function of the thyroid and pituitary glands is important and is best done, first, by physical examination and, second, by laboratory tests. Pituitary hyperfunction in early life produces gigantism whereas after puberty it produces acromegaly. Hypofunction on the other hand, if occurring in childhood, gives the well-formed dwarf and in adult years usually causes obesity unaccompanied by bony changes. Milder pituitary dysfunctions are brought to light by the galactose tolerance test. The normal male responds positively to 30 gm. of galactose from childhood to old age. Pituitary overactivity and the usual type of pituitary dysfunction both depress the galactose tolerance to levels which in severe cases are less than 5 gm. Bilobate pituitary failure, on the contrary, has a directly opposite effect, producing an increased tolerance which may reach 200 to 300 per cent above the expected normal.

Treatment of pituitary dysfunction consists of administration of desiccated whole gland by mouth in sufficient doses to produce satisfactory effect upon metabolism, spermatogenesis, and general health. Overdosage will manifest itself in the production of headache and vertigo. Mild roentgen-ray therapy to the gland may be of value in pituitary hyperfunction.

An evaluation of thyroid efficiency is best arrived at by studying repeated basal metabolic readings in conjunction with the usual physical findings. However, due consideration should be given to the possibility of conditions other than thyroid dysfunction affecting the basal metabolic rate. Thyroid hypofunction is best treated by the guarded use of thyroid extract. Hyperfunction usually requires partial or total ablation, either surgically or by roentgen ray. In the infertility cases, hypofunction of the thyroid is more often encountered than hyperfunction.

A complete azoospermia calls for aspiration

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

† From the Greatheart Obstetrical Service, Temple University Hospital.

of the testicle. If the aspirate shows normal spermatogenesis a mechanical blockage is indicated, and in an attempt to restore the normal route the choice will lie between epididymovasostomy and artificial insemination with secretions aspirated from the testicle. Complete azoospermia of the aspirate offers a poor prognosis for any type of treatment but warrants a series of injections of pregnancy urine in the hope that spermatogenesis may occur. Faults in delivery due to congenital abnormalities can be overcome by posture during the sex act, by a condom with a pin hole in the end, or by artificial insemination.

FEMALE FACTORS

In the consideration of female causes of infertility, the same general rules apply as in the male regarding complete history and physical examination, elimination of foci of infection, improvement of the general hygiene and diet, and pituitary and thyroid medication as indicated. A thorough gynecologic examination and Rubin's test, with lipiodol injection and roentgen ray if necessary, should be made. Any conditions such as an infected cervix or tubo-ovarian disease must be remedied in the usual manner.

A careful menstrual history should be taken to determine the function of the ovaries. In ovarian hypofunction there is a tendency to acne of the face and chest, and overgrowth of hair with masculine distribution on the upper lip, chest, and suprapubic area. Obesity is common but not always present. The menses tend to be irregular, scanty, and accompanied by gastrointestinal complaints. Hypofunction from puberty produces a poorly developed uterus with a low uterine index and retarded onset of the menses. Hyperfunction causes excessive menstrual bleeding and a short cycle. Various tests have been devised to show the amount of hormone present in the blood and urine, but these are still too intricate to be performed by the average worker.

In those cases in which the glandular system is apparently normal, there is still the possibility of anovulatory menstruation due to failure of the graafian follicle to rupture. A microscopic study of the endometrium obtained just before an expected period will show whether the gland epithelium has definite secretory activity. If so, the presence of progesterin is indicated, which in turn presupposes the presence of a corpus luteum, and therefore that ovulation has occurred.

The treatment of the different ovarian dysfunctions at the present time is legion and varies with almost every worker in the field. In brief,

hypofunction is treated with desiccated whole gland or by the various stimulating hormones as theelin, amniotin, antuitrin S, and such products. Mild roentgen-ray stimulation of the pituitary gland and the ovaries has been used with good results. Both roentgen ray and radium as ovarian stimulants are to be used with extreme care as overdosage will produce castration and defeat the purpose of the treatment. Hyperfunction of the ovaries responds best to treatment of the thyroid and pituitary glands in an attempt to balance the endocrine triumvirate. The treatment of anovulatory menstruation is empirical and consists of daily injections of prolan-containing principle (200 rat units), beginning at about the expected time of ovulation and continuing for several days in the hope of promoting rupture of the graafian follicle.

A particular field of therapy has been opened by experimental work originally aimed in exactly the opposite direction to be used as a contraceptive measure, namely, the attempt to discover the exact time of ovulation. At the present time this is thought to be most often between the eleventh and fourteenth day following onset of the last menstrual period, or the fourteenth day before the onset of the next expected period. The ovum is believed to be fertilizable for about 24 hours while the male sperm are capable of fertilizing the ovum for 2 to 3 days after emission. Hence, in advising marital relations for the purpose of propagation, it would seem wisest to determine the time of ovulation, if possible, and advise coitus during the fertile period. It is surprising how frequently a couple may be seen who have intercourse only once a month, and it is highly probable that the single exposure occurs at a nonfertile time.

Certain factors of infertility depend upon joint therapy of husband and wife. This includes instructions in general hygiene such as obtaining sufficient rest and relaxation, abstinence from excessive coitus, and the opposite—too infrequent coitus. If necessary, proper methods of coitus should be taught. Especially careful supervision of the diet is of great importance due to the present-day fads in eating. The excessive use of alcohol and drugs is to be avoided. Mental tranquility should be maintained. Enough exercise to keep the body in good physical condition is essential, but fatigue and physical exhaustion must be guarded against.

PREGNANCY

An aspect of infertility which is of equal importance and interest is frequently overlooked. That is the carrying of a pregnancy to full term

with a living healthy child. This applies not only to the women who become pregnant after study and treatment, but also to the large group who become pregnant easily but in whom the pregnancy is terminated by habitual miscarriage or birth of stillborn infants.

Antenatal syphilitic treatment has lessened the incidence of habitual miscarriage and stillbirths, and produces a high percentage of healthy children not handicapped by the stigma of hereditary syphilis.

Diabetic mothers are prone to early abortion or delivery of stillborn macerated fetuses, yet supervision of the diet with the use of insulin offers great encouragement to such a woman.

The part played by vitamins in infertility is not yet well understood, but the addition of vitamins B and E to the diet of these patients has been followed by pregnancy too often to be purely coincidental. Their use has also proved most gratifying in cases of habitual early abortion in which no other deficiency could be found. Vitamin B is best prescribed in the form of brewer's yeast, and vitamin E in the form of wheat germ oil.

A proper endocrine balance is as important after the onset of pregnancy as before. Deficient corpus luteum formation is a common cause of bleeding and miscarriage in early pregnancy and one that fortunately is amenable to treatment either by oral or hypodermic administration of corpus luteum extract. The author has recently used a combination of desiccated thyroid, anterior pituitary extract, and corpus luteum in 3 cases with satisfactory results. Occasionally injections of pregnancy urine are of value in early pregnancy.

CONCLUSION

A painstaking study and correction of all these deficiencies will result in conception in from 20 to 40 per cent of childless couples. The treatment can be carried out on an elaborate scale if desired, but the average doctor with a microscope, a cervical cautery, a Rubin insufflator, and a small laboratory equipped for simple analysis can work wonders.

Great progress has been made in the study of endocrine and sex physiology in the last decade, and present indications are that equally great progress will be made in the next decade.

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ABSTRACT OF DISCUSSION

C. KENNETH MILLER (Philadelphia): In this age when physicians are dealing with contraception and all

of its newer aspects and methods, and with abortion and its effects which they see in the large general hospitals, the student or intern is apt to conclude that women never go to a physician to try to have a baby, but always to escape pregnancy.

Dr. Green has brought out several important points. The average woman consulting a physician about her infertility is usually accompanied by her husband. The first thing the physician does is to examine the woman carefully. If she comes to his office many times, he probably utilizes the important factors Dr. Green outlined in regard to infertility of the female. Finally, as a last resort, the physician thinks probably it is not her fault; it may be the fault of the man. In a cursory way he investigates certain facts concerning the male. He finds that the woman seems to be normal, but he seldom determines this by the different tests Dr. Green has described. Still the woman does not become pregnant. There is one factor often overlooked, namely, that the woman does become pregnant but promptly aborts at a menstrual time. She is more or less resigned to a childless marriage. With a little more care, this condition may be prevented.

In regard to giving corpus luteum in beginning hemorrhage at 2, 3, or 4 months of pregnancy, I have not had the favorable experience with it as claimed by some observers. In many of these cases, if we do not do anything but keep the woman quiet, we accomplish almost as much as by the administration of corpus luteum—certainly better results than by giving these glandular products with which the market is flooded.

The handling of cases of infertility will be greatly enhanced when we know more about endocrinology. There are those who think it may be the greatest factor in infertility of the female or of the male, and it may be that endocrinology will solve this problem.

A young couple who are very desirous of having a child came to my office 2 weeks ago. They had been to other physicians, and the young man showed me some bottles of glandular drugs that one physician had given this woman. Often a physician gives a patient glandular therapy for conditions wholly different from inducing pregnancy, and suddenly finds the patient becomes pregnant after 12 or 15 years of infertility. One woman recently became pregnant after taking glandular therapy for obesity and was delivered of a normal male child; she was age 50 and had been childless for 22 years.

CHARLES MAZER (Philadelphia): My remarks shall be confined to the problem of functional sterility, that is, the condition wherein there is no ascertainable cause to account for the existing infertility other than some form of menstrual disorder. In these cases endocrine products are employed together with hygienic and dietary measures. There is considerable confusion concerning the use of these products in the treatment of the condition. Generally we expect too much from endocrine products. In cases in which organotherapy might do good, errors in diagnosis and improper dosage often nullify its potential value. The subject may be summarized as follows:

1. Corpus luteum given by mouth is valueless. The average corpus luteum extract in ampule form contains no more than one-fiftieth of a rabbit unit per c.c. There is only one chemically pure product on the American market available for clinical use, dispensed in doses of one-fifth of a rabbit unit per c.c. This is the product employed by Krohn and Falls in the treatment of habit-

ual abortion. In adequate doses, given every other day for a period of 4 or 5 months, it is effective in at least 80 per cent of cases of habitual abortion.

2. Estrin when employed as the sole agent is rarely effective in the treatment of amenorrhea. The hormone has no stimulative effect either on the pituitary gland or ovaries. It does, however, produce growth and vascularity of the uterus which, if atrophic, may in some instances be the sole cause of an existing amenorrhea. These patients should be given a continuous supply of small doses of the follicular hormone estrin in the hope of reactivating the uterus and rendering it more responsive to the amount of the hormone the patient automatically produces. Large doses inhibit the anterior pituitary lobe and defeat the purpose. Doses must be employed that will produce a concentration of the hormone in the blood no greater than that normally current in the woman premenstrually. This amount is the difference between the amount the patient automatically produces and the predicted normal level of the hormone in the blood and urine. It is easily determined through laboratory studies. In the castrated woman, for instance, the administration of 1000 rat units of estrogenic substance daily by mouth produces a concentration of the hormone in the blood and urine comparable to that current in the normal woman premen-

strually. Less than half the amount will produce the same effect when given hypodermically. These figures are reliable guides as to dosage in cases of amenorrhea with marked uterine atrophy. Large doses are of value in the treatment of the severe menopausal syndrome.

3. Anterior pituitary lobe extract has a marked stimulative effect on the ovaries of experimental animals. Its effect on the human ovary is unknown. To the best of my knowledge, there is only one standardized anterior pituitary lobe extract containing the sex hormone. It is sponsored by the University of Wisconsin and may be given either hypodermically or intravenously.

The anterior pituitary-like substance obtained from the placenta or from pregnancy urine, when employed in combination with the extract of the anterior pituitary lobe, is effective in a small proportion of cases of amenorrhea showing definite evidence of pituitary deficiency.

As a whole, menstrual disturbances other than functional uterine bleeding infrequently respond to organotherapy. Low dosage irradiation of the pituitary gland and ovaries in doses of 50 to 80 roentgen units given 3 times in the course of 3 weeks is the most effective measure in the treatment of functional menstrual disturbances.

OUTSTANDING SIGNS AND SYMPTOMS IN SINUS THROMBOSIS*†

Merits and Demerits of Internal Jugular Ligation in the Treatment of Lateral Sinus Thrombosis

MATTHEW S. ERSNER, M.D., AND DAVID MYERS, M.D., PHILADELPHIA

Thrombosis of the lateral sinus as a complication of middle ear and mastoid suppuration never fails to produce mental aggravation. This invariably arouses considerable discussion wherever otologists congregate. Despite the abundance of literature that exists and the great amount of time, thought, and study that has been afforded this dangerous complication, there is still a great deal of dispute relative to its management. There is no fixed pattern in which this disease manifests itself. The stereotyped textbook picture is rarely encountered. Even after the diagnosis is made, the attending physician is still in a quandary as to the best plan of treatment to follow.

A study of the literature will not give much comfort. The profession apparently has divided itself into 3 groups: Those who always ligate the internal jugular vein, following the original dictates of Zaufal, Lane, and Ballance; those who never ligate the jugular vein, as Mygind,

Rott, Dixon, and others; and those who classify each case individually. The third group attempt, by the use of their best surgical and medical judgment, to decide which cases should be ligated and those which should be treated expectantly.

During the past 2 years we have had a series of 10 cases of lateral sinus involvement; this is in addition to a report of 14 cases recently presented by one of us (M. S. E.).

An attempt will be made to review rapidly the various signs and symptoms as they occurred in our series of cases, and to call particular attention to a sign that was of particular value in one case.

The symptomatology of lateral sinus thrombosis may be divided into 2 groups—general and local.

The general symptoms include temperature, chills, convulsions, pulse, mental picture, hematologic and other laboratory studies, spinal fluid changes, and metastasis to various parts of the body.

The local signs and symptoms are centered about the external surface of the mastoid and

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

† From the Department of Otology, Temple University School of Medicine.

the mastoid cavity, and vary with the type of mastoid, the condition of the lateral sinus, and the internal jugular vein. Knowledge of the condition of these structures is elicited by inspection, palpation, ophthalmologic observations, and various diagnostic tests.

GENERAL SYMPTOMS

Temperature.—Elevation of the temperature is the most common symptom; it is present in 87½ per cent of cases. In the majority of cases a characteristic septic temperature will be present. The typical temperature is the steeplechase or spiked temperature with frequent remissions or intermissions. However, at the onset of a phlebitis or sinus thrombosis, the temperature may remain at a sustained level for several days. This period should be one of watchful waiting as this type of temperature may be a forerunner of such complications as erysipelas, pneumonia, meningitis, or lateral sinus disease. The temperature may likewise remain elevated and at a sustained level between embolic phenomena. In the case of a thrombus there is an intermittent temperature; in the case of a phlebitis the temperature is remittent but never intermittent. Chills concurrent with a rise in temperature in the presence of an ear infection should automatically lead to a suspicion of lateral sinus involvement, and at the time of operation the lateral sinus should be thoroughly inspected.

Chills.—The chill in sinus thrombosis is the next most prominent symptom. The chill is usually present in about 47½ per cent of cases. Harrison and Tobey divide thrombophlebitis clinically into 3 types: A high temperature with an abrupt remission and chills; an elevated temperature with chills absent; no temperature and no chills. However, in the last category profuse sweats may be present. The chill is an inconstant factor, but it is of utmost importance when observed. The objective and subjective description of the chill may vary from that of cold extremities and a feeling of chilliness to actual rigors and even profound prostration and cyanosis. In infants and children convulsions are often apt to occur instead of chills. The chill usually occurs when the bacteria or their toxins are thrown into the circulation, and it is usually followed by a rise in temperature. The presence or absence of chills depends upon the number of organisms thrown into the blood stream and on the resistance of the individual to the organism.

Convulsions.—The presence of convulsions is rather infrequent. They may occur as the result of a toxemia, especially in children, or they

may be due to some circulatory anomaly resulting in an increased intracranial pressure. This has occurred in some of our cases, especially when the right side was involved and an anomaly existed in the opposite lateral sinus.

Pulse Rate.—The pulse rate invariably parallels the temperature. However, the pulse rate may be slow in the presence of such a complication as meningitis, or cerebellar or cerebral abscess.

If the temperature persists and myocardial failure occurs, the pulse rate may become very rapid and cross the temperature on its way down. This has been described as the death cross and indicates a poor prognosis.

Mental Picture.—The patient is usually mentally alert during the remission of the temperature. R. Almour¹ states, "A patient having a sinus thrombosis has a peculiar septic flush which gives the impression of overstimulation. The eyes are bright, and the patient feels well and active."

At the height of the temperature and during a chill the patient is apt to be drowsy and apathetic. This is probably due to the toxemia. The clear mentality and the well-being of the patient in the presence of sepsis eliminates intracranial complications.

Blood Culture.—The blood culture is of value only when positive. The percentage of positive blood cultures in different series varies from 20 to 50 per cent. In our series of 10 cases there were 60 per cent positive cultures. Too much emphasis has been placed on the value of the blood culture as a diagnostic sign in lateral sinus infection. If the culture is positive, it is an indication of infection, and when this is taken into consideration with the other symptoms present, it is an aid in diagnosis. However, it may be positive in practically every acute infection—pneumonia, tonsillitis, acute endocarditis, erysipelas, and following postoperative mastoidectomy of the hemorrhagic variety. A negative culture does not preclude the presence of infection in the lateral sinus. The organism most often isolated is the *Streptococcus hemolyticus*.

Obtaining a positive culture depends on many factors, such as the time the culture is taken in its relation to the temperature and chill, the type of culture medium used (aerobic and anaerobic media should be employed), and the amount of blood inoculated into the culture medium. The quantity of blood is also important since too much blood may contain sufficient antibody to destroy the organism. An insufficient amount

of blood may not contain enough organisms to survive on artificial culture media.

Blood Counts.—Frequent hemograms should be made. A progressive reduction in the hemoglobin and red blood cells in the presence of sepsis indicates a hemolytic infection and a depression of the hematopoietic system. We can also evaluate the benefits of blood transfusions and the progress of the patient by frequent estimations of the hemoglobin and red blood cell count.

There is usually an increase in the total white blood cell count, but this is of little importance without a differential study to determine the presence of immature and degenerated white blood cells. The Arneth shift and Schilling index are of great importance in aiding in the management of the case.

In an overwhelming infection there is an aneosinophilia, a low lymphocyte count, and a reduction of the monocytes; occasionally there is the presence of a basophil and a disproportion in the number of immature leukocytes. The neutrophils may show a high degenerative index as pointed out by Strumia. As the patient improves, the immature cells disappear and the normal blood elements reappear.

Spinal Fluid.—The spinal fluid did not reveal any chemical or cytologic changes in any of our cases with the exception of one. This terminated in a meningitis. An increase in the spinal fluid pressure is often observed in patients who present a choked disk. If there is an increase in the spinal fluid pressure, frequent eyeground examinations should be made.

The Tobey-Ayer test gives positive results in a varying percentage of cases, as reported by different observers. A rather large percentage of errors may occur. A rather interesting experience with the Tobey-Ayer test occurred in one of our patients. This child developed symptoms of lateral sinus involvement several days after a bilateral mastoidectomy. Both lateral sinuses had been exposed at the time of operation. A Tobey-Ayer test performed at this time was negative and remained negative for several days until visible pulsations of the sinus were noted, which became more pronounced on pressure of the internal jugular vein on the same side. The appearance of a necrotic black spot on the left lateral sinus was also noted. At this time a Tobey-Ayer test was performed, and it was positive for the presence of an occluding thrombus in the left lateral sinus. At operation a large thrombus was evacuated.

Metastasis.—Metastasis does not depend solely on the disorganization of the thrombus and the spread of its particles into the general circulation. It is due to the bacteremia and to the specificity of the organism (Kopetzky) for certain parts of the body. For example, one strain will involve the visceral structures, such as the lungs, heart, spleen, *etc.*, and another will involve the joints and muscles and not the viscera. Metastasis occurring in the muscles and about the joints is usually a good omen and often acts as a fixation abscess, clearing the blood stream of organisms. Metastasis occurring in a viscus is usually a poor omen.

Metastasis occurs in many cases independent of the fact that the jugular vein was ligated or the lateral sinus obliterated. Meltzer,² in reviewing the cases treated at the Massachusetts Eye and Ear Hospital, states, "Metastasis appeared with greater frequency, in fact, about 4 times as often after ligation as before it. Of 30 patients, 26 actually had metastasis after ligation."

LOCAL SIGNS AND SYMPTOMS

1. The presence of neck rigidity should be evaluated by careful palpation. The rigidity may be purely defensive as a result of traumatism to the sternocleidomastoid muscle at the time of operation. It may also be necessary to evaluate neck rigidity in the presence of cervical adenitis, especially if there has been sinusitis, tonsillitis, or pharyngitis.

2. The anterior border of the sternocleidomastoid muscle should be palpated for evidence of tenderness along the course of the internal jugular vein. If tenderness is present, associated with other signs and symptoms, it may indicate an involvement of the vein. Hyperesthesia elicited by light superficial palpation may be due to an adenitis. Deeper palpation eliciting pain along the course of the vein may be due to involvement of the internal jugular vein.

3. At the time of operation, palpation of the lateral sinus may indicate the presence or absence of a thrombus. When present the sinus has a doughy feel and often pits on pressure and may also pulsate. These pulsations may be exaggerated by pressure over the corresponding internal jugular vein.

A perisinous abscess without the presence of a fibrinous exudate or granulation tissue covering it is most dangerous. In this type of case a fulminating blood stream infection may result, and the patient invariably succumbs to the in-

fection before a thrombus forms. A thrombus in the sinus is really a protecting element.

Discoloration of the surface of the lateral sinus is not the index of what may be found within its lumen. In many cases of perisinous abscess a thick exudate may cover the sinus wall giving it the grayish appearance. These patients usually make an uneventful recovery without any treatment.

Although the course of procedure is clear and the surgical principle is simple and theoretically perfect, nevertheless, ligation of the jugular vein has fallen short in many instances. Therefore, the efficacy of such a routine treatment is not entirely satisfactory, and from a therapeutic standpoint ligation does not always solve the problem.

In sinus thrombosis the following elements must be overcome: Infection, septicemia, thrombosis (which may be the source of a local and focal infection), embolism, and metastasis.

In combating these conditions both medical and surgical therapeutic measures are utilized. The medical treatment consists of tonics, repeated blood transfusions, chemotherapy, autogenous and stock vaccines, specific and non-specific sera.

The surgical treatment consists of evacuation of the thrombus from the lateral sinus, if present, and obliteration of the sinus by packing. In phlebitis the lateral sinus is merely incised and then obliterated. These surgical procedures are orthodox and are universally accepted.

The third surgical principle deals with the ligation of the internal jugular vein. This precedent was suggested by Zaufal in 1880. The rationale for ligating the internal jugular vein is to obliterate the channel carrying the infection, and thus to check septicemia, bacteremia, and, particularly, emboli and metastasis. One of the important factors overlooked is the collateral circulation, through which infection still continues to enter the general circulation.

To substantiate this contention, 33 per cent of metastasis occurred after ligation in our series, and even higher percentages have been reported by other observers. In addition, the hospitalization period is not shortened and the mortality rate is often higher. Theoretical considerations and studies of statistics have failed to solve this problem to the satisfaction of everyone.

In the course of our experience with many of these cases, we have formulated the following flexible rules that help to guide us. The lateral sinus is always first to be attacked. If an occluding thrombus is found that can be easily

removed and free bleeding is obtained from both ends, then the lateral sinus is merely blocked by packing and nothing is done to the internal jugular vein. If a phlebitis of the lateral sinus is found without a thrombosis, the sinus is incised and obliterated and no treatment is given to the jugular vein. If a thrombus is found in which bleeding from the lower end cannot be obtained, we are then confronted with several problems. In a mild case without local signs in the neck, the thrombus is not disturbed nor the jugular vein ligated. In a case of severe septicemic symptoms presenting local physical signs in the neck, indicating an extension of the thrombotic process downwards, the internal jugular vein is always ligated.

CONCLUSIONS

1. Sinus thrombosis must be approached with an open mind.
2. Each case of sinus thrombosis is entitled to deliberate and deep consideration from a medical and surgical standpoint.
3. Thrombosis manifests itself in a variety of ways. The elements concerned in the causation and manifestation are so numerous that it becomes an impossibility to subscribe to one type of treatment.
4. The pathology, the virulence of the organism, and the resistance of the patient are factors which must be considered.

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ABSTRACT OF DISCUSSION

C. WEARNE BEALS (Dubois): It is well to remember that the postoperative course of an uncomplicated mastoid is regular and without variation. Any change from this course should be noted and thoroughly investigated. The Arneth and Schilling count has been of value in the diagnosis of many complicated cases of mastoiditis over a period of 4 years.

The authors point out a procedure of treatment which is conservative and especially valuable to those of us who are located in the smaller towns. Some years ago, in a case of lateral sinus thrombosis with no bleeding from the bulb, due to the poor condition of the patient, I failed to ligate the lateral sinus. The patient recovered. Recently, since ligation seems less necessary, there is less need to worry about such cases, and a patient showing poor condition on the table may be safer without ligation.

Dr. Batson, at the recent meeting of the American Academy, in his instructional course on "The Venous Circulation of the Head," clearly demonstrated the rich collateral circulation and the many by-passes, showing that after all ligation may be of no avail. However,

in cases of the septic type in which there is no bleeding from the bulb, ligation is the safer procedure.

J. HOMER MCCREADY (Pittsburgh): Drs. Ersner and Myers have elaborated on the various blood, spinal, and manometer tests necessary as an aid in arriving at a correct diagnosis. Unless the attendant is able to evaluate these signs, symptoms, and tests, he will fail utterly in unearthing many of the vague, indefinite cases. A textbook symptom complex rarely is encountered, and as pointed out, the absence of a "pump handle" temperature, of a positive blood culture, of tenderness along the internal jugular vein, of a certain blood count, or the absence of a rise in spinal fluid in the manometer test, does not preclude the presence of a thrombus or phlebitis.

The scientific diagnosing of a thrombus is just as complicated in some cases as it is simple in others. As Almour says, "The therapeutic procedure in a given case is a law unto itself, and generalizations are not possible or wise." Just so in diagnosis, each case is a law unto itself. Never try to standardize the diagnosis nor the medical or surgical treatment of sinus thrombosis.

The writers divide the surgical treatment into 3 main groups:

1. Evacuation of the thrombus from the lateral sinus, where one is present, and obliteration of the sinus by packing.

2. In phlebitis, the lateral sinus merely is incised and then obliterated.

In these 2 classes the internal jugular vein is not ligated. I agree with them in this classification. I am confident that there is entirely too much promiscuous jugular ligation. The reports of various writers have proved that the mortality rate is about the same without as with ligation.

3. The third classification, the ligation of the internal jugular vein—personally, I ligate or resect the vein if there is no bleeding from the bulbar end, regardless of positive or negative local signs in the neck, or whether the degree of septicemia is mild or severe. Several of my cases have presented total absence of local neck signs, but on opening the neck the jugular was found cord-like in its appearance, with the thrombus reaching almost to the clavicle. On the other hand, the neck is opened many times with a resulting negative jugular; then the best judgment must be used whether to ligate or not. In the absence of free bulbar bleeding, the neck should be opened, as an exploratory operation, to guard against a possible rapidly descending thrombosis, because in my experience cases of thrombosis with extension below the clavicle have had 100 per cent mortality. Fortunately, most of these patients show at least minor neck signs, and as Drs. Ersner and Myers have stated, they always ligate such cases.

Transfusion is very good treatment in all cases. Aside from transfusion, we use very little venous therapy and we place all patients on a full supporting diet.

For the past 5 years, in ligating the jugular, we have been using the transverse in preference to the vertical incision, as it gives a good exposure and a better cosmetic result.

Drs. Ersner and Myers have stated that the prevailing opinion among otologists is that the rationale for ligation of the internal jugular vein is to obliterate the channel carrying the infection and thus check septi-

cemia, bacteremia, and particularly emboli and metastasis. Recent research and study have demonstrated the fact that collateral circulation with the lateral sinus is very copious. Such being the case, we must stop and think, and perhaps conclude that ligation of the internal jugular vein in all cases of thrombosis or phlebitis of the lateral sinus is not a cure-all, especially for septicemia, metastasis, and emboli, as many otologists are led to believe.

GEORGE B. JOBSON (Franklin): Sinus thrombosis is often difficult to diagnose when the outstanding signs and symptoms are absent, as I shall illustrate by a brief description of an unusual case. A boy, aged 10, developed an acute suppurative otitis media of the left ear, the drum of which ruptured spontaneously with free discharge of pus, which continued for 3 days. The patient grew violently ill and complained of a severe left-sided headache and chills accompanied by a septic temperature. On consultation with his family physician, a chemosis of the left eye was noted with exophthalmos and paralysis of the extrinsic muscles. There was no clinical evidence of mastoiditis. Left papilledema was noted, coma was commencing, and a mastoidectomy was performed at once, but there were no signs of disease until the lateral sinus was encountered and this was thrombotic. A long incision was made and the thrombus evacuated. As there was no free bleeding, and every evidence of cavernous sinus involvement, suction of the superior petrosal sinus was attempted with the idea of freeing the cavernous sinus of clot. This was apparently successful to a certain extent as the eyeball receded slightly the next day, but the patient died. Necropsy was refused so there is no positive evidence that we were successful in freeing the clot. My opinion is that infection was carried by the emissary veins of the tympanum to the sigmoid sinus, and thence to the cavernous sinus by way of the superior petrosal branch. There is no hard and fast rule for the treatment of all cases of sinus thrombosis. Formerly I was a strong advocate of ligating the internal jugular vein, but during recent years I have given up the use of the ligature, as there is always the danger of secondary infection of the wound in the neck as well as injury to the vein and nerves in this region, and it has not been proven that ligation aids the patient.

My present procedure is to remove all diseased bone over the sinus and granulations if present, and if the hydrodynamic test shows complete occlusion of the sinus then evacuate the central part of the clot only and pack the sinus cavity lightly with iodoform gauze. The mastoid cavity is left open. If there is free bleeding, pack more tightly. Ten c.c. of metaphen are given intravenously every 12 hours if necessary to control blood-stream infection. The results by this treatment have been far better than by former methods.

GEORGE W. MACKENZIE (Philadelphia): The first part of this paper dealt with the symptomatology of sinus thrombosis. The question the authors raise as to whether it is better to ligate the jugular vein or not brings up another question, i.e., as to whether or not there exists any particular form of treatment that is best in all cases. Six or 7 years ago at a Triological Society meeting in Atlantic City, Dr. Fraser from England, a guest, in discussing a paper on this subject claimed that he did not operate upon the last 5 cases of sinus thrombosis under his care, and all recovered. Ewing Day, of Pittsburgh, followed, and said he had had a similar experience. For fear of the bad effect it might have on the younger men present I raised an objection

and presented the other side. One of the reasons we disagree as to the form of treatment is because one man understands sinus thrombosis to be one condition, and another an entirely different one.

A sinus thrombosis may be infected or not, and it is possible that the cases referred to by Fraser and Day were not infected.

Numerous symptoms and signs of infected sinus thrombosis were presented by the essayists, even as to the atypical continuous high temperature for several days, and the more typical fluctuating temperature with more than one rise in a single day followed by a depression below normal. This very irregular temperature is characteristic of sinus thrombosis of the infective type. This is the kind of case that needs immediate operation. And, the only way to operate upon such a patient is to do it most thoroughly.

Do not wait until after the second chill. I recall 2 cases within a week of one another. One was a case with a hip complication that had been allowed to go for 2 weeks. The patient was operated upon and recovered without further trouble. The other I saw first in consultation. I thought it safe to wait until the second rise of temperature, but on the second day the patient had already developed an infection of the hip joint. He was sick for months afterwards with an abscess which might have been prevented had the sinus been operated upon immediately after the first rise and drop of temperature. It remains a question as to when to operate and when not.

In those cases in which I have ligated the jugular vein alone, omitting the facial vein, occasionally metastases continued for quite a while afterward. No doubt infected particles find their way into the general circulation by some other route. This brings up the question of ligating the jugular and facial veins before opening the sinus. It is safer to ligate first.

GEORGE F. GRACEY (Harrisburg): There is one important question regarding nonligation of the jugular vein. Suppose there is a case of lateral sinus thrombosis in which we have completed a mastoid operation and have uncovered what we consider a sufficient length of lateral sinus. We then shut off each end of the sinus with an iodoform plug. Ordinarily now we ligate the jugular vein. If we do not, any manipulation around the corner or proximal end of the sinus to establish free bleeding is in great danger of dislodging a septic clot which will enter the jugular vein and find lodgment in some distant part. It is certainly safer to ligate the jugular vein before we open the lateral sinus or do any manipulation around the open lower end. The only case of metastatic abscesses following operation I ever had was one in which I did not ligate the jugular vein.

JOHN F. CULP (Harrisburg): Some years ago I was called in consultation to a mining town to see a woman past age 60 who was extremely ill with a tender mastoid, a discharging ear, and a very tender cordlike swelling of the neck extending from the tip of the mastoid to the clavicle. She had a typical pump-handle temperature which reached to 105° F. in the evening and dropped to below normal in the morning with most profuse sweats and extreme weakness. She had been an invalid for a number of years, and her chances were not good with or without operation. Both the patient and her family refused to have anything done, and the husband said, "If she must die, let her die in peace." A few weeks later I met her physician in the hospital

and asked him, "When did your patient die?" He replied, "She did not die at all and is getting well." She lived for quite some time after this and died from an abdominal complication. The discharge from the ear, however, continued.

JOHN R. SIMPSON (Pittsburgh): For a great many years some of the older men have been resecting the jugular vein. A few years ago some of the younger men who are doing research work concluded it was not necessary to ligate the jugular vein. One man made the statement that he would never again ligate the jugular vein. It is not good judgment to take such a position. The pendulum swings one way and then another. I do not feel that this jugular ligation is without some benefit.

Early in my practice I was called to a mining town to do a mastoid operation under local anesthesia. The physical condition of the patient was poor, particularly the heart. A sinus thrombosis was found, opened, and cleaned out. There was free bleeding from the torcular end, but not from the bulbar end. The next day the temperature was 104° F., accompanied by a chill; on the second and third days the temperature remained at 104° F. On the fourth day I resected the jugular vein. After that there was no rise in temperature, no further chills; the patient was out of bed in 6 days. Ligating the jugular vein has some value.

DR. ERSNER (in closing): Sinus thrombosis is independent of mastoiditis. An otitis media may produce a thrombosis through the carotid plexus or the inferior petrosal veins. The question then arises: Why ligate only the internal jugular vein when there are other vessels, such as the vertebral, emissary, condyloid, and the external jugular veins, which carry on the collateral circulation and disseminate the infection to the other structures?

The general surgeon does not ligate when he is confronted with a phlebitis in other parts of the body. He usually waits for localization or resolution. The obstetrician certainly does not ligate in cases of phlegmasia alba dolens. He, too, waits for resolution or localization and meets the condition as it presents itself.

Dr. George W. Mackenzie called our attention to the pathologic classification of thrombi. This is true in the laboratory, but in vivo there is an entirely different problem.

In actual life there is a patient with an infection. Therefore, we must treat the patient and not the pathologic classification, although we may be cognizant of it. There are 3 basic principles underlying thrombus formation, namely, infection, injury to the endothelium, and retardation of the circulation.

Nature's method of stemming an infection is to produce a thrombus and thus localize it. Thrombi found in the lateral sinus without symptoms or embolic phenomena belong to this category.

Dr. Simpson mentioned a case in which ligation accomplished nothing short of a miracle. Two things occur when ligation is done: (1) The large channel that carries the infection is obliterated; (2) there is a self-created, man-made thrombus trying to imitate nature. When such a thrombus occurs, it is not in the diseased part of the wall but in the healthy part of the vessel. Occasionally, in an obliterated sinus, bleeding occurs at the end of a week; this is significant of an incomplete thrombus. We always hope that when a new thrombus forms it will be sterile. If such be the case, there is little to fear. But if it is infected, then

no matter where or when we ligate and no matter what we do, the patient will manifest secondary symptoms such as emboli, positive blood cultures, *etc.*

In regard to secondary foci, when the emboli affect the external parts of the body, such as the muscles and joints, the patient invariably survives. The infected areas act as fixed abscesses and thus promote immunity.

On the other hand, when the viscera become involved, the prognosis is most unfavorable.

Answering Dr. Gracey, we do not ligate as long as the sepsis is under control, irrespective of whether there is bleeding from the distal and proximal portions of the lateral sinus, but we ligate when the infection is of a virulent nature.

ERADICATION OF DIPHTHERIA IN PENNSYLVANIA*

HENRY J. BENZ, M.D., PITTSBURGH

Diphtheria ranks as one of the most serious contagious diseases of early life with a case mortality rate averaging 8 per cent over the past 20 years. It is especially dangerous to a child under age 10. Seventy per cent of the cases and 90 per cent of the deaths occur under age 10. The death rate is higher in the earlier years of life, ranging from 28 per cent during the first year up to 8 per cent in the sixth year. In different years it has waves of virulence the same as every other contagious disease.

Prior to 1920 there was little inroad made against this disease in Pennsylvania or other localities even though antitoxin for treatment of both patients and contacts was in use, and the quarantine restrictions were religiously carried out in so far as possible. Due to better facilities of early diagnosis and treatment, the mortality was as a rule lower in cities than in rural districts.

The advent of active immunization against diphtheria began with the use of toxin-antitoxin after 1920 in many parts of the state and received quite a general stimulus around 1923 and 1924 and since that time. The use of toxin-antitoxin was followed by toxoid according to the formula of Ramon and later by alum precipitate or so-called refined toxoid. Preventive treatments by these various agents produced immunity ranging from 80 to 95 per cent depending upon the material used.

Toxin-antitoxin given in 3 doses a week apart averaged about 80 per cent immunity after 6 months; toxoid, according to the Ramon formula, given in 2 doses 2 weeks apart usually gave 90 per cent result; and the alum precipitate toxoid given in 1 dose gave in many instances 90 to 95 per cent immunity. These figures applied mostly to the lower age group—6 months to 6 years. Above these years the percentages were lower, being in inverse proportion to the age.

In districts where immunization has been carried out fairly extensively, the resultant reduction in diphtheria has been very marked. In the State of Pennsylvania in 1920 there were 17,058 cases or a rate of 194.6 per 100,000 population with 1733 deaths or a rate of 19.8 per 100,000. In 1934 there were 2597 cases or a rate of 26.4, and 222 deaths or a rate of 2.3 per cent. This means a reduction of over 85 per cent in cases and a reduction in deaths of 91 per cent.

In the first years of this immunization administration most of it was done through public health departments and public agencies. It was a newer preventive measure and had to be proven worth-while. At first many physicians were skeptical as to its values and its dangers, and in many instances they would send their patients to public health departments to be immunized. Time, however, has proven that this treatment is not only safe but dependable and the only sure method of protection. Its safety is guarded by careful governmental restrictions and tests.

Granting, therefore, that there is a safe and sure method of stamping out diphtheria, how should this be done? By public or private measures? Since diphtheria is a contagious disease, it is the duty of public health departments to do everything possible to prevent it. Likewise, since the doing of this involves personal treatments to the public, these treatments should be administered wherever possible by the family physician. His contacts and interest should not be divorced by public agencies. Rather it should be so arranged that his contact with the family should be stimulated. To do this requires a plan which should be uniform throughout the state and which would make available to all families the necessary protection against diphtheria for their children. Such a plan embraces educational propaganda, furnishing of material, facili-

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ties for treatment, and admission and control in schools.

Educational propaganda as to the value of preventive treatments against diphtheria should be state-wide and uniform in all sections. This propaganda should be directed so as to include both laity and physicians. There are some physicians who unfortunately do not admit of the efficacy of diphtheria immunization. To the laity the education can be spread by news items, by radio addresses and other lectures, by talks and pamphlets in schools, and by advice from the family physician. Another method of propaganda is the sending of a special notice to the mother about 6 months after the birth of each child. There is a book sent by the state after the birth is recorded, but this should be accentuated by a later reminder. This follow-up can be done in the larger cities by organized health departments not only in the form of reminder letters but also by personal solicitation of visiting nurses. In every way possible a continual propaganda should be directed against the disregard of parents and against their fear of having this done, for they are the ones who must take the child for treatments.

Educational propaganda to the physician should be sent through some central committee of the State Department of Health or other state organization by which he could be kept informed as to the value of the various types of material and the results of each of these, making it possible for him to secure information in a condensed way regarding the results and value of these various propositions and any newer developments which might arise. The physician himself can very properly solicit his patients to have the children protected as early as possible without any stigma. Close co-operation of the public health agencies and the local medical societies regarding the ways and means of developing any program is essential, and by a frank discussion of the various problems arising will insure a mutual feeling of the responsibilities of each. Fundamentally every practicing physician is a potential health officer and teacher, and anything done by a public health body should not divorce that personal, intimate relationship of physician and family. There is, however, a duty of health departments to protect the public from preventable diseases, and if the public cannot obtain such protection any other way they are obliged to act.

One of the important objections of many parents which has been found through house to house canvasses has been the cost of treatments. This cost consists of 2 things—material and

service. Material for treatments should be furnished by the state or its subdivisions free to all, wealthy or indigent. Since it is to the interest of the public to prevent diphtheria, the general public therefore should furnish the wherewithal. The cost to the commonwealth for preventive material is far below the cost for care and treatment, and in a short time would make the latter measure unnecessary altogether as a state or municipal function. Some of this furnishing of material is being done by both the state and, in some instances, the municipality. In Pittsburgh, material is furnished to all doctors free of charge.

The cost of service or the administering of the treatments is the question concerning the parent. This is the problem which has caused much discussion. Criticism has been heaped upon public agencies because they have administered treatments, and criticism has been heaped upon the doctors by patients because of their charges. The state or the municipality cannot dictate, nor does either presume to do so, what these charges should be, but it can say what it will pay toward such treatments given to those unable to pay for it.

There are several plans being used at present in various parts of the country to meet this difficulty, and each of them has its critics. The plan being followed in Pittsburgh and Allegheny County is based upon the idea that the municipality is paying for reports of children immunized, especially in the preschool age—up to and including age 6. Alum precipitate toxoid is furnished free to any physician, and payment is made to him at the rate of 50 cents for each report he makes of a child immunized whether he has been paid by the recipient or not.

In a house-to-house canvass of Pittsburgh by nurses in the employ of the CWA it was found that more than 50 per cent of the families reported could not afford this treatment but were willing to have it if they could get it. In normal times this percentage would be far below these figures. It is hoped that by a method such as the one in effect in Pittsburgh all of these children will be taken to their local physicians for proper treatment. If this could be done routinely, there would be no need for public clinics for this purpose.

A test should be made on all children entering school, and those found not immune should be recommended for treatment. Here again is the issue—who should do this? There is no question but what the same condition holds here as in the preschool age. Preferably it should be done by the family physician. The Pittsburgh

plan is to send out a notice to the parents of each child shown not to be immune. This message is as follows:

A Schick test for diphtheria recently made shows that Mary Doe is not immune or protected against diphtheria. It is very important that you have your child receive the immunizing treatment at once. This treatment is safe and effective. *Your doctor can do this. Consult him at once.* If, however, you are unable to obtain this protective treatment from him within your economic means, the Department of Public Health will give it upon your signed request.

I request that the Department of Public Health give the child named above the protective treatment against diphtheria, and that a later Schick test be given to determine the result. I make this request because I am unable otherwise to obtain this protection.

Signed.....
Parent

Due to the fact that from 3 to 5 per cent of the children lose the immunity they have in their earlier years after a varying lapse of time, a plan in school should embrace a Schick test of the

child in about the sixth grade or about age 11 or 12. Those found to have lost their immunity should again be treated.

In our experience with the alum precipitate toxoid we have found very little reaction in children of the older age group, in fact, no more than we find in the younger age group. Consequently, we do not hesitate to use it through all the various age groups in the school child. After school age, of course, no general plan is practical, but it is not so much needed, the greater incidence being in the earlier years of life.

If all infants and preschool children are immunized and checked for immunity at age 6 and again at age 12, in the course of time there will be very few after age 20 who will need to be further protected. Although this plan will probably not result in a 100 per cent reduction in the incidence of diphtheria in Pennsylvania, in time this disease will have as low a case mortality rate as is true of smallpox and typhoid fever.

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A PRACTICAL CONSIDERATION OF CARCINOMA OF THE SKIN*

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The aim of this paper is to present some practical points in the classification, diagnosis, and treatment of carcinoma of the skin. It must be understood that all statements made in dealing briefly with such a subject should be modified by the term "usually" or "as a rule."

PRESENT CONFUSION

The present multiplicity of terms used in the classification of carcinoma of the skin has resulted from uncorrelated contributions made from time to time by investigators, many of whom have added new names. Some of these terms are incorrectly used to designate carcinoma of the skin in general and at times to indicate a particular type of carcinoma. In this group are found the following: Epithelioma, cancer, carcinoma, and epidermoid carcinoma.

As a matter of fact, there are but 3 histologic types of carcinoma of the skin, and some authorities accept but 2, namely, basal cell type and prickle cell type. (See Table 1.) The third and most recently added is the mixed cell type.

Some of the terms used to indicate the basal cell type of carcinoma are: Rodent ulcer, Jacob's ulcer, reticulated epithelioma, adenoid epithelioma, hair matrix carcinoma, and epithelioma terebrans.

Some of the terms used to designate the prickle cell type of carcinoma of the skin are: Epithelioma, epidermoid carcinoma, squamous cell carcinoma, flat cell carcinoma, acanthoma, canceroid, and hornifying canceroid.

MIXED CELL TYPE OF CARCINOMA

This tumor is made up for the most part of basal cells and encloses a group of atypically developed prickle cells. Pseudo-epithelial pearls and even true epithelial pearls may be present. This is a very malignant tumor and is regarded the same as a prickle cell type.

Just as there are definite histologic differences in the 2 common types of skin carcinoma, there are also fairly definite clinical characteristics. (See Table 2.) However, there are many times when the true type can be determined only by a careful histologic study.

The use of the nomenclature basal cell, prickle cell, and mixed cell carcinoma of the skin is en-

* Read before the Section on Dermatology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

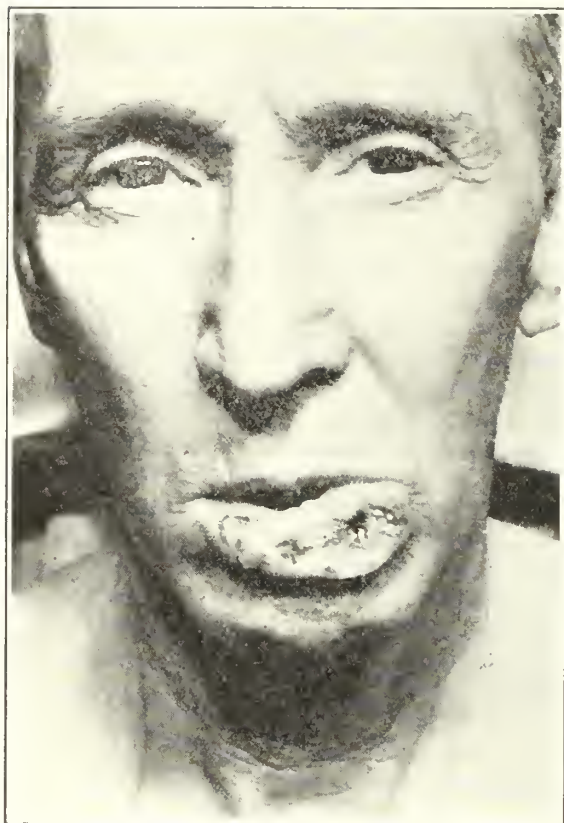


Fig. 1. Carcinoma of the lower lip. (a) Before treatment. (b) After treatment with massive dose of roentgen ray.

couraged for 3 reasons: (1) Because it obviates the confusion which must follow when so many terms are used in discussing these lesions; (2) since there are fairly definite clinical features associated with the histologic pictures, a clearer clinical conception is obtained when this classification is used; (3) since the type of treatment is largely dependent on the histologic type of carcinoma present, such a classification is very practical and easy to follow when recommending treatment.

RECOMMENDATIONS FOR TREATMENT

Basal cell lesions are best treated by electrodesiccation or, if feasible, by radio knife exci-

sion. The latter is by far the better method because it permits a thorough histologic examination, which will confirm the type of tumor present, and also affords the opportunity of determining whether or not the entire tumor has been removed.

If, on account of the age or physical condition of the patient, it may be unwise to produce the shock which is associated with electrosurgery, the use of roentgen ray is recommended. From a cosmetic standpoint the result may not be as good as when radio knife excision is employed.

In the prickle cell type the location of the lesion is an important factor in determining treatment. In the average case of this type either

TABLE 1

BASIC HISTOLOGIC DIFFERENTIATING POINTS

<i>Basal cell carcinoma</i>	<i>Prickle cell carcinoma</i>
1. Tumor is made up of small but elongated almost spindle-shaped cells resembling basal cells of the epidermis. Nucleus and scant ring of cytoplasm. No tendency to pearl formation.	1. Tumor is made up of prickle cells which have a tendency to concentric arrangement and the formation of horny pearls.
2. Deeply staining cells.	2. Cells stain fainter than normal prickle cells.
3. Mitotic figures not common.	3. Typical and atypical mitoses.
4. No prickles.	4. Prickles often demonstrable.

TABLE 2
IMPORTANT CLINICAL CHARACTERISTICS

<i>Basal cell carcinoma</i>	<i>Prickle cell carcinoma</i>
1. Most frequently located on face, neck, and scalp.	1. Most frequently found at mucocutaneous junctions and areas exposed to trauma, as lips, hands, and temporal regions.
2. Grows slowly.	2. Grows rapidly.
3. Does not metastasize.	3. Does metastasize.
4. Is superficial; does not invade the underlying structures.	4. Tendency to grow deeply; invades the underlying structures and bones.
5. Waxy nodules in border, when present, are diagnostic.	5. Early ulceration, warty in character.

roentgen ray in massive doses or radium in the form of implantation is used. On the scalp, lesions are treated by radio knife excision or by a massive dose of roentgen ray. On the forehead, temporal region, nose, ear, and lower eyelid, except at the canthus or where the mucocutaneous junction is involved, radio knife excision is used providing the tumor is freely movable over the underlying structures.

If the skin, as on the forehead, does not permit suturing after the excision of a moderate sized lesion, then a massive dose of roentgen ray is used. The same treatment is given to lesions

at the inner canthus, on the lip, or in any location where the tumor is fixed.

Where there is reasonable evidence that a lesion on the ear is either a prickle cell or mixed cell type, total excision of the external ear is advised.

Lesions on the hand need special consideration, and no hard and fast rules can be applied. The treatment depends upon the history of the carcinogenic agent and upon the presence or absence of lymph node involvement. If there is the slightest suspicion that a carcinoma is the result of radium or roentgen ray, amputation or at

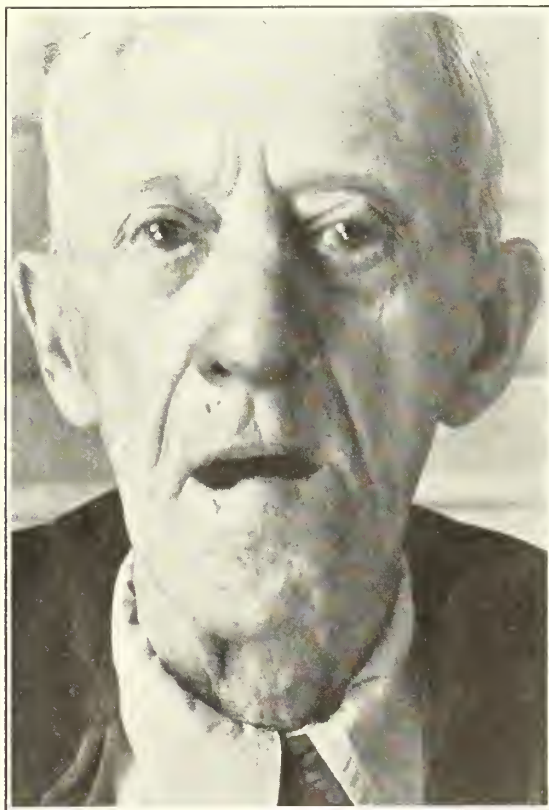
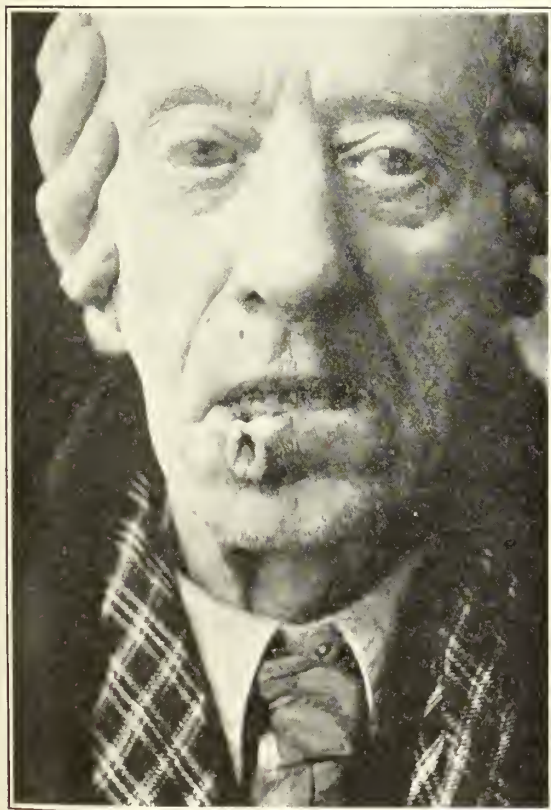


Fig. 2.—Carcinoma of the lower lip. (a) Before treatment. (b) After treatment with massive dose of roentgen ray.

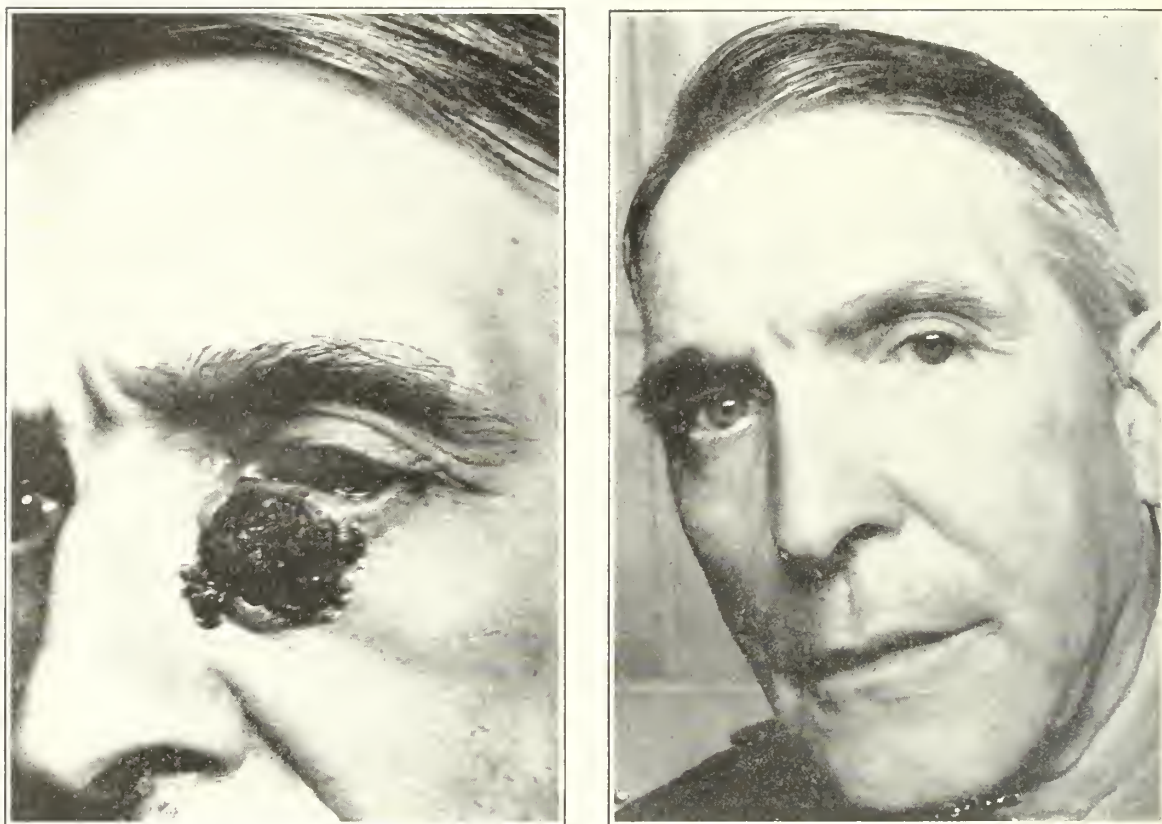


Fig. 3.—Carcinoma of the eyelid. (a) Before treatment. (b) After treatment with massive dose of roentgen ray.

least wide excision is to be advised. In other instances, if there is lymph node involvement, a massive dose of roentgen ray is used.

MASSIVE DOSE OF ROENTGEN RAY

According to MacKee a massive dose of roentgen ray is 2 to 4 units (600 r. to 1200 r.), one unit being the dose which will cause a skin erythema to appear within a week and persist for 7 to 10 days.

The unsatisfactory results obtained in the treatment of prickle cell carcinoma of the skin with roentgen ray are in a large part due to the misunderstanding of what constitutes a massive dose. This is true especially in carcinoma of the lip. A massive dose of roentgen ray is one which will cause a blistering of the exposed lesion or an intense inflammatory reaction which develops within 7 days and persists in its acute stage for at least 14 days.

RECOMMENDED DOSAGE OF ROENTGEN RAY

In treating basal cell carcinoma of the skin 2 to 6 units of unfiltered superficial roentgen ray should be used; prickle cell lesions are given 4 to 18 units. The entire dosage is given either in

one treatment or in 2 or 3 doses within a period of 7 days.

In treating lip cases we have arbitrarily chosen 18 erythema units, and under no consideration do we give a smaller amount. No argument to the contrary will convince those of us who use it that such a dose will produce untoward effects or unsightly burns. Quite to the contrary, the replacing tissue is soft and pliable and rarely shows as much as a moderate telangiectasia. If inflammatory reactions could be induced in other locations, the carcinoma therapy would be much more efficacious than it is at the present time.

The accompanying "before and after" photographs are shown to illustrate the results of treatment with a massive dose of roentgen ray.

SUMMARY

1. A simple classification of carcinoma of the skin is encouraged in order to eliminate the existing confusion in terminology.
2. The associated clinical characteristics are briefly pointed out.
3. A practical review of the treatment based on the histologic type and location of the lesion is given.

4. A massive dose of roentgen ray is clearly defined, and the results from its proper use demonstrated.

535 Medical Arts Building.

ABSTRACT OF DISCUSSION

LESTER HOLLANDER (Pittsburgh): There are but 2 phases of this paper which I shall discuss. One has to do with my heartily seconding the various types of procedures advocated by Dr. Schmitt in carcinoma of the skin as determined by type, location, and condition of the patient. It is far better to adapt a procedure to the patient than vice versa. Results will be better if a choice is carefully made from roentgen-ray therapy, radium, electrodesiccation, electrocoagulation, *etc.*, according to the plan mentioned.

The second point is the question of a massive dose, especially as it concerns carcinoma of the lip. Dermatologists have lost out in the treatment of this condition because of the lack of proper understanding of a massive dose of roentgen ray.

Originally Pusey, an outstanding dermatologist, pointed out the necessity of a blistering dose, and later roentgenologists like Grier and Martin re-emphasized the same. Our experience at the Pittsburgh Skin and Cancer Foundation coincides with that of the authors mentioned—that the efficient massive dose in carcinoma of the lip amounts to about 18 erythema units (5400 to 6000 r.) given in 1, 2, or 3 doses within a period of a week.

Deep therapy to the lymph nodes in the cervical region follows this treatment.

SIGMUND S. GREENBAUM (Philadelphia): What procedure is carried out in treating carcinoma of the lip when there is *no* lymph node involvement, and when there *is* lymph node involvement?

DR. SCHMITT (in closing): Routinely we give deep therapy to the cervical glands, the dose being 450 r. repeated on 3 occasions to each side of the neck. If there is lymph node involvement, there is no routine procedure. At times radon implants are used. We do not do block dissection.

SPINAL CORD TUMORS*†

FRANCIS C. GRANT, M.D., PHILADELPHIA

In the past 15 years, 42 cases of verified spinal cord tumors have come to our attention—9 in the University Hospital upon the ward service of Charles H. Frazier, the remainder from the neurosurgical services of the Graduate, Philadelphia General, Mt. Sinai, and Orthopaedic hospitals. Twenty of these verified lesions were benign fibroblastomas, neuromas, or chondromas. This high percentage of benign tumors in a group of spinal cord lesions differs markedly from the earlier figures of Schlesinger and Frazier but corresponds closely to those recently recorded by Elsberg. It is curious that the ratio of benign to malignant tumors should be so much higher in the spinal cord than in the brain. Furthermore, since early diagnosis and operative removal of these benign tumors results in prompt and satisfactory recovery of function, consideration of the clinical manifestations accompanying such lesions seems indicated.

Spinal cord tumors may be situated within the substance of the cord, without the cord but within the dura, or extradural between this sheath and the walls of the vertebral canal. In whichever situation the tumor is placed, the symptoms have a common basis. The spinal cord is an im-

pulse-conducting mechanism closely confined in the vertebral canal. At a certain point a neoplasm appears which, as it grows, interferes with the function of the spinal cord by direct pressure and by compression against these surrounding barriers. Sensory and motor symptoms gradually develop below the level of the tumor.

The problem in reaching a diagnosis of spinal cord tumor resolves itself into 3 parts. Are the symptoms due to involvement of the spinal cord? What segment of the cord is involved? Is the lesion a degenerative process within the cord or is there a tumor present which should be removed surgically? The answer to the first question is usually easy; to the last 2 it may be extremely difficult.

It is not our purpose to describe in detail the neurologic symptoms accompanying spinal cord tumors. That has been done so frequently that further repetition is unnecessary. From consideration of these 20 cases of benign tumors the very early clinical findings will be considered and the proper methods outlined for determining whether or not these symptoms are due to a space-taking lesion of the cord.

These benign tumors lay outside the cord, 16 intradural and 4 extradural. All of these lesions come into contact not only with the spinal cord but with the posterior roots as well. Pain re-

* Read before the Section on Surgery of The Medical Society of the State of Pennsylvania, Oct. 1, 1935.

† From the Neurosurgical Service of the Graduate Hospital of the University of Pennsylvania, Philadelphia.

ferred to the skin area supplied by the posterior roots arising from the cord in the region involved by the tumor was an early and persistent symptom in 17 of these 20 cases. In 10 of these 17 cases in which pain was present, this pain was aggravated by coughing or straining as at stool. When coughing or straining occurs, fixation of the diaphragm produces an increase in intracranial pressure. A wave of cerebrospinal fluid surges down the spinal canal, impinges upon an extramedullary tumor, dislodges it, and pulls upon the adjacent posterior roots. Definite persistent pain, therefore, that involves specific skin areas for a long time should raise the possibility that a cord tumor may be present. Six of these patients had been suspected of having sciatica, 3 of intercostal neuralgia, and 2 had had exploratory sections for suspected upper abdominal pathology. In all but one of these cases motor weakness in one or both extremities had been allowed to develop before a correct diagnosis was suspected.

In 7 of these patients the second symptom following the persistent pain was a numb sensation in the ipsilateral lower extremity. In 6 weakness of a lower extremity appeared without subjective sensory loss. Four had the weakness and hypesthesia develop simultaneously, and in 3 cases there was no definite muscular weakness nor sensory change evident to the patient. In these last 3 individuals, it was the persistent pain plus reflex changes, muscular atrophy, and very slight but definite hypesthesia on sensory examination that first suggested the diagnosis of a cord tumor.

Given a group of symptoms suggesting a spinal cord lesion, reflex changes, sensory loss, motor weakness, loss of sphincter control, how may a definite diagnosis of tumor be reached before compression of the cord has continued for such a long time that following successful removal of the tumor complete recovery is impossible? A tumor whether intra- or extramedullary or extradural is a space-taking lesion. Interference with the free flow of cerebrospinal fluid past the lesion results from its impingement upon the lumen of the spinal canal. By the use of lumbar puncture and the Queckenstedt test, definite or at least suggestive evidence of the presence of such a lesion may be obtained. When pressure is applied over the jugular veins in the neck an immediate rise in the spinal fluid in the manometer should appear. As soon as the pressure is released an equally abrupt fall should be noted. The jugular compression should be maintained for exactly 10 seconds, the point to which the fluid rises in the manometer at the end of this

time accurately recorded, and following release of the veins the point to which the pressure falls in the succeeding 10 seconds observed. If a very slight rise or no rise whatever or a fall occurs, or if an abrupt rise with a delayed fall is noted, the presence of a complete or partial block presumably due to a tumor can be predicated.

If following a single lumbar tap any doubt exists as to the presence of an obstruction, a cisternal and lumbar puncture may be combined. The reaction of the fluid in the cisternal manometer is used as a control for that of the lumbar manometer. Any lag in the upward or downward movement of the fluid in the lumbar manometer as compared with the cisternal is definite evidence of an obstruction somewhere between the points of insertion of the needles.

After the Queckenstedt test has been completed, spinal fluid should be withdrawn and examined for its color and protein content. A yellowish discoloration of the fluid or an increase in its protein content, whether the fluid is clear or xanthochromic, suggests obstruction.

Occasionally in low lying tumors of the cauda equina it may be necessary to perform lumbar punctures at the fourth or fifth interspace instead of the third. Unless the lowest possible point for puncture is chosen, the needle may be above the tumor and the evidence from the test misleading.

The inference that can be drawn from a lumbar or combined lumbar and cisternal puncture with jugular compression is only that a block, partial or complete, exists. No certain information as to the segment of the cord involved is available. Determination of the sensory changes gives the most accurate conception of the position of the tumor with relation to the cord. Unfortunately the sensory changes are often far from clean-cut, or no sensory level may be obtainable. Under these circumstances 3 c.c. of lipiodol should be inserted into the spinal subarachnoid space and the passage of this radioopaque substance noted in the fluoroscope. It is easier and more comfortable for the patient if the oil is introduced into the cistern. The upright position may then be maintained as the oil flows downward. Immediate fluoroscopic study should be made with roentgen-ray films and repeated in 24 hours as a check to avoid the error of a false arrest of the oil about a root or the dentate ligament.

Lipiodol injection gives the most definite information available. Not only does it indicate the presence of a block but also its level. In this way a subsequent operative incision can be placed exactly over the tumor. If under the fluoroscope

a definite block appears, it is wise to fasten a metal disk to the skin just lateral to the line of the vertebral spines. This acts as a guide in the second fluoroscopic study and in planning the operative incision. Lipiodol seems entirely innocuous in the spinal canal, produces no irritation or pain, and may remain in this region for long periods before it is absorbed. Every patient suspected of having a cord tumor in which the Queckenstedt test suggests a partial or complete block should have lipiodol injected. Sensory findings are at times misleading. The operative incision may be placed with much greater assurance, the number of laminae removed reduced from 6 to 4, and the operative time and possible shock thereby reduced.

Lumbar puncture was performed in all these 20 cases. In 10 a complete block existed, in 9 a partial block, and in one no obstruction at all could be determined. In 3 of the cases of partial block a combined lumbar and cisternal puncture was necessary to determine that a block actually existed. Lipiodol was used upon 9 occasions, showing exactly the position of the tumor in 8 instances and passing by the tumor in one instance giving a misleading result. In the one case in which the Queckenstedt test was negative, lipiodol localized and confirmed the diagnosis of cord tumor. A yellow discoloration of the spinal fluid was noted in 5 instances, and in 17 the spinal fluid protein was markedly increased.

Thirteen of these 20 cases have made complete recoveries, 3 partial recoveries, 3 were unimproved, and there was 1 postoperative death. In the 13 patients recovering completely the period from onset of symptoms to operation averaged 21 months. The 6 who showed partial or no recovery of function came to operation on an average of 38 months after the onset of symptoms. In 3 of these patients complete flaccid paralysis and complete sensory loss had been present for 6, 3, and 1 month respectively. No improvement followed removal of the tumor. In 1 case with subsequent entire recovery there was complete motor paralysis of both legs with total anesthesia below the level of the lesion encountered. Fortunately but 8 months had elapsed from the onset of symptoms, and absolute motor loss had been present but 10 days.

The operation of laminectomy is neither difficult nor dangerous. Six laminae may be removed. Bleeding occurs only from the erector spinal muscles (and this may be almost entirely avoided by keeping the incision carefully in the midline over the spinous processes) and from the veins in the epidural fat. The bone should be removed widely from either side of the canal to

permit as much space as possible for mobilization of the tumor without increasing pressure upon the cord. In freeing the tumor from the cord, always work toward the tumor and away from the cord. As the fibroblastoma and neuromata are attached to the dura, it is necessary to excise this dural attachment completely to avoid recurrence. This produces a dural defect and prevents tight closure of the dura, but careful wound closure will obviate any chance of a cerebrospinal fluid leak. Babcock's stainless steel wire is an easy and effective material for suturing the heavy spinal muscles. No disability in strength or motility of the vertebral column seems to follow even an extensive laminectomy. None of these 13 patients in whom complete recovery occurred has complained of pain in the operative wound on flexion or extension of the spine.

SUMMARY

This paper has briefly described the diagnostic methods and operative results in 20 cases of benign tumor of the spinal cord.

A decision that the spinal cord is involved is easy. To reach an early conclusion that the symptoms noted are due to tumor is rendered much easier and more certain by lumbar puncture and the Queckenstedt test and the use of lipiodol. Prompt operative removal of a tumor of this variety is followed in a high percentage of instances by complete restoration of function.

3400 Spruce Street.

ABSTRACT OF DISCUSSION

SAMUEL S. ALLEN (Pittsburgh): Dr. Grant has mentioned the difficulty in differentiating the degenerative type of lesion from the neoplasm. If an extradural abscess is confused with a spinal cord tumor and the patient is up and about, the result is better because that is the patient's only hope of living.

Since pain may be produced by the cerebrospinal fluid shifting and causing irritation of the nerve roots, spinal taps should be done rather cautiously because the tumor may also be dislodged causing pressure on the cord. I have known 2 cases of paralysis to occur shortly after a spinal tap for diagnostic purposes was done.

When the paralysis comes on rather acutely, the chances for restoration of function are very much less than when the progression of the disease is more gradual.

In some of the slowly growing tumors the cord may be flattened out to just a fraction of its original diameter and yet there will be no loss of function until the symptoms of the tumor begin to assert themselves. Although the cord has been definitely injured by long-continued pressure, the results are usually good.

It is important to emphasize that, regardless of how hopeless the condition may be, even though the patient has been completely paralyzed for a period of weeks or months, operation offers the only hope. Sometimes quite remarkable results are obtained even when the case seems hopeless in the beginning.

VESICOVAGINAL FISTULA*

J. NORMAN WHITE, M.D., SCRANTON, PA.

Patients with inoperable vesicovaginal fistula are fortunately not common in the average hospital service. Fewer cases have been seen since the advent of improved obstetrics, better trained obstetricians, and more universal hospitalization of maternity patients.

ETIOLOGY

This condition is as old as obstetrics. The common cause is prolonged pressure on the vesicovaginal septum during delivery. There are other conditions: Sloughing from cancer, accidents, radium, tuberculosis, sloughing following typhoid fever (reported by William W. Keen in 1873), and operation following congenital malformation (in the case reported in this paper). Howard Kelly, of Baltimore, says that it never comes from the use of obstetrical forceps.

DIAGNOSIS

The diagnosis presents no difficulty. There is generally a history of prolonged labor, carcinoma, tuberculosis, radium, injury, or operation.

SYMPTOMATOLOGY

No condition is more distressing than incurable vesicovaginal fistula. The patient is horribly offensive to herself, her family, and her neighbors; she is constantly soaked in urine and suffering from extensive and painful excoriations of the vulva and thighs; usually there is a state of mental depression. The patients are conscious of the odor and exclude themselves from ordinary society. If the condition is due to carcinoma or tuberculosis, there are the added symptoms of anemia, cachexia, etc.

TREATMENT

Three methods of treatment have been proposed: (1) Bringing the ureter out through the skin at the loin; (2) transplanting the trigon of the bladder into the bowel (Middle's operation); (3) the method of recent years, anastomosing the ureters into the pelvic colon.

About 1878 Sir Thomas Smith of England transplanted the right ureter into the posterior surface of the ascending colon, and later the left ureter into the descending colon. This was the first recorded operation of its kind. Although it was not successful, because the left ureter tore out, he was fortunate in that the ureter was ob-

literated and the kidney atrophied. The right ureter was transplanted some months later but became compressed by sutures and the patient did not recover.

In 1873 Dr. William W. Keen operated to cure a condition in which there was a sloughing of the bladder wall and the rectovaginal septum due to typhoid fever. He did a colporrhaphy so that the urine, menstrual flow, and fecal matter could pass through the rectum. The patient subsequently developed a large calculus, which was removed, and she was alive and well some 20 years after the operation.

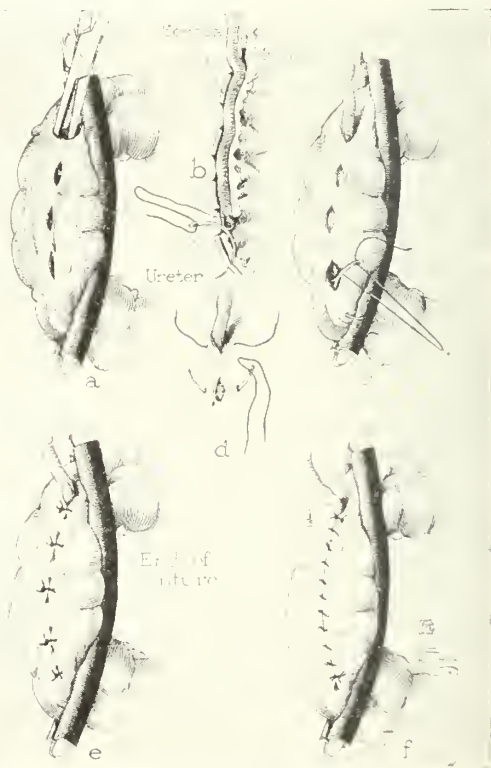


Fig. 1. Implantation of ureters. (Mayo and Dixon in *Surgical Clinics of North America*, Feb., 1930.)

There was no definite progress until the late years of the last century, when Franklin H. Martin, of Chicago, succeeded in transplanting the ureter in a dog, using the valve principle, with recovery.

The late R. C. Coffey in 1909 observed that the salivary ducts, the common bile ducts, and the ureters entered through the muscle wall obliquely, and that this acted as sort of a valve to prevent regurgitation. It also occurred to him that the pressure in the ureter is negative where-

* Read before the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

as the pressure in the bowel is positive; therefore, he worked out a valve mechanism in transplanting the ureter. This resulted in his operation now known as technic No. 2. In the earlier attempts at anastomosing, the ureters entered the bowel just as a drainage tube would be inserted into a distended gallbladder. This operation was followed by many complications, especially pyelitis and leakage at the site of the anastomosis. Another complication is obstruction of the ureter from too tight sutures. At the present time there is no technic that would justify transplanting both ureters at one operation. It is better to transplant the right one first, because there are often considerable adhesions and the sigmoid is not so movable after the first operation. That makes it easier to anastomose the left one last.

TECHNIC

The first step was to mobilize the portion of the sigmoid where the anastomosis was to be made. Four or 5 incisions about one-half inch long were made through the peritoneum and muscular coats of the sigmoid about one-half inch apart. With a small instrument (a cataract knife) the incision was undermined in the sigmoid, preparing a tunnel for the insertion of the ureter. The right ureter was isolated just as it passes over the brim of the pelvis, freeing it for about 3 or 4 inches to the bladder. The lower end of the ureter was tied and the upper portion brought into the operative field. A very fine catgut suture was passed through the end of the ureter, which had been cut diagonally, and with the needle was passed through the tunnel made in the sigmoid. Then an opening was made in the sigmoid below the last incision, and the curved needle was passed into the sigmoid and out through the serous coat. Another needle threaded on the other end of the catgut, which was still in the end of the ureter, was passed through the opening and out of the sigmoid about one-eighth inch distant. These 2 ends were tied to hold the ureter in place. A catgut suture closed the incisions in the sigmoid, 1 or 2 of them taking in a portion of the wall of the ureter. Then the whole suture line was buried with another continuous row of sutures. A piece of omentum may be placed over the anastomosis if desired.

CASE REPORT

Mrs. A. S., white female, age 28, was admitted to Moses Taylor Hospital, Nov. 19, 1934.

Chief Complaint: Complete incontinence of urine.

History: The patient had never menstruated. At age 16 she began to notice headache, backache, and general malaise lasting several days practically every month. There was no other discomfort. Nothing abnormal



Fig. 2. Ureters 3 months after first operation.

was noticed other than the absence of menses, for which at age 18 she consulted a physician who gave her some pills and advised a vaginal examination, which was refused. At age 24 she was married, and a year and a half later sought medical advice for amenorrhea and sterility. Operation was advised and on Apr. 29, 1933, a vaginal operation, the nature of which I do not know, was performed. After this operation there was no urinary control. From May, 1933, until the time of admission, November, 1934, there was continuous urinary incontinence, necessitating the constant use of vulva pads. She was always confined to the house in which there was always an annoying odor of urine.

Physical examination: Young, healthy looking, well-developed, white female. Skin clear. Heart, lungs, and blood pressure normal. Abdomen normal except for slight tenderness on deep palpation over the right lower quadrant. An examination was made on Nov. 19, 1934, under ether. A rather small vagina was found, only about 2½ inches long. External genito-urinary organs normal. No cervix and no uterus could be palpated. Urine was continually coming from vaginal orifice. With a small vaginal speculum inserted in the vagina, a round opening in the urinary bladder about one inch in diameter could be seen.

Because of absence of the urethra, the large size of the vesicovaginal fistula, the absence of a bladder sphincter, and the fact that the small vagina would make any plastic operation difficult, it was decided that the best procedure would be the implantation of the ureters into the pelvic colon. Accordingly, on Nov. 24, 1934, through a midline incision the right ureter was implanted into the sigmoid using the Coffey technic No. 2. At this operation normal ovaries but no uterus were found. Postoperative convalescence was satisfactory. There was no evidence of urinary secretion into the rectum

until the eighth day, when the patient had 2 liquid bowel movements. During the first week there was some left costovertebral tenderness, but no mass could be palpated and there was no temperature rise. The patient was discharged from the hospital on the sixteenth day, having about 2 or 3 liquid bowel movements a day. The urine coming through the vagina was reduced to approximately one-half.

The patient remained at home one month. During this time she was able to sit through a motion picture 2 or 3 hours with a few vulva pads. She gained 10 pounds.

The patient was re-admitted to the hospital on Feb. 5, 1935. The following day an intravenous pyelography was done. The opaque material appeared in the ureters and kidneys immediately. The right ureter was normal throughout its entire extent. The left ureter was dilated due to slight contraction at lower end.

On Feb. 9, 1935, through a midline incision the left ureter was implanted in the sigmoid using Coffey technic No. 2. Good union was found between the right ureter and the sigmoid. The left ureter was slightly enlarged.

Recovery was uneventful. The patient was discharged in 2 weeks in good condition. There was no urinary discharge from the vagina; the painful excoriations of the skin on thighs and vagina were cured, and the patient was having 4 to 5 liquid bowel movements daily.

On re-examination, Mar. 6, 1935, the patient stated that she felt well. She was having 4 or 5 liquid bowel movements daily, had gained in weight, and was much stronger.

An intravenous pyelography was done on Mar. 6, 1935. The ureters, pelvis, and calices of both kidneys were dilated. The lower end of the ureters where they pass into the bowel was narrowed.



Fig. 3. Ureters about 1 month after last operation.



Fig. 4. Ureters 7 months after last operation.

On Sept. 11, 1935, roentgenograms were made after intravenous diodrast. They disclosed both ureters terminating about the level of the sacrococcygeal articulation. Both ureters were greatly dilated, together with the pelvices. The calices were dilated.

SUMMARY

1. Inoperable vesicovaginal fistula is not common but presents a serious problem in any patient.
2. Transplanting the ureters into the pelvic colon is undoubtedly the best procedure. It is the safest if not the quickest.
3. It is better to anastomose each ureter separately and at different times.
4. Pyelitis and stricture of the ureter are the most common complications, but on the whole the operation is satisfactory.

Moses Taylor Hospital.

ABSTRACT OF DISCUSSION

WALTER J. LARKIN (Scranton): The discussion of this paper leaves but one point to be considered and that is the choice of operation. In the literature there are about 250 types of operation for vesicovaginal fistula.

In 1851 Simons of St. Thomas Hospital laid down the principle of establishing a fistula between the ureter and the rectum by means of a tight ligature passed through their adjacent walls. This agrees in substance with the technic of Coffey's No. 3 operation and that

of Higgins, from the Cleveland Clinic, who reported his modification in 1933.

Successful and unsuccessful operations were performed by Maydl and Fowler in 1898 and by Martin in 1899. In 1911 Coffey introduced the so-called valve operation. Coffey succeeded where Martin failed in that he distinguished between valvular action and sphincteric action. He conceived the principle of delivering liquid from the ducts of an organ, where it is under low pressure, into a receptacle where the pressure is higher. He stated that a valve was necessary and in his first work formed anastomosis by means of an artificial valve.

Charles Mayo was the first to recognize the importance of this work and the first to adopt the principles and apply them to the human. Coffey and Mayo modified the first method and formed the second technic or the tube method, and this is the method that Dr. White used in curing his patient.

The late Dr. Coffey reported aseptic uretero-enterostomy by a special suture transfixing the ureteral wall and the intestinal mucosa. This is rather an ingenious operation that depends for its success upon a stout linen or silk ligature that is tied so tightly between the ureter and bowel as to result in a fistula. For this operation the initial incision is exactly the same, but the ureter is brought in between the muscle coat and the mucosa without entering the lumen of the bowel. With a straight needle the ureter is transfixed in half its circumference and the needle is inserted through the bowel into the lumen. A suture is then tied tightly so as to cause strangulation. Coffey stated that within 36 to 48 hours a fistula will occur.

Opponents of this type of operation are of the belief that the time limit may be longer and that the fistula may not result in the desired short space limit. They also state that serious damage to the kidney may result if it be impeded in its action for 36 to 48 hours. All

agree, however, that the big problem of the other types of uretero-enterostomy, that is infection, is eliminated. I cannot conceive of repair in the strangulated edges of the ligature within 36 hours; connective tissue and mucous membrane need a rather heavy supporting barrier of repair which I do not believe can result in 36 hours. Other opponents of this operation consider that it is not applicable to adults because of the thickness of the ureteral wall, which precludes the formation of a fistula before the ureteral obstruction has caused serious damage to the kidney. In children it is satisfactory.

The method developed by Higgins, of the Cleveland Clinic, in 1933 seems to be a more practical and scientific method than the preceding ones. In substance this technic differs from Coffey No. 3 technic in that the ureter is not severed at the bladder but is left free so that urine may still empty into the bladder. The transfixing suture is used in about the same manner and the ureter is not tied until the urine is entering the bowel freely. This method prevents damage to the kidney at the time of operation and allows the operator to implant both ureters at the same operation.

If the surgeon is not skilled in this type of operation, however, he should not use Coffey technic No. 2. Higgins' technic or Coffey No. 3 is preferable.

DR. WHITE (in closing): I have done all of these different types of operation on the cadaver. There is a personal equation in relation to every operation, and the Coffey technic No. 2 is the one that I prefer. The danger of leakage is less; hence, this is the safest technic. It takes longer, but we do not perform these operations very often. In exstrophy of the bladder in the newborn a good result can often be secured from this method. The only treatment is to transplant the ureter. In cancer of the cervix where there is leakage and the patient is miserable, the urine can be diverted into the rectum with relief.

HISTORY AND RECOLLECTIONS OF THE DEVELOPMENT OF PEDIATRICS IN PHILADELPHIA*

J. P. CROZER GRIFFITH, M.D., PHILADELPHIA

Some of my remarks have already appeared in a previous, now ancient, publication of my own, and other data are derived in part from the valuable contributions of S. S. Adams (*Evolution of Pediatric Literature in the United States*), Carson (*History of the Medical Department of the University of Pennsylvania*), Packard (*History of Medicine in the United States*), Kelly and Burrage (*Dictionary of American Medical Biography*), Garrison (*Abt's Pediatrics*), and various articles by Jacobi.

Let us consider first the subject of pediatric literature emanating from Philadelphia, beginning in the eighteenth century. Medical articles on pediatric subjects were rather slow in appearing in the United States. About 1790 Benjamin

Rush, who was professor of medicine in the University of Pennsylvania School of Medicine and in his time probably the leading physician in the United States, wrote an article upon influenza, in which the peculiarities of the disease in children as compared with those seen in adults were well recognized. He inoculated 20 children with smallpox virus and claimed that the course of influenza in them was peculiarly mild. He wrote also upon dengue in children and upon cholera infantum. The first pediatric monograph published in the United States appears to have been one of 69 pages by Charles Caldwell in 1791, and was his inaugural dissertation at the University of Pennsylvania. It was an attempt to show that internal hydrocephalus, diphtheria, and infantile diarrhea were different secondary phenomena of a single primary febrile condition. In 1803 he established the first clin-

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ical lectures in any department of medicine, these being given in the Philadelphia Alms House. They were not specifically lectures on pediatrics, although some of them very possibly discussed children's diseases. Caldwell evidently was possessed of great ability and brilliance, but apparently was impetuous and quarrelsome. His autobiography seems to reveal him as a man with firmly fixed opinions and not hesitating to express them; consequently he was often at sword's points with his colleagues.

John Archer was a resident of Maryland but a writer whom Philadelphia can in part fairly claim, since he studied at the University of Pennsylvania School of Medicine and presented his inaugural dissertation there in 1798. This was on "Cynanche Trachealis," commonly called "croup or hives," for the treatment of which he recommended "Seneka" in full doses. The paper was based largely upon the favorable experiments of his father, John Archer, Sr., and his brother. It is worthy of note that the graduation of the senior Archer in 1768 is said to have been the first occasion in the United States of the conferring of a medical degree after actual attendance upon lectures.

In the earlier part of the nineteenth century more numerous pediatric articles were published by Philadelphians. Parrish, one of the surgeons to the Pennsylvania Hospital, wrote in 1826 upon "A Peculiar Catarrhal Complaint in Children," which required different treatment from that suitable for adults. Horner, adjunct professor of anatomy in the University of Pennsylvania School of Medicine, published a pediatric article in 1829 entitled "An Inquiry Into the Anatomical Characters of Infantile Follicular Inflammation of the Gastro-Intestinal Mucous Membrane, and its Probable Identity with Cholera Infantum." W. W. Gerhard, who was graduated from the University of Pennsylvania in 1826, is known as the man who first clearly distinguished typhoid fever from typhus fever. He was one of the teachers in the medical department of the University of Pennsylvania, was highly appreciated by the undergraduates, and was a most distinguished physician. Among his pediatric publications were "Cases of Rubeola Followed by Death," "Cerebral Affections of Children," and "Pneumonia in Children." He was the first to record observations on auscultation and percussion in the pulmonary diseases of childhood.

None of these men was what we would call a pediatrician. The treatment of sick children was undertaken in the course of their practice

among adults. In fact, pediatrics as a specialty did not exist at all at this period.

In the matter of textbooks written by Philadelphians, an occurrence which gave impetus to the recognition of pediatrics was the appearance in 1825 of the work of the celebrated William Potts Dewees, entitled *A Treatise on the Physical and Medical Development of Children*. At this time he was lecturer on midwifery at the University of Pennsylvania School of Medicine, and later became full professor. This book, probably the first systematic treatise on pediatrics published in the United States, soon became a well-recognized standard textbook. Although celebrated for this work, he was even more so for his writings on and practice in obstetrics.

It is interesting to observe how even at this early date the obstetrician, instrumental in separating the body of the infant from that of the mother, seemed bent, in a sense, on putting them together again. How this tendency persisted in many quarters is demonstrated by the use of such terms as "professor of diseases of women and children" and "professor of obstetrics and diseases of children." There never was, of course, any more reason for a combined chair of diseases of women and children than for one of diseases of men and children. We are glad to see, in so many localities at least, the acquiescence on the part of obstetricians to the full separation of their work from that of the pediatrician.

To return to the topic of early textbook history, we can with propriety claim as a partial Philadelphia product the *Treatise on the Diseases and Physical Education of Children* by John Eberle, published in 1833. Eberle was one of the first teachers in the Jefferson Medical College of Philadelphia and probably one who had much to do with the founding of that institution, where he taught materia medica and practice of medicine. He had, however, moved from Philadelphia to Cincinnati 2 or 3 years before his textbook on diseases of children was issued. About 10 years later, in 1844, there was published the textbook of David Francis Condie of Philadelphia, which, it is said, soon became in that city the standard textbook on diseases of children, although reviewers claim that it in no way compared in value with the book of Dr. Dewees. Condie was a very active and favorite practitioner. It does not appear that he had any connection with a medical school or did any actual teaching. He always visited his patients on foot, and, according to his biographers, used to say, "Those who ride in one-horse carriages are physically deficient, but those who ride in two-

horse carriages are mentally deficient." What would he think of us now!

Still more important was the appearance in 1848 of the *Practical Treatise on the Diseases of Children* by J. Forsyth Meigs. This book soon replaced to a large extent all earlier ones and passed through many editions, being finally elaborated under the joint authorship of Meigs and William Pepper, the latter formerly provost and professor of medicine in the University of Pennsylvania School of Medicine. Meigs was for a time connected with the Philadelphia Medical Association, where he lectured on obstetrics, medicine, and diseases of children. This association was a sort of accessory school to the other medical colleges in the city, holding sessions only in the spring and autumn. Later he gave lectures in the Pennsylvania Hospital, not confining them to diseases of children, for, although widely recognized as a pediatrician in Philadelphia, he was also actively engaged in general practice. I had the privilege of knowing him in my early medical life, and I entertained the same high opinion of him that all his colleagues did. He was perhaps the first in the country to urge the giving of cream mixtures to infants. In some of my earlier cases, and later ones also, excellent results were had with the cream, water, arrow-root, and sugar mixtures recommended by him. Meigs' father, Charles D. Meigs, was professor of midwifery and diseases of infants and children in the Jefferson Medical College, and in 1850 published a volume entitled *Observations on Certain of the Diseases of Young Children*. This book contained a series of lectures which he had delivered to his class at the college.

Other Philadelphians later distinguished themselves by editing textbooks with the different articles composed by various writers. The most important was the *Cyclopædia of the Diseases of Children*, issued in 1889 and edited by John M. Keating, a massive work in 4 volumes, with later a supplementary fifth volume. This was the first work of the kind published in the English language. There appeared in 1894 *An American Textbook of the Diseases of Children*, edited by Louis Starr. It was my privilege to contribute to both of these publications. Other books on pediatrics by Philadelphians have appeared in more recent years, but these will not be mentioned in detail as they are numerous.

With regard to pediatric societies, it should be noted that the Pediatric Section of the American Medical Association was established in 1880, the American Pediatric Society in 1888, and a pediatric section of the New York Acad-

emy of Medicine in 1887. The Pan-American Medical Congress was first started in 1893 with a pediatric section, of which John M. Keating of Philadelphia was the first chairman. Two state pediatric societies were established, one in 1895 (Ohio) and the other in 1897 (Indiana). In St. Louis the Bethesda Pediatric Society was started in 1895, but it was limited to 15 members and was more like a medical club. Mention is made of these because we can claim for Philadelphia the first independent city medical society in the United States devoted to pediatrics, with its membership open to any physicians who wished to join. This, the Philadelphia Pediatric Society, was founded in 1896, and it was my privilege to be interested actively in starting it. Its influence has been very positive in Philadelphia in arousing and stimulating interest in this branch of medicine.

As to hospitals, Philadelphia rightly claims the first hospital in the United States for the treatment solely of sick children—the Children's Hospital of Philadelphia. This was established in 1855 by Francis Lewis and Thomas Hewson Bache, both of whom I had the pleasure of knowing, especially Dr. Bache, who often told me incidents regarding the small beginnings of the institution. Pediatrics has grown in Philadelphia since then. A casual, and perhaps not quite accurate, count shows 6 hospitals solely for infants and children, some confining themselves to certain departments of pediatrics, and 29 general hospitals with separate wards for children, in at least 3 of these the children's wards being in separate buildings.

Let us review in more detail the progress of the teaching of pediatrics in the last 50 or 75 years and its recognition as a special department of medicine. First let me refer briefly, for the sake of comparison, to what was being done in the country at large. Reference has been made to some of the earlier teachers in Philadelphia. Lectures on the subject were given by Charles Meigs about 1841 or later and by J. Forsyth Meigs about 1850. Earlier there were chairs for diseases of children combined with other departments, and it is doubtful whether any attention was paid to the subject of pediatrics. The first official recognition in the University of Pennsylvania of such a combination was the appointment of H. L. Hodge in 1835 as professor of obstetrics and diseases of women and children. However, the first special chair for diseases of children anywhere in the United States was established in 1860. In that year Abraham Jacobi was made professor of infantile pathology and therapy in the New York Medical College.

When this institution closed its doors in 1865, he was appointed to the chair of clinical pediatrics in the University of New York and in 1870 was made clinical professor of pediatrics in the College of Physicians and Surgeons of New York. J. Lewis Smith was appointed clinical professor of diseases of children in the Bellevue Hospital and Medical College at its foundation in 1862. Charles Putnam was elected lecturer on diseases of children at Harvard in 1873. Later Thomas M. Rotch was made clinical professor and in 1888 full professor, this being the first full professorship in this country with a required examination and the professor a full member of the faculty. That, however, was nearly all there was anywhere in the United States. Writing in the Introduction to Keating's *Cyclopædia of Diseases of Children*, dated 1889, but written by him, of course, somewhat earlier, Jacobi with discouragement said, "To my knowledge there is no school in the country which lays the least stress on that branch of instruction. . . . No examination being required by those to whom the student looks for direction and enlightenment, he neglects the study, to find out too late the mistake he has made in doing so."

Soon after that period progress became surprisingly rapid in many regions. Less than 10 years after the date of Jacobi's statement I published, in 1898, a review of what was being done in the country as far as I could learn. Of 117 medical schools in the United States suitable for study, in 64, or 54.7 per cent, there was a special chair of pediatrics. At 43 others, 36.75 per cent, the chair was combined with some other department. Of the 64 colleges in which the department had its own independent chair, in 49, or 76.55 per cent, the title was a minor one, usually clinical professor or associate professor. About 2 years before 1898 I had obtained accurate information directly from the teachers of pediatrics in 28 colleges. In 17 of these schools the department was represented on the governing medical body. In 14 out of 24 the professor received a salary. As in nearly all of the remaining 10 none of the chairs were salaried, this indicates that in the majority of the 28 colleges studied the department of the diseases of children was considered of importance equal to that of other branches. In all but 3 of the 28 colleges there was a required final examination by the professor of pediatrics.

An investigation on somewhat similar lines had been made about 2 years before by Samuel Kelley of Cleveland. The results of his inquiries were entirely in accord with those here

recorded. All this tends to show that in most localities, although not in all, great progress had been made since the statement of Jacobi. It is regrettable that Philadelphia, with its ultraconservatism, was lagging far behind almost all other places. Even the recognition of pediatrics as a special branch of practice was at a low ebb. About 1880 John M. Keating, Arthur Meigs (the son of J. Forsyth Meigs), and Louis Starr, all young men, were almost the only ones looked upon by the Philadelphia public as specialists in diseases of children. Keating, however, although lecturer on diseases of children in the Philadelphia General Hospital, combined his pediatrics with gynecology. Meigs was a general practitioner, but he was very much interested in diseases of children, and was one of the physicians to the Children's Hospital. He was one of the first in the United States to write on the subject of the chemistry of human milk, insisting that the much lower percentage of protein in it as compared with cow's milk was a matter of importance. Starr was the only one of the 3 whose chief work was among children. While an undergraduate I took some work with him in the outpatient department of the Children's Hospital of Philadelphia. He was an excellent practical teacher.

It may be of interest to outline some of my own earlier experiences as a student and teacher. In my student days R. A. F. Penrose was professor of obstetrics and diseases of children in the University of Pennsylvania School of Medicine, and William Goodell was professor of diseases of women and children. As usual in such a combination the diseases of children were not considered much. I never heard Dr. Goodell mention children, and I listened to but a single lecture on the subject given by Dr. Penrose. This was on whooping cough, and 2 children were brought before the class, not in the clinic but in the ordinary lecture room. We waited patiently, but not once did they give us a demonstration. That was all the instruction in pediatrics I ever had at the University.

The first clinical professorship of diseases of children in the University of Pennsylvania was not established until 1884, and was held by Louis Starr. He held the position a few years and then resigned in disgust. In 1891 I was elected clinical professor of diseases of children at the University of Pennsylvania School of Medicine, and a good many years later professor of pediatrics. My teaching continued there for 33 years.

To outline all of my efforts to increase the recognition of the department would take too

long. Some may be mentioned just to show the backward position of Philadelphia at that time with regard to diseases of children. I was permitted at first to lecture once a week during the last half of the fourth medical year without remuneration, without required examinations, with an extremely small outpatient department to draw upon, since a majority of the children were scattered among other outpatient departments, and with the privilege of 2 beds in the women's ward. When these were occupied the women in the ward naturally complained of the children crying. There was no ward class work. During many of the years of my teaching work the time assigned was the last hour of the last day of the week, when students were rather tired as a result of the week's work and, moreover, could see no reason why they should attend, since there were no penalties attached to absence or to lack of knowledge of the subject. Do you wonder that I found it laborious to attract and hold students? They attended much better than could have been expected, in fact very satisfactorily. The students, at least, recognized that the subject was one of importance. But it was only very gradually that improvement in the recognition of the department by the governing body took place. In spite of the unquestionable proof that the schools of Philadelphia were so far behind others, nothing was accomplished.

Finally it dawned faintly on those in power that Philadelphia was not doing what it should in the matter of teaching pediatrics. A special ward for children was established at the University Hospital in 1900 through the efforts of some of the Women's Board of the hospital. Later the lectures were extended throughout the entire senior year. Time for ward classes was set aside, to be held not only in the University Hospital but also in the Children's Hospital of Philadelphia. At first there was no required examination whatever. Then 2 questions were allowed in the final year as a part of the examination in medicine. Later still the number was increased. When I retired from teaching several years ago, we were gradually approaching the position desired in regard to instruction in pediatrics. The diseases of children are now well taught at the University of Pennsylvania; but so far as official recognition by the "powers" is concerned, truth compels me to say that, unless my informant is mistaken, the subject is still practically a minor one and has to share its final examination with 2 other subjects. It might readily happen, therefore, that a student could neglect his pediatrics, fail in this examination, and yet succeed in graduating if he did well in the other subjects of the group.

In the early days matters at the Jefferson Medical College were somewhat better than at the University of Pennsylvania, yet not markedly so as far as recognition of pediatric teaching was concerned. From G. S. Pattison in 1832, Samuel McClellan, Robert H. Huston, Charles D. Meigs, William V. Keating, and Ellerslie Wallace succeeded, one the other in the order mentioned, as professor of obstetrics and diseases of women and children. In 1866 summer courses in pediatrics were started, at first by J. Aitken Meigs and later by W. B. Atkinson. It was not until 1887 that any official separation of pediatrics from other departments was made, this being done by the selection of Oliver P. Rex as clinical lecturer on diseases of children; and it was not until as late as 1892 that Edwin E. Graham was appointed clinical professor with the privilege of having certain questions on his subject included in the final examinations on the practice of medicine. In 1902 the chair became a full professorship and its incumbent a member of the faculty. The post is now filled by Edward L. Bauer. It must be stated, nevertheless, that, as is the case with the University of Pennsylvania, the subject is still a minor one so far as the final examination is concerned, sharing with examinations in 2 other departments to make up an average equalling in value that of a major department. There is no question, however, that the subject is well taught.

The Hahnemann Medical College was founded about 1847, and in this institution there existed the same early neglect in the recognition of pediatrics which was then prevalent everywhere. According to information received from C. S. Raue, in 1879 the professor of obstetrics and the professor of medicine divided the diseases of children between them, the former supposedly discussing the examination of children and the latter giving lectures on the infectious diseases. I do not know how long before this date there was any real consideration given to the subject of pediatrics. Even as late as 1894 there was still no special chair of pediatrics; the professor of physiology was announced as lecturing on the subject. The first separate professorship in the Department of Diseases of Children was not established until 1906, being occupied by William W. van Baum, and even then the department was still merely a branch of the Department of Medicine. Only by 1925 was it made an independent department under the charge of Professor C. S. Raue, who is still the incumbent. Although pediatrics, then, was very slow in obtaining recognition at Hahnemann, as it was in the other schools, instruction in it is now receiving full attention. Yet, as in

the 2 schools previously mentioned, it is still a minor subject so far as the final examination is concerned and shares with one or more other departments in the making up of a final passing average. When will our older Philadelphia colleges wake up to the fact that we are well behind so many schools of the country so far as the recognition of pediatrics is concerned?

Like the colleges already mentioned the Woman's Medical College of Pennsylvania had the misfortune of being founded early, about 1849, and suffered from Philadelphia's conservatism and apparent dislike of change. According to information kindly given me by Emily Bacon, the head of the department there, and James H. McKee, the former head, pediatrics was included under the professorship of obstetrics and diseases of women and children at least as far back as 1856, and this or some other combination continued until 1894, when E. P. Davis was made clinical professor of pediatrics, this being apparently the first official recognition of the department. Later Dr. McKee was head of it for a few years, to be followed by Theodore LeBoutillier. The chair was still a minor one until 1919, when its head was made a full professor with a seat in the faculty. Professor Bacon has occupied this position since 1925. The subject is now receiving full recognition and ample time is given to the instruction of the students. It gives me great pleasure to find that at least one of our 4 older colleges has broken through the chains of precedent and custom, and that pediatrics is now one of the major subjects with a required final examination equal in importance to that of any other department.

The Medico-Chirurgical College of Philadelphia, combined with the Philadelphia Polyclinic Hospital in 1917 to form the Graduate School and Hospital of the University of Pennsylvania, was established about 1881. This was at a much later date than the other schools which we have considered. There was a chance here, in a new institution, to start on a more modern plan so far as diseases of children was concerned; but the opportunity was not improved as it might have been. According to information received from the former dean, Seneca Egbert, and from Dr. McKee, there was, as in the other schools, the combination of pediatrics with some other chair. Apparently the first reference to diseases of children was in 1888 when William B. Atkinson was professor of sanitary science and of pediatrics. In 1891 W. C. Hollopeter was made lecturer on the diseases of children and in 1892 clinical professor, the title being changed again in 1900 to that of professor of pediatrics with a

full seat in the faculty and an independent examination. Hollopeter retired in 1915 and was succeeded by James H. McKee. Recognition of pediatrics and the separation of it, even in part, from other departments of medicine was no more evident here in the beginning than in the case of the first 3 schools reviewed; but action was earlier in giving the chair full recognition with a faculty seat and a separate examination.

The youngest Philadelphia medical school is that of the Temple University, opened in 1901. Being young it ought to have started in a more modern way so far as pediatrics was concerned, but the shadow of our ultraconservatism seems at first to have clouded this school as in the case of the others. It was not until 1908, as I am informed by the Dean and by Ralph M. Tyson, now professor of diseases of children there, that pediatrics was looked upon as a separate department. The teaching up to that time had been given by a member of the Department of Medicine with the title of lecturer on pediatrics. A separate examination was conducted, the marks being included along with neurology as a part of the practice of medicine. In 1908 James H. McKee was appointed clinical professor of diseases of children; the following year he was advanced to full professor and gave a final examination equal in value to that of any other chair. He was succeeded by H. Brooker Mills and in turn by Ralph M. Tyson. Another Philadelphia school, then, has given pediatrics the official recognition it deserves.

This completes the review of the progress of the teaching of pediatrics in the medical schools of Philadelphia. At the time of my published analysis in 1898 not one of those existing at that date was in the class of colleges in which pediatrics was receiving the consideration due it, and even now, 38 years later, some of our schools are still not in the forefront in every particular.

All this is now a matter of history. The slowness of development which has existed in Philadelphia is not a secret. This account would not have been written were it not that it is history. Many of the older graduates of the Philadelphia institutions know well what an insignificant position diseases of children once held in Philadelphia medical colleges, although they could not know how hard their pediatric teachers labored to improve matters. Probably they blamed the teachers for what they could in no way help. The progress made in more recent years in the official recognition of pediatrics in Philadelphia has been decided although far from satisfactory

in some of the older schools. In the matter of the teaching, however, and in the hours allotted and the efforts made to give students full instruction in the subject Philadelphia institutions are now well up to the times.

Some may wonder why I reproach my own city and its medical schools, and why I stress so much the importance of official recognition of the subject? I am loyal to Philadelphia. It is a great city and has great medical schools. But I am not here to carry a brief for any city or any school. My interest is in the sick chil-

dren. The more thoroughly students are instructed in the diseases of children the greater chance there is for sick children to be aided; but if the governing body of a medical school tacitly says, "We do not consider the subject of diseases of children of major importance," can you blame the students for likewise paying insufficient attention to the subject, no matter how good and faithful the teaching may be? The sufferers are the children.

1810 Spruce Street.

FURTHER STUDIES ON THE THYMUS AND PINEAL GLANDS*†

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The results of early studies on the biologic effects of thymus extract were published in July, 1934. The present communication describes further studies on the thymus gland to Apr. 8, 1935, and also the biologic effects of pineal extract (Hanson) administered to succeeding generations with the identical procedure followed in the thymus studies.

The experiments were conducted as follows: One c.c. of thymus extract (Hanson) was administered to rats intraperitoneally daily even through periods of pregnancy and lactation. As the offspring reached a suitable age, either pre-pubertally or maturely, they were mated and likewise injected. This has been carried on through succeeding generations and the effect on both parents and offspring noted. The work has been continued now to the tenth generation.

Many interesting things have been noted, among which are the following: 1. Some rats of the fifth generation were covered with fur and the eyes were open within 60 hours after birth. Some of them were weaned on the third day and grew and developed as well as or better than the litter mates left with the mother.

2. Rats of the ninth generation have had their eyes open as early as 42 hours, the animals then weighing but 11 gm.

3. Rats of the tenth generation showed opening of the vagina as early as the sixth day in-

stead of between the fifty-fifth and seventy-second day. These animals tell a very important story, because the opening of the vagina is seen not only earlier from the standpoint of time but also in animals that are far below the normal size at which the vagina usually opens. Occasionally the vagina opened in animals under 20 gm., and in many instances between 20 and 40 gm. Estrus has been seen as early as the ninth day.

Table 1, indicating the time of appearance of many vital phenomena, shows that the development or differentiation is earlier in each succeeding generation of young born to parents treated with thymus extract. Likewise the curves of body weight, as shown in Fig. 1, indicate an accruing acceleration in growth in each succeeding generation up to the sixth or seventh.

Until the sixth generation was reached, there was an almost predictable accruing effect in each litter of the succeeding generations under treatment. Up to this point we had available some of the original supply of thymus extract sent to us by Dr. Hanson. However, in utilizing batches of thymus extract made up in our laboratory as needed, we have seen the same general type of effect; but the findings have been somewhat more variable, both as to rate of growth and development. In all probability these batches of thymus extract differ in their content of the potent agent, whatever it may prove to be, which is responsible for the appearance of these biologic phenomena. It has been found from experience that extracts poor in sulphur compound are not potent. When large numbers of animals are taken into consideration, it is found, however, that there is a constantly ac-

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† From the Philadelphia Institute for Medical Research, the Samuel Bell, Jr., Laboratory in the Philadelphia General Hospital, the Laboratories of the Philadelphia General Hospital, Philadelphia; and the Hanson Research Laboratory, Faribault, Minnesota. This work was supported by a grant from the Penrose Fund of the American Philosophical Society. The authors wish to acknowledge with gratitude the financial assistance given to Dr. Hanson by the Josiah Macy, Jr., Foundation.

TABLE I
DEVELOPMENT OF THYMUS-TREATED RATS AND THEIR CONTROLS

	Controls	F ₁	F ₂	F ₃	F ₄	F ₅	F ₆	F ₇	F ₈	F ₉
Average birth weight (gm.)	4.6	5.1	5.3	5.3	5.6	5.5	5.6	5.5	6.5	6.0
Ears opened (days)	2½-3½	2-3	2	1-2	1-2	1-2	¼-2	Birth	Birth	Birth
Incisors erupted (days)	8-10	8-9	4-6	4-6	2-3	2	1-2	Birth	Birth	Birth
Fur appeared (days)	12-16	10-12	4-6	4-6	2-3	2	1-2	1-2	1	1
Eyes opened (days)	14-17	12-14	4-6	4-6	2-3	2-3	2-3	42-48 hours	42-48 hours	36-42 hours
Testes descended (days)	35-40	15-29	15-21	10-12	6-10	4-6	3-10	3-4	3-4	2-3
Vagina opened (days)	55-62	30-45	23-32	21-27	18-20	18-20	16-20	16-18	16-18	6
Pregnant (days from birth)	80	70	56	42	25	40	46	37	22	....
First litter cast (days from birth)	102	92	78	64	47	61	68	59	43	....

cruing acceleration in the rate of differentiation up to the tenth generation.

Investigations carried out on the rate of development of the teeth by M. T. Barrett show that the rate of growth in this regard is just as remarkable as that of the body as a whole. Likewise studies by A. C. Buckley have revealed the fact that myelinization in thymus-treated rats proceeds at a rate much more rapid than normal.

An interesting corollary to the work of the thymus extract has been carried on in our laboratory in conjunction with Dr. Einhorn. He has shown that thymectomy in successive generations of parents results in accruing retardation in the rate of growth of the offspring. Thus in the third generation the young are more than 35 per cent below normal weight at 30 days of age. After 70 days the growth is usually normal. The effects of both the administration of the extract and the removal of the gland has to do only with the growth and development in the early days of life. Neither gigantism on the one hand, nor dwarfism on the other, is permanent.

It is of unusual interest to ascertain that the effects of thymectomy are confined largely to the rate of growth of the offspring. Significant retardation in development has not been observed to date, although various vital phenomena occur late in the normal range or in some instances just beyond the extremes of the normal. It is possible, of course, that more striking effects in this connection may become apparent in later generations.

It is of great significance that these effects of thymectomy in the young can readily be overcome through the administration of thymus extract (Hanson) or partially overcome through the implantation of thymus glands in parents,

facts which have been established through the work of Dr. Einhorn.

Reference should be made to certain clinical problems concerning the thymus gland. There is no unanimity of opinion concerning the weight of the thymus at birth, the normal weight according to different authors varying from 9 to 21.8 grams. It is obviously of tremendous importance, if we are to treat the newborn for enlargement of the thymus, that we should have a definite idea as to its normal weight.

A committee of the British Medical Society, known as the British Status Lymphaticus Committee, has made a careful pathologic study of a large amount of thymus material from patients who died suddenly, and has come to the conclusion that there exists no pathologic entity responsible for so-called thymus lymphaticus death. In our work, through the administration of thymus extract (Hanson), we have produced, at least partially, the pathologic findings said to characterize this disease (i. e., the enlargement of the thymus glands, decrease in the size of the adrenal glands, together with marked lymphatic hyperplasia), but curiously this pathologic pic-

TABLE II
PROGRESSIVE DEVELOPMENT UNDER PINEAL TREATMENT

	Ears opened	Teeth erupted	Fur appeared	Eyes opened	Testes descended	Vagina opened
Controls	2½-3½ (3)	8-10 (9)	16 (16)	14-17 (15.5)	31-40 (35)	55-72 (65)
F ₁	2-3 (3.3)	8-10 (9)	7-16 (13)	12-17 (14.9)	12-36 (22)	32-56 (45)
F ₂	2-3 (2.8)	7-11 (9)	6-17 (12)	12-16 (13.8)	6-26 (15)	30-39 (37)
F ₃	2-3 (2.3)	5-8 (6.9)	5-12 (9)	5-13 (9.8)	5-12 (10)	29-39 (32)
F ₄	1-3 (2)	3-5 (4)	4-8 (5)	4-8 (6)	4-9 (5)	23-26 (24)

ture is not associated with difficulty in respiration or with sudden death. To date our work in no way settles the important question of status thymus lymphaticus; that problem is still in status quo.

John Lansbury, working in The Philadelphia Institute for Medical Research, plotted a weight curve of the thymus gland as it is revealed in the literature and found that it practically coincided with the accepted curve of growth.

There is one clinical problem in which we are greatly interested at the present time, namely, the roentgen-ray treatment of infants supposedly suffering from status thymus lymphaticus. Is such treatment desirable or even justifiable? Our opinion is that it is often both necessary and helpful. On the other hand, there is a small number of cases subjected to this form of therapy in the early days of life in which retardation is later found—mentally, physically, or both. During the last year some 18 of these cases have been brought to our attention in one way or another and 7 have been seen personally.

After a careful study of several of these cases, we are convinced that as a profession either we are unwittingly administering roentgen-ray therapy to the thymus region of retarded infants or we are producing retardation with radiation. It is the clear duty of the profession to ascertain the truth.

With this in mind we are starting a form of substitution therapy in certain of these retarded children. In the majority of them treatment is probably beginning too late. The brain of a child should be quite fully developed by age 7. It would seem desirable, therefore, that treatment in such cases should be begun very early. At the present time we have under treatment a group of 5 such children. At the request of the parents, these children will be subjected to a course of treatment of daily subcutaneous or intramuscular injections of 2 to 3 c.c. of thymus extract. This part of our work has not progressed to a point that would justify any expression of opinion as to the outcome.

In addition to the attempts at clinical application of our work on the thymus gland, it is obvious that the question of chemistry of the gland and its extract is of paramount importance. A more stable and more potent extract is imperative.

The second part of this communication has to do with the effects of the administration of pineal extract (Hanson). We have now reached the sixth generation. As a result of administering 1 c.c. of pineal extract daily to successive generations of parents, we have found an ac-

cruing retardation in growth and an accruing acceleration in the rate of differentiation in the offspring.

There are young rats of the fifth generation weighing 8 gm. on the fourteenth day whereas the controls weigh 20 gm. This is an extreme effect. Likewise in the sixth generation there is both the eruption of the teeth and the opening of the eyes in an animal 5 days of age weighing just under 5 gm. This indicates that the administration of pineal extract has brought about dwarfism associated with precocious development.

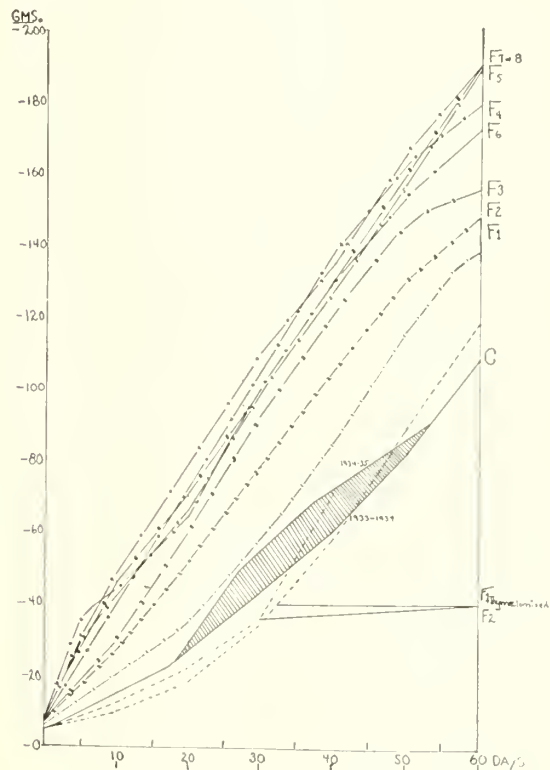


Fig. 1.

The accruing effect in succeeding generations is best illustrated by reference to Table II, which contrasts the time of the appearance of various biologic phenomena in the controls and in the succeeding generations. Likewise the retardation in growth as reflected in the weight curve is indicated in Fig. 2.

Caution must be exercised in drawing conclusions relative to the function of the pineal gland from the effects observed following the administration of pineal extract. Pinelectomy studies in a small series of animals at the Philadelphia Institute for Medical Research, carried out by Dr. Einhorn, indicate some retardation of growth and some acceleration in differentiation. At the present time, however, we are in

no position to speak authoritatively of anything other than the effects of pineal extract (Hanson). This retardation of growth and acceleration of differentiation has been observed in hundreds of animals given pineal extract.

Although we are greatly interested in the biologic effects observed as a result of the administration of thymus and pineal extracts and of the removal of the thymus gland in succeeding generations, we are inclined to believe that there is emerging from this work a more important consideration than the mere indication of function of the glands concerned. Both curves of body weight and tables relative to the time of onset of biologic phenomena reveal accruing effects in the young in each succeeding generation from parents under treatment. This, so far as we know, is the first inkling of what may eventually become a new law in biology.

This amplification of effects in the young through continuous treatment of successive generations of parents is seen in the weight curve of the thymus animals up to the sixth generation, in all the data relating to the physical and gonadal development, and in the weight curves of the young following thymectomy of the parents; it is also seen in the retardation of the weight curves of the animals subjected to pineal extract (Hanson) and in the tables concerning their differentiation up to the fifth generation.

The great need in this work at present is expansion along chemical and clinical lines. The clinical application of thymus extract (Hanson)

to retarded children who have been subjected to roentgen-ray therapy of the thymus gland in infancy is one that will occupy our immediate attention. This problem is fraught with a great many difficulties, particularly as it must be carried on without harm to the children concerned. It is hoped that a considerable series of these retarded children will be under treatment with thymus extract during 1936.

Philadelphia Institute for Medical Research, Thirty-fourth and Pine Streets.

THE MEDICAL COSTS OF CATASTROPHIC ILLNESS

We have listened for many years to appeals for some form of government controlled sickness service based on the argument that many families degenerate into poverty-stricken units after they have paid for the required sickness services in connection with certain so-called catastrophic illnesses.

Recently some illuminating figures have been made available by the Northwestern National Life Insurance Company of Minneapolis, who learned from a survey of 384 of their policyholders that one major emergency or crisis must be met by the average family every 11 years.

An average span of 15½ years of married life was covered in the detailed reports of 384 policyholder families tabled by company statisticians.

The families surveyed were widely scattered geographically and their reports listed all important emergencies (sickness or otherwise) encountered, together with costs and losses involved. Of the 384 families exactly one-third reported no serious mishaps.

Due to the difficulty of arriving at a proper estimate of financial loss, no families faced by unemployment were included in the study.

If the catastrophic misfortune suffered was illness, pneumonia and stomach ulcer were the leading causes, at an average cost of \$343 for hospital, nursing, and doctors' services.

Of the 158 surgical operations thus reported, the average total cost for hospital, nurse, and doctor was \$258.

The cost of similar services in severe accidental injuries, whether they were sustained in automobile accidents or otherwise, was \$240.

Costs incident to the birth of children were not included in the study, except in complicated cases.

Since the average family's annual income reported was \$2748, and the average cost for each sickness or injury emergency met was \$280, less than 6 weeks' income in the 11 years' average was wiped out in each sickness or injury emergency.

Granting that numerous families with considerably less annual income meet with similar catastrophic illnesses and are much less able to absorb the unexpected expenditures for same, nevertheless it is enlightening to have the above figures regarding the all-important group of American families with an average income of \$2750 a year.

Consideration of the averages arrived at above should be a help in intelligently estimating the actual cost in dollars and cents of prolonged illnesses to lower income families meeting with such emergency sicknesses much more frequently, possibly, than every 11 years.—*Pittsburgh Medical Bulletin*, Apr. 25, 1936.

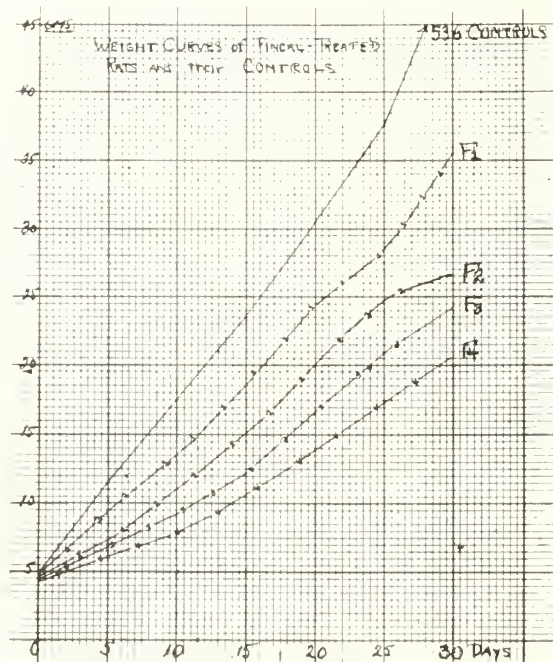


Fig. 2.

EDITORIALS

THE GRADUATE COURSES OF THE COUNTY MEDICAL SOCIETIES

The county medical societies are very well pleased with the graduate courses which have been conducted, and it is urged that those county societies anticipating this instruction make every arrangement for the establishment of such a course. By means of the arrangements recommended by the Committee on Graduate Instruction of the State Society, graduate instruction can be brought to any community of the state at a very nominal sum.

We wish at this time to express most courteous appreciation to the instructors who have been requested to give these various courses, especially during the recent inclement weather. Some of the instructors were required to drive at least 150 miles on dangerous highways in order to keep appointments with local county societies.

PUBLICIZING INFORMATION REGARDING MEDICAL ECONOMICS

At the Annual Conference of Secretaries of Constituent State Medical Associations held in Chicago, Nov. 15-16, 1935, a paper was read by Dr. William F. Braasch of the Mayo Clinic on "Publicizing Information Regarding Medical Economics." This paper and discussion appears in the January, 1936, number of the *American Medical Association Bulletin*. The keynote of the article is the need for increased effort and the adoption of modern methods to develop an intelligent organized defense against the threat of socialistic medicine. This can best be accomplished by the combined efforts of the state secretary and the state medical journal in co-operation with the various resources of the American Medical Association.

It is stressed that the first step in a nationwide antisocialistic movement should be the organization of bureaus or committees of propaganda by the individual state and county societies. The most active propagandist must necessarily be the doctor himself. However, no one can be a propagandist unless he is well-informed. Unfortunately, the physician has been slow in informing himself thoroughly concerning the economic problems of medicine. Although such information has accumulated rapidly during the last few years, nevertheless adequate methods for its dissemination in the ranks of the medical

profession have been lacking and undoubtedly are most urgently needed at the present moment.

Dr. Braasch thus clearly brings to every physician the necessity for the physician keeping himself well informed upon the issues arising in order that he may be an efficient propagandist in properly informing his patients at the bedside, in the office, or wherever the contact seems most conducive.

There are 2 principles involved which must be emphasized—the free choice of physician, which is all important, and no one man should be hired as a county physician or a city physician to do the work. The members of our State Medical Society have been and are being supplied with informative material through the office of Secretary Walter F. Donaldson of The Medical Society of the State of Pennsylvania. This material is sent to the secretary and president of the constituent county medical societies throughout the state, to the editors of 25 to 30 component society bulletins, and to various county society committee chairmen.

Our members must realize that the best manner in which to meet the general public is through talks to lay groups and to individual patients, neighbors, and friends. Our membership must realize that the American Medical Association cannot submit a sickness service plan that will be workable in every community. The county medical society must work out its own community plans in consultation with the State Society's Committee on Medical Economics and the Board of Trustees of the State Society.

To be a propagandist each member of the medical profession must be a student and thoroughly understand the existing conditions. He must understand that the publicity in this matter needs to be iterated and reiterated. The physician must understand not casually but basically, fundamentally, and in detail.

As an aid the members should read the information given on medical economics in our State JOURNAL, the *Journal of the American Medical Association*, and the *American Medical Association Bulletin*, and any other reliable source of information. The doctor at the bedside is the man to tell the story, and he must know what story to tell and how to tell it. The public must be advised of the misinformation being widely distributed to the public by the foundations and other interests bent upon the socialization of medicine. It would seem that information

on economics obtained from headquarters is not sufficiently read.

If any of our members have no sources of information in their own files they might well ask for the packages being so widely distributed to high school debaters, requesting same from the Librarian, 230 State Street, Harrisburg, or the office of Secretary Walter F. Donaldson, Jenkins Arcade, Pittsburgh.

MATURE WHISKY

A serious accident, not without a humorous feature, recently occurred in the West when 2 young men deliberately ran a stolen automobile at a speed of 80 miles an hour into a ditch in order to end their lives. The car was smashed, but the 2 young men escaped without a scratch. Previous to the escapade they had imbibed some cheap whisky, and said it had made them "despondent."

It is no wonder that the cheap whisky sold nowadays makes those who drink it "despondent." All this cheap whisky is green whisky.

Sufficient time has elapsed since the repeal of prohibition to enable the distillers to put more mature whisky on the market.

Federal law should prohibit the sale of year-old whisky.

LIFE BEGINS

After the world was created, man in some form made his appearance. Nature at that time endowed him with certain dynamic desires that would insure a perpetuation of the species. Likewise, he was so endowed that the complete satisfaction of these desires was only possible through heterosexual relations, other attempts at satisfaction being merely safety valves and tension reducers. It has been observed that the happiest life is the life that is best adjusted sexually. This being the case, babies will always be with us and it, therefore, behooves society to see that the child's inalienable rights are protected, such rights as the right to be well born, to have available the best environment, proper guidance in mental and physical development, and the right to educational and vocational training so that in adult life they will be self-supporting. Physicians are very definitely related to the protection of these rights.

Although learned physicians, particularly obstetricians, may make approximations, no one knows just the moment when life begins. This beginning is very important to the mother and the life that is to be. During the period between

the exposure and the physical manifestations of conception, many and varied are the emotional experiences of the expectant mother, for regardless of instinctive tendencies and the desire for a child this particular period carries with it in some instances joy and hope, in others a fear that is based on inexperience. In some instances motherhood means blocking in the outlet of personal selfish ambitions and desires and a conflict ensues. Physicians can do much in the matter of psychotherapy in those cases in which there is much concern as to the possibility of pregnancy. Joys may be sustained, fears overcome, and a satisfactory readjustment made to a new situation.

During the period of gestation—from the embryonic and fetal stage to birth—cells, protoplasm, and the fetus itself are making adaptation to an intra-uterine experience. The more healthy the mother, mentally and physically, and the better the environment, the more normal will be the development of the child. Likewise, the psychology of the mother is important, particularly during the period when there is a disturbance of the physiologic functions, such as cessation of menses, nausea, and vomiting. Psychotherapy here is most helpful in aiding the mother to accept the new experiences. In actual delivery, while we think in terms of safety of mother and child, we should not overlook the predelivery period of the mother as she is about to enter for the first time a painful experience, an experience the thought of which is associated with much fear, apprehension, and anxiety.

Birth creates a new environment for the child. Though its eyes may not see, nor its ears hear, one of the most delicate mechanisms, the nervous system, begins to register on the child impressions of this new environment, impressions that become a permanent part of the individual. As these reflex patterns are formed they become the fabric of habits (which are but previous experiences) and the foundation of personality traits that remain throughout life. We wonder if physicians, obstetricians, and pediatricians, as well as the parents, appreciate fully their responsibility to the child from birth to age 6; that is, if they are fully conscious of the personality needs of the child, if they have an adequate understanding of the psychologic processes involved in this developmental period, such as those in curiosity, imitation, savage tendencies, and normal emotional outlets. We hope so, for during the period of birth to the preschool age is patterned that which the personality is to be.

The physical health of the child is important, but more important is the care of the child dur-

ing attacks of disease, and most important of all the period of convalescence, the period wherein so many sequelae and complications lurk. The physician's duties do not end when the fever holds the base line and râles disappear, nor when the child appears to be physically on the mend. His duties and responsibility cease only when the period of complications and sequelae is passed and the child is restored to its pre-illness level of living.

The greatest responsibility of the physician, therefore, as it relates to a new life is from that period when life begins to the time when the child has reached age 6. He is too closely allied not only with those forces combating infant mortality and that group which promotes good physical health, but also with that group whose interest centers on aiding or bringing about the best type of personalities of potential women and men, to fail to respond to the professional obligations that confront him.

FATAL ACCIDENTS

The automobile industry insists that speed has little or nothing to do with automobile accidents. Advertising the "safety" which the industry says is built into its products, it continues to make cars capable of running comfortably at speeds of from 60 to 125 miles an hour and sells them to be operated on highways, many of which were built for the horse and buggy.

Some people speak continually of "speed per se" as having nothing to do with accidents. It is about as sensible to talk about "speed per se" in relation to automobile accidents as to discuss mumps as a leading cause of bank failures. Speed cannot be "of itself" in that connection. There must always be the vehicle, the driver, and the highway.

A writer stated recently in dismissing the question of speed with a mere paragraph in a lengthy article on highway safety that "90 per cent of all accidents occur at speeds moderate or low." They certainly do, but it is among the 10 per cent at higher speeds in which the fatal accidents may be counted.

Amos E. Neyhart, assistant professor of industrial engineering at Pennsylvania State College, a pioneer in giving safe-driving courses in college, found in analyzing 2571 highway deaths in Pennsylvania during 1934 that 56 per cent were due to "exceeding speed limit or driving too fast for conditions."

Still American manufacturers continue to flood the market with fast cars.

Much could be said to offset some of the claims of "built-in safety." Glaring headlights and inability of cars to withstand safely the speeds at which they may be operated are outstanding subjects of discussion. A complete analysis of safety in relation to motor car construction may be found in the report of the Massachusetts Highway Accident Survey.

The high-speed capacity of the modern automobile is undoubtedly an important contributing factor to the automobile fatality toll.

The following editorial appeared in the *Philadelphia Inquirer*, Apr. 1, 1936:

Greater highway safety will not be achieved by sporadic and half-hearted campaigns directed at 1 or 2 causes of accidents but by unrelenting efforts to combat all causes. Some sound counsel along this line was given the other day by Alfred P. Sloan, Jr., president of General Motors, when the National Safety Council presented awards to the 3 states and 6 municipalities for their accident reduction attainments last year. Pennsylvania and Philadelphia, it might be mentioned, were not on the list.

Mr. Sloan aptly pointed out the desirability of not debating "whether the chief hazard of the highway is excessive speed or liquor, or carelessness or bad brakes, but recognizing that all these and many others combine to increase the casualty lists."

As obstacles in the way of promoting safety, he alluded to the "unholy alliance of ancient and inadequate highways, automobiles that are too old for safe use or that have been allowed to become old before their time, antiquated and conflicting laws, drivers and pedestrians who do not know—and all too often do not care whether they know—how to conduct themselves safely and courteously."

The first thing in any efficient safety campaign is to recognize all the hazards and handicaps, and then seek to remedy them by educational drives demonstrating the value of careful driving and by action of public officials in providing adequate highways, adequate traffic systems, and adequate enforcement of traffic laws.

At the annual meeting of the Keystone Automobile Club held recently in Philadelphia an appeal was made by all the speakers for increased safety on the highways. A prediction was made that unless motorists reduced their driving speed state legislatures will find some means of forcing them to do so. The motorist will have to discipline himself in the matter of fast driving or the legislatures of the several states will enact more stringent legislation governing automobile traffic.

The Department of Revenue has received 2 suggestions on how to control accidents. One of them calls for strengthening the severity of intelligence tests for drivers' licenses. The other asks the establishment of a volunteer women's patrol corps, members of which will note violations of the motor code, take down the license number, and report to the State Highway Patrol.

Although no action has been taken on either of the suggestions, the club is anxious to learn the reaction to the suggestions.

JUDGE RAPS SUITS BY GUEST RIDERS

Judge Joseph L. Kun of Common Pleas Court No. 1, Philadelphia, suggested on Jan. 22 a state law to reduce the number of accident suits brought against motorists by guest riders. The Judge said that it seems unfair to have a guest or relative who is riding gratuitously make a claim against the owner of a car involved in an accident just because the driver was negligent. The Legislature should enact a law restricting such suits to cases in which there is "wanton recklessness" on the part of the driver.

Judge Kun pointed out that Indiana and several other states require more proof in guest suits than mere negligence on the part of the driver. Many of the guest suits are brought against insurance companies which carry accident policies on motor cars.

Judge Kun made his suggestion after nonsuiting a guest suit demanding \$17,500 for injuries received. He held that the driver of the car did not show any intentional disregard for the safety of his guest riders or any "wanton" recklessness.

IF THREATENED WITH SUIT

If you are threatened with suit for alleged malpractice you should communicate at once with the secretary of your county society, the councilor for your district, or the secretary of the State Society *before consulting an attorney*.

The State Society will not undertake the defense of any member unless his application is made *within 7 days* after summons has been served by the court.

ALFRED JAMES OSTHEIMER, M.D.

Dr. Alfred James Ostheimer, of Philadelphia, aged 62, died Mar. 23 at the U. S. Veterans' Hospital, Coatesville, Pa., following a nervous and mental collapse from activities incident to the World War. He had been confined to the Veterans' Hospital for more than 2 years.

Dr. Ostheimer was born in Philadelphia, a son of the late Alfred J. Ostheimer and Mrs. Ellen Hackes Ostheimer, of Cleveland. Dr. Ostheimer's father at one time was honorary Japanese and honorary Austrian Consul at Philadelphia.

Dr. Ostheimer was graduated from Harvard University in 1895 and the Medical School of

the University of Pennsylvania in 1898. After pursuing graduate studies in England and on the Continent, he returned to this country and engaged in the importing business with his father.

Dr. Ostheimer saw extensive overseas service during the World War as regimental surgeon of the 23d Infantry, Second Division. He was under fire at Château-Thierry, Soissons, and other major engagements in which American troops participated prior to September, 1918. He was also a neuropsychiatrist of Base Hospital 34 at Nantes when that city was bombarded by the Germans. He returned to this country after the war and retired from the service in 1919 with the rank of lieutenant-colonel and entered the U. S. Public Health Service. When this agency was taken over by the Veterans' Bureau, Dr. Ostheimer organized the psychiatric division in Pennsylvania, New Jersey, and Delaware. He resigned in 1924 from the Public Health Service to become medical director of the mental hygiene division of the Public Charities Association of Pennsylvania. Since 1926 he had been a frequent patient at the Coatesville Hospital.

Dr. Ostheimer was a Fellow of the Philadelphia College of Physicians.

In 1924 Dr. Ostheimer was married to the former Miss Caroline W. Jones. In addition to his widow he is survived by 4 sisters and 1 brother.

JEROME BONAPARTE ROGERS, M.D.

Dr. Jerome Bonaparte Rogers, Pottsville, aged 60, died at his home, Mar. 2, his last illness having developed in August, 1935. He had been bedfast from that time.

Dr. Rogers was born in Toms River, N. J., Oct. 20, 1876, a son of Jerome Bonaparte and Mary (Allan) Rogers. His father, who died in 1900, was a captain in the U. S. Navy. Dr. Rogers received his early education in the Toms River schools and Pennington (N. J.) Seminary. He was graduated from the Jefferson Medical College in 1904, serving his internship in the Pottsville Hospital, and then located permanently in that city.

He was elected superintendent of the Pottsville Hospital in July, 1920, and served in that capacity until 1929, when a change in the policy of the hospital took place and a physician no longer acted as the directing head. He retired as chief surgeon at the Pottsville Hospital about 6 years ago on account of ill health. He was also chief surgeon to the Reading Coal and Iron Company, succeeding the late Dr. George H. Halberstadt, under whom he served as assistant for many years.

Dr. Rogers served in many professional capacities in Pottsville. He was president of the Pottsville Board of Health, county medical director, and during the influenza epidemic in 1918 worked unceasingly to alleviate conditions not only in Pottsville but throughout the county. He served for several years as a deputy coroner.

On July 19, 1920, Dr. Rogers was married to Miss Louise Dolan, of Pottsville, who with an unmarried daughter survives.

Dr. Rogers was a member of his county and State medical societies and the American Medical Association and a Fellow of the American College of Surgeons.

Dr. Rogers was an indefatigable worker for the best interests of the community which he served. For some time he gave instruction to the "First Aid Corps." The local health board paid tribute to Dr. Rogers, who for years was one of its former members, having served as president. He was a member of the Phi Alpha Sigma Medical Fraternity.

He was beloved by all, an exemplary citizen, and one who consecrated himself to the service of humanity.

FRANCIS HOWARD McCASKEY, M.D.

Dr. Francis Howard McCaskey of Rochester, Pa., died Dec. 22, 1935, at his home, from cardiovascular-renal disease.

Dr. McCaskey was born in Freedom, Pa., on Mar. 19, 1871, a son of Major Robert and Louise Brown McCaskey. He received his preliminary education in the Freedom schools and Beaver High School and was graduated from the Western Reserve University School of Medicine, Cleveland, O., in 1901. He was a graduate student in the Roentgen-ray Department of the Jefferson Medical College Hospital preliminary to entering the Army medical service in the World War.

He was the originator of *The Bulletin*, the official publication of the Beaver County Medical Society, and was the editor and publisher of the same from 1912 to 1930, at which time it was discontinued. *The Bulletin* was widely read and very favorably commented upon.

He was a member of the surgical staff of the Rochester (Pa.) General Hospital 1901-1917, and in 1921 was appointed head of the Roentgen-ray and Physical Therapy Department of the same institution. The latter position he held until his death. As a roentgenologist, he was widely and favorably known, it being said of him that he was one of the very best roentgen-

ray diagnosticians in western Pennsylvania. His opinion in obscure cases was held in high esteem by the members of the hospital staff.

Dr. McCaskey was a member of his county and State medical societies; a Fellow of the American Medical Association; a member of the Pennsylvania Roentgenological Society, the American Roentgenological Society, the Clinical Society of Rochester (Pa.) Hospital, the Nu Sigma Nu Medical Fraternity, and the Junction City Post, Veterans of Foreign Wars.

He was a pioneer in roentgen-ray work, being the owner and operator of one of the first roentgen-ray machines in Beaver County.

He was a medical officer in the Army for 3½ years during and following the World War and was assigned to service in both the French and American armies.

Dr. McCaskey was married in 1902 to Miss Anna Romigh, who with a married daughter survives.

It can be truly said that he was a cultured, refined gentleman, with a high sense of honor, a great charm of manner, highly skilled in his line of work, and much respected and beloved by all the profession with whom he associated.

THE EASTERN SECTIONAL MEETING OF THE AMERICAN CONGRESS OF PHYSICAL THERAPY

The Eastern Sectional Meeting of the American Congress of Physical Therapy will be held in conjunction with the Seminar on Physical Therapy of the Philadelphia County Medical Society in the auditorium of the Philadelphia County Medical Society on May 27, 1936, starting at 9 a.m. and continuing all day with an evening meeting at 8 o'clock. The following program has been arranged:

"Physical Therapy in the Treatment of Arthritis," John P. Currence, M.D., New York City; "Physical Therapy in Orthopedic Conditions," Jerome Weiss, M.D., Brooklyn, N. Y.; "Fever Therapy in Office Practice," G. J. Barger, M.D., Washington, D. C.; "The Danger of Overtreatment in Physical Therapy," Madge C. L. McGuinness, M.D., New York City; "The Treatment of Erysipelas with Ultraviolet Energy," Norman E. Titus, M.D., New York City; "Temperature of the Surface of the Skin," William Bierman, M.D., New York City; "Influence of Short-wave Radiation on Constituents of the Blood," Disraeli Kobak, M.D., Chicago, Ill.; "Evaluation of Suction Pressure in Peripheral Vascular Disease," Drs. Eugene M. Landis and Lewis H. Hitzrot, Philadelphia.

On May 28, 1936, a series of clinics will be held by Philadelphia clinicians in the Physical Therapy Department of Jefferson Hospital, 1015 Walnut Street, at 9 a.m., as follows: "A Demonstration of the New Treatment for Tic Douloureux," Benjamin Ulanski, M.D.; "The Value of Suction Pressure in Peripheral Vascular Disease" (Demonstration), Robert P. Sturr, M.D.; "Treatment of Sinus Infection with Short-Wave Diathermy," Thomas Lechner, M.D.; "Eval-

ation of Fever Therapy" (Demonstration), Wm. H. Schmidt, M.D.

The clinics will be continued at 1 p.m. as follows: "The Treatment of Muscular Dystrophy," Albert A. Martucci, M.D.; "Zinc Ionization in Nose and Ear Conditions," Philip S. Stout, M.D.; "Treatment of Paralytic Ileus by Galvanism," Frederick A. Cochran, M.D.; "The Value of Static Currents in Bell's Palsy," Wm. T. Johnson, M.D.; "Exercise and Massage as a Therapeutic Agent," Josef B. Nylin, M.D., Philadelphia.

VETERANS GET 350 BEDS AT PHILADELPHIA NAVAL HOSPITAL

Again reversing its policy on the hospitalization of veterans at the Philadelphia Naval Hospital, the Veterans' Administration announced on Apr. 9, 1936, that 350 beds would be made available for ex-service men at the League Island institution.

Simultaneously, Representative Daly, of Philadelphia, moved to reopen a Congressional inquiry into the subject by introducing a resolution asking a full report from the Veterans' Administration respecting its activities at the hospital.

Under the new policy, announced in a letter to Daly by Brigadier General Frank T. Hines, chief of the Veterans' Administration, 50 beds which were to have been abandoned will be retained until the end of the fiscal year, June 30.

Care of the veterans at the hospital has been disputed by government officials and veterans' organizations since the institution was opened in April, 1935. Originally 200 beds were available for ex-service men. The number was later increased to 250, and last February to 350.

Pursuant to a resolution introduced by Daly several weeks ago, General Hines reported to the House Naval Affairs Committee that, beginning Apr. 1, 1936, the number would be reduced to 300.

In his letter to Daly, dated Apr. 6, the general announced a reversal of this stand.

Officials of Philadelphia veterans' organizations, Daly said, have informed him more than 500 veterans needing urgent hospitalization have been refused admittance at the naval institution. General Hines failed to comment upon these charges in his first report to the House committee.—*Philadelphia Evening Ledger*, Apr. 9, 1936.

THE STORY OF THE FLOOD AS TOLD IN COUNTY SOCIETY PUBLICATIONS

Allegheny

For the benefit of the current reader at a distance or a future reviewer of the Bulletin we offer the following very brief observations in explanation of the missing numbers 12 and 13 of Volume 25 of the Pittsburgh Medical Bulletin, which should have been published March 21 and 28, 1936.

The Imperial Power Building and the Jenkins Arcade Building, in downtown Pittsburgh, which house respectively the workshop of the faithful printers of the Bulletin and the offices of the Allegheny County Medical Society, are located on streets 20 feet higher than the ordinary level of the Allegheny and the Monongahela rivers and approximately one-eighth of a mile from the rivers' edge at their ordinary stages.

On March 16, 17, and 18, in the mountainous or hilly areas of Southern New York, Eastern Ohio, West Virginia, and Western Pennsylvania, which comprise the extensive watersheds drained by the streams tributary

to the formation of the Ohio River at its source, the rainfall averaged $4\frac{1}{2}$ to 6 inches.

This unusual and widespread precipitation resulted in a record-breaking flood level of 46 feet at Pittsburgh, bringing the destructive and filthy river waters to the ceiling of the first floor in the Jenkins Arcade Building and even higher in our printer's building farther down the street toward the Point, where the Allegheny and the Monongahela join to form the Ohio River. Flooded rivers return quickly to their accustomed levels and channels, leaving behind them death, disease, destruction, and human determination.

The 8 feet of water added to the highest previous flood level at Pittsburgh resulted in the sudden cessation of nearly every public utility that modern urban life has come to accept as necessary: "City" water, rail and highway transportation, and the now indispensable facilities dependent upon commercial electric current—light, power, telephone, and radio.

The brief period of chaos, the longer hours devoted to rescue from impending death, the then seemingly endless days and nights of conjecture as to the outcome of individual and organized efforts to furnish food, clothing, shelter, and medical attention to the tens of thousands rendered homeless in the greater Pittsburgh district, all passed with great credit to the volunteer workers—trained and untrained.

We acclaim the efforts of the untrained and publish below a precious editorial comment from the *Pittsburgh Post-Gazette* of March 24 regarding the members of our own profession:

Doctors in First Line of Defense

It was simply characteristic of their profession that 600 Pittsburgh physicians should immediately have volunteered their services in guarding the public health in the wake of the flood.

In such crises the doctors are always in the first line of defense, working unselfishly, heroically.

And how quietly and effectively they work, giving not only the benefits of science, but also a warm-hearted touch of humanity!

There could be no higher tribute to the profession than the fact that it is expected to do this as a matter of course—and it never disappoints!

All the daily newspapers of Pittsburgh, true to their finest traditions, were issued each day from such distant points as Washington, New Castle, and Greensburg in Pennsylvania, and Youngstown in Ohio, their columns including messages of advice, confidence, and hope from established sources, such as city, county, and state health authorities and the Allegheny County Medical Society; and considering the lack of co-operative action due to the limitations placed upon facilities for communication, the general advice given was remarkably well co-ordinated.

Everything that may be said in praise of the newspapers in their endeavors to facilitate the labors of all workers in behalf of rescue, shelter, disease prevention, and rehabilitation, may also be said of radio station KDKA especially, which was fortunately able to carry on uninterruptedly, under the greatest of broadcasting difficulties, 24 hours a day. The management of this station was not only willing but anxious to spread such advice and hope as might be given by the health organizations and to broadcast the far-flung and successful emergency endeavors of the American Red Cross.

From other sources have been recorded and must continue to be recorded the voluntary efforts of nu-

merous members of the Allegheny County Medical Society in the devastated areas in towns along the rivers and their tributaries above, below, and in the city of Pittsburgh. Upon them devolved the task of rendering the professional services necessary to those suddenly ill or injured, as well as the giving of inoculations against disease to thousands of refugees from the flood. The outcome of such protective measures will be awaited with great interest not only by members of the medical profession but by all those similarly exposed to flood waters who were inoculated, especially against typhoid fever, as well as those who were not.

To the members of the Allegheny County Medical Society who have through unavoidable interference with their office practice lost the opportunity for varying periods during the past 3 weeks to serve a great majority of their clientele, we offer the cold comfort that may be abstracted from the following quotation from a communication issued Mar. 31 by our State Medical Society: "We cannot close this communication without bringing to your sympathetic attention the plight of probably 200 of our state society members scattered across the state (50 of them in Johnstown) through whose first-floor combined offices and residences flowed from 5 to 12 feet of destructive and filthy flood waters."—*Pittsburgh Medical Bulletin*, Apr. 4, 1936.

Cambria

On March 17, 1936, Johnstown and vicinity suffered another flood from continued rains and melting snows that was analogous to the flood of May 31, 1889.

There were few lives (8) lost as compared to the 2280 lives lost in 1889, but the property damage was much greater due to a larger population and greater number of industries now located in Johnstown.

Thirty-nine physicians had their offices flooded; 16 physicians had their offices and homes flooded. These members of the Cambria County Medical Society were as follows:

L. R. Altemus, Market and Vine Sts.; M. E. Baback, 123 Broad St.; J. W. Bancroft, 441 Vine St.; George Bloom, 248 Market St.; Meyer Bloom, 521 Locust St.; K. A. Bowman, 234 Market St.; E. C. Boyer, 244 Market St.; J. P. Choby, 408 Broad St.; H. V. Cunningham, 225 Main St.; T. J. Cush, 136 Park Place; C. Reginald Davis, 531 Locust St.; S. R. Davison, 236 Market St.; W. J. George, 405 Pine St.; B. W. Grabiak, 318 Broad St.; Harold M. Griffith, 343 Lee Place; George Hay, Valley Pike and Hay Ave.; L. W. Hornick, 415 Locust St.; J. J. Huebner, 325 Horner St.; W. L. Hughes, 230 Market St.; L. W. Jones, 434 Lincoln St.; P. E. Lavelle, 344 Lincoln St.; B. E. Longwell, Sr., 340 Locust St.; B. E. Longwell, Jr., 340 Locust St.; J. B. McAneny, 115½ Broad St.; John B. McAneny, 115½ Broad St.; B. J. McCloskey, 338 Locust St.; Paul McCloskey, 338 Locust St.; W. E. Matthews, 425 Lincoln St.; L. H. Mayer, Jr., 228 Market St.; W. F. Mayer, 228 Market St.; S. B. Meyers, 326 Haynes St.; C. B. Millhoff, 646 Franklin St.; A. Miltenberger, 413 Locust St.; H. G. Nickel, 220 Conemaugh St.; S. Palazzolo, 407½ Franklin St.; Edward Pardoe, 531 Locust St.; H. H. Penrod, 409 Vine St.; Henry Pohl, 422 Franklin St.; L. L. Porch, 221 Broad St.; W. N. Pringle, 936 Franklin St.; E. E. Raymond, 240 Market St.; W. C. Raymond, 528 Franklin St.; P. W. Riddles, 533 Locust St.; R. J. Sageron, 340 Lincoln St.; H. W. Salus, 420 Franklin St.; F. J. Scanlan, 114 Walnut St.; J. Swan Taylor, 408 Franklin St.; James T. Taylor, 408 Franklin St.; W. B. Templin, 418 Lincoln St.; H. F. Tomb, 431

Lincoln St.; W. M. Wallace, 442 Franklin St.; L. A. Wesner, 424 Franklin St.; Julius Wollitzer, 429 Lincoln St.; G. F. Wright, 224 Main St.; A. C. F. Zobel, 124 Main St.

Physicians not members of the Society who had flooded offices, homes, or both were:

G. W. Conrad, 516 Vine St.; D. T. Powelson, 530 Vine St.; F. M. B. Schramm, 272 Cooper Ave.; C. J. Wesner, 538 Vine St.

Data and statistics of the flood activities of the Cambria County Medical Society and its members will be published in the May issue of *The Medical Comment*.—*The Medical Comment*, Apr. 9, 1936.

Clearfield

The flood waters did serious damage to the offices and residences of Drs. Falconer, Waterworth, Yeane, L. C. Rowles, Wilson, and Frantz, all situated along Second Street in Clearfield. A half-dozen other members in the central business section were seriously inconvenienced by the situation, but the water did not get into their first floors. Motor and row boats rescued people and delivered supplies right up to the door of the Dimeling Hotel.—*Clearfield County Medical Society Bulletin*, Apr., 1936.

Dauphin

We have been visited by a catastrophe. The original benumbing sensations are slowly abating, and we are confronted now with the grim realization of consequence. Needless to say, our problem is one of health conservation and prophylaxis. There is no doubt in the minds of those in high authority that the rank and file of the medical profession will not be found wanting in this emergency. It is not enough to sit back and wait for our opinions to be solicited. So many grief-stricken and homeless unfortunates have scarce time to concern themselves with future trouble. We must go to them and by every means at our disposal, inform them, guide them, and help them obviate the horrors of the inevitable infection and contagion which will follow the flood. This is no time to indulge in high-sounding platitudes; this is no time to indulge in experimentation; this is no time to allow the slightest semblance of discord or variance of procedure in the medical profession to enter into the minds of the public. We must be completely united and devote ourselves wholeheartedly to a common cause. We must also, of necessity, set aside our personal convictions regarding the details of public hygiene. It is essential that we abide by the plan set down by those in authority—the city and state health departments. We have the greatest confidence in the judgment of our general practitioners that they will do to and for their patients as they would want done to and for themselves and their dear ones.

A great deal of anxiety has arisen because of the enthusiasm, or lack of it, on the part of a few who have been administering antityphoid prophylaxis contrary to accepted plan. We all know that immunity cannot be established hurriedly—the statements of biological houses to the contrary notwithstanding. Our health department has announced that antityphoid serum or serobacterin shall be administered at weekly intervals in recognized dosage. All other administrations of prophylaxis have not been passed upon by the council of the American Medical Association and should, therefore, not be employed. The administration of all 3 doses at once is unscientific, ineffective, and actually hazardous. Please remember that every c.c. of serum

contains approximately 2500 million bacilli, and the reactions can be very severe if excessive doses are administered.

The oral administration of typhoid immunizing substances by pills or otherwise has not been council-accepted or approved and should therefore be discouraged at this time.

The fact that an individual has had typhoid at some time in his life does not render him immune to the present infection because the present pollution includes both paratyphoid A and B, either one of which can cause a disease of severity quite equal to that of typhoid itself. There are some who are of the belief that individuals past age 40 are immune. This has no rational basis. There are some who feel that children under age 4 should not be inoculated. This is also fallacious. Children are exposed to a far greater degree to the hazards of infection than are adults because of their youth and lack of judgment.

Our health department has issued a bulletin ordering the boiling of water for all domestic purposes—drinking, washing, *etc.* The accepted plan is to boil all water for 30 minutes. While it may be very satisfactory and practical to chlorinate water sufficiently to render it safe, this procedure in lay hands would of necessity be fraught with danger and should, therefore, be discouraged in order to insure maximum safety to the greatest number of people.

In the name of heaven, in the name of health, and in the name of the dignity of the medical profession, let us man together with a concerted uniform policy to do our share toward the alleviation of suffering and the prevention of an epidemic which, if it gains a foothold, will be unparalleled in the history of modern medicine. There is no shame in admitting that we are not conversant with the accepted policy of prophylaxis. The information is readily available and will cheerfully be furnished. For the past year or two the medical profession has been in the throes of a controversy with misinformed lay groups. We have been accused of assuming a laissez-faire attitude; we have been accused of a tendency to allow government agencies to assume the complete rôle of prophylaxis without the complete co-operation of the profession. Here is our opportunity to throw the lie back to those who have so unjustly been accusing the profession. Here is our opportunity to rise to heights heretofore unheard of. We feel sure that the profession will not be found wanting.—*The Dauphin Medical Academician*, Apr., 1936.

Erie

Is the Erie County Medical Society prepared for disaster? True enough, the members of the local county society have never been found wanting in their duty under any emergency or stress, but should disaster occur in our own city are we prepared actively to take hold and administer to the afflicted and suffering? During the recent floods we officially offered our services to any part of the state. We also gave a donation to the Red Cross. But, say that disaster had occurred in Erie—would we have been ready to step into the emergency without delay and with full organization? I am inclined to say that unpreparedness would be the answer.

Therefore, with the American Legion and the Red Cross, the Erie County Medical Society should set up a relief and assistance organization fully manned and properly officered so that if a serious conflagration or catastrophe should strike we will be fully prepared and manned to step in and properly administer. Just a

thought that occurs to your editor as an aftermath of what just transpired in our state. What is your reaction, doctor?—*The Stethoscope*, Apr., 1936.

Luzerne

If the floods of 1936 could be likened to the 3 stages of labor, counting the 29-foot rise early in March as the first stage, the record crest of the nineteenth as the second, then the reconstruction would well be called the third stage. At the present writing the Wyoming Valley is in the early puerperium. From this terrifying disaster there must come a worth-while progeny if there is to be any recompense for the suffering and privation of those caught in the high waters.

The *Bulletin* feels that the occasion cannot be allowed to pass without some comment if only for the record. Many of our confreres were among the refugees; many helped in the volunteer rescuing and will in the rehabilitation. The writer was on the fringe, a refugee true, but active in the stand of the community against disaster only so far as the demands of a hospital service. We feel almost like an impartial observer and as such want to state most emphatically an unbounded admiration for the Red Cross, the military, the civil, and state police, the Coast Guard, the Boy Scouts, and other civic organizations that helped, but most of all for the people themselves who displayed a calm courage, a swell sense of humor, a co-operative urge that if maintained is bound to bring out of the chaos of the disaster a greater and finer community and neighborly sense. It is that, we feel, which will have made the experience worth-while.

As a physician we realize that the nursing and medical professions expect as a matter of course to do their part in such times. What a much more beautiful demonstration of organization, training, and efficiency were the co-ordinated activities of the Red Cross, Coast Guard, and military. The usual acquiescence of the people themselves to the military rule, the segregation of districts as the waters fell, was an experience not to be expected on the part of the herd. That the authorities put over the restraint is as much a tribute to the people themselves as to the authorities.—*Luzerne County Medical Society Bulletin*, Apr., 1936.

Northumberland

High water in Sunbury occurs when the river reaches 15 or 16 feet. In 1865 there was the unusual depth of 22 feet, but in 1936 a depth of over 30 feet was reached. The river then completely overflowed its banks and its channel was right through Sunbury, flooding homes, stores, and offices.

The offices of Drs. Deitrick, McDonnell, Geise, Heckert, Phillips, Savidge, Thomas, Landau, and Gass were affected.

The day after the flood a small group of the Northumberland County Medical Society met and arranged to co-operate with the State Health Department and the Red Cross in the care of the sick. They also recommended the use of typhoid vaccine. This was recommended because of the sewers which were overflowed. Sunbury's water supply remained in good condition.

Medical help and nurses arrived from Philadelphia, Danville, Mount Carmel, Shamokin, and Lewisburg to assist in the emergency.

A medical center was established on North Second St., a measles and a scarlet fever hospital were established to take care of these cases which were evacuated from the flooded areas.

Whiskey became another problem as everyone seemed to think if some physician would write them a liquor prescription they could get a pint free at the liquor store.

The Mary M. Packer Hospital became crowded with drugs, bandages, children's clothes, old people, invalids, and pregnant women.

Typhoid vaccine was being given at various places throughout the city. All the local physicians were wondering who would give the second and third doses.

Here's hoping none of you get your cars flooded, as you just have to wait until they dry and then remove the water from the oil and gasoline lines, carburetor, dash board, transmission, differential, muffler, valve chambers, and everything else. Besides this, if your car was in a garage, it was probably covered with mud and a sticky layer of oil.

Anyway, we can be glad we were not merchants whose stock either floats away or else is ruined by water and mud.—*Medical Society Notes*, Mar. 28, 1936.

Philadelphia

The most gratifying news at hand as we go to press concerns the overwhelming response of the physicians in this area to the calls for medical aid and general assistance to the people in our near-by flood-ridden counties. As always they have placed personal convenience aside to help others in distress. This is the great test of character, and the members of our profession have always been proud of their resources in this respect. It is our sincere hope that their efforts to stem the infections that follow such catastrophes as this will be successful and that the victims of this caprice of nature will soon be able to re-establish themselves in their homes. Our sympathies go out also to our colleagues in these sections. Should more help be needed, they may rest assured that we are at their service to the limit.

As always, our members have responded most generously to the appeal for donations for flood relief. As checks are received they are listed, together with the names of the donors, and are endorsed over to the Mayor's Flood Relief Committee.

Contributions by physicians in time of stress whether of money, time, or energy (usually all 3) are nothing new. It is largely a matter of tradition, and this tradition continues to be maintained by present action. This being so, it seems most unfair that certain agencies should invariably attempt to place the medical profession in a wrong light before the public, which it serves so faithfully, in regard to certain controversial subjects.

If such influences did not tend to mitigate against public health, we could afford to laugh at the ridiculous position assumed by them in placing the medical profession, as represented by the more than 100,000 members of the American Medical Association, in the laudable position of the "eleven stubborn jurymen." If such people could "take it," we would prescribe large doses of logic ad nauseam. Their little logic now is largely linked with noise.—*The Weekly Roster and Medical Digest*, Mar. 28, 1936.

Washington

Our sympathies go out to our friends in the neighboring flood-stricken areas who have been called upon to pass through such trying circumstances, and we, as members of the Washington County Medical Society,

must not forget that our president has called upon us to render whatever aid lies in our power at all times.

No doubt all have read in the daily papers the proclamation of President Maxwell. It will not be out of place to quote it at this time:

As president of the Washington County Medical Society, I call on every practitioner of medicine in Washington County to hold himself in readiness to assist in any way possible and render aid to all flood-stricken areas.

Allegheny County, Pa., and Ohio County, W. Va., take notice.

J. R. MAXWELL, M.D.,

President, Washington County Medical Society.

The Medical Program, Apr., 1936.

COMMENTS AND EXCERPTS

Helium Treatment for Asthma Made Cheaper.—

Reduction in the cost of helium treatments for asthma is now possible through improvement in method, Dr. Alvan L. Barach of Columbia University School of Medicine has announced.

Dr. Barach is the originator of the method by which patients suffering from severe asthma are given relief by inhalation of a mixture of oxygen and helium. Because helium is a very light-weight gas, it requires only half the effort to breathe the oxygen-helium mixture as to breathe ordinary air. This gives the patient's breathing muscles considerable relief and rest. While not a cure for asthma, the helium treatment has been found an effective remedy in combination with adrenalin.

Helium, however, is an expensive gas, so only a few patients could get the benefit of the treatment. Dr. Barach announced a method of re-using the helium, thus reducing expense. After the gas has left the patient's lungs it is circulated through soda-lime and returned to the apparatus to be used again.—*Science News Letter*, Jan. 25, 1936.

Cobra Venom Stops Pain But Is not Habit-Forming.—

Cobra venom, in doses too small to be poisonous, relieves pain as effectively as morphine, but the venom of the death-dealing serpent is not habit-forming when given to relieve pain, as morphine is, and it does not produce the disagreeable and dangerous by-effects of the narcotic drug.

Experiments with cobra venom on laboratory animals and human patients, including a hundred sufferers from cancer in its late stages, were reported by Dr. David I. Macht, director of Pharmacological Research Laboratory, Hynson, Westcott and Dunning, Baltimore, at the meeting of the National Academy of Sciences. Dr. Macht was formerly lecturer in pharmacology at the Johns Hopkins Medical School.

Seventy-five of the cancer sufferers had their pain relieved by doses of cobra venom injected into the muscles, Dr. Macht reported. The snake venom checks pain by acting on the higher nerve centers in the brain.—*Science News Letter*, Nov. 30, 1935.

Encephalitis Virus Grown in Test Tube.—The virus of encephalitis, recently epidemic in St. Louis, has been grown in a test tube for the first time. The method by which this was achieved is reported by Drs. Jerome T. Syverton and George P. Berry of the University of Rochester School of Medicine and Dentistry. (*Science*, Dec. 20.)

Development of a means of growing this disease "germ" in a test tube or laboratory dish will mean that scientists investigating the virus no longer need to use animals to keep the strain alive for their experiments. The "food" on which the test tube virus was kept alive was made from embryonic mouse tissue, normal rabbit serum, and a solution containing calcium, magnesium, and similar chemicals.—*Science News Letter*, Jan. 4, 1936.

\$10,000 Prize Offered for Relief or Cure of Disease.—A prize of more than \$10,000 will be awarded in 1940 and every 7 years thereafter by the American Academy of Arts and Science in Boston for "outstanding work with reference to the alleviation or cure of diseases affecting the human genital organs." The award is to be known as the Francis Amory Septennial Prize, since it is made possible by a fund established by the will of the late Francis Amory of Beverly, Mass.

In case there is work of a quality to warrant it, the first award will be made in 1940. It rests solely within the discretion of the Academy whether an award shall be made at the end of any given 7-year period, and also whether on any occasion the prize shall be awarded to more than a single individual or research program.

While there will be no formal nominations, and no formal essays or treatises will be required, the committee invites suggestions, which should be made to the Amory Fund Committee, care of the American Academy of Arts and Sciences, 28 Newbury Street, Boston, Mass.—*Science News Letter*, Feb. 22, 1936.

Appendicitis Attacks Men Much Oftener than Women.—A young man is twice as likely to have appendicitis as is his sister or wife.

This disease that fills the surgical wards of our hospitals is more prevalent among adolescents and young adults than among others, and much more frequent among men and boys than among women and girls. This is one of the conclusions to be drawn from a report of 3 Cincinnati physicians, Drs. Mont. R. Reid, D. Henry Poer, and Paul Merrell, who have recently studied the records of about 3000 cases of appendicitis admitted to the Cincinnati General Hospital. Details of their study appear in *The Journal of the American Medical Association* (Feb. 29).

It does not pay to trifle with the disease or to delay surgical treatment. These physicians say that the appendicitis death rate is going to remain high as long as persons are not operated on earlier. When there is delay, complications are more frequent and the hospital stay must be longer.

The average time that elapsed in the 2921 cases studied was 3.8 days between the first symptoms and admission to the hospital—much too long for proper surgical treatment.

It does not pay to wait for a second acute attack, their figures make clear. Of the cases they studied, 60 per cent were admitted during the first attack, and in about 40 per cent of all cases admitted the appendix had ruptured.—*Science News Letter*, Mar. 7, 1936.

Another Sinus Causes Trouble.—Another sinus, besides the ones already so well known for the suffering they cause, can contribute its share of aches and pains, Dr. Chester H. Bowers of Los Angeles reminded members of the American College of Surgeons.

This sinus is known as the sphenoid. It is located far back of the nose, approximately in the center of the skull, lying close to the brain and perhaps in intimate relationship with half of the cranial nerves and important blood vessels. It is usually not involved in disease,

but it may be the hidden cause of many disagreeable symptoms.

Headache, reflex pain over a canine tooth, pain or continuous burning in the throat, pain in the back of the head or even in the ear are among the symptoms which may be traced to trouble with the sphenoid sinus. Involvement of this sinus may also interfere with vision because the optic nerve is separated from it by a very thin wall.—*Science News Letter*, Nov. 9, 1935.

MEDICAL ECONOMICS

New Cut Rate Plan.—According to the Philadelphia *Evening Bulletin*, Feb. 13, a voluntary health insurance plan, in which employees contribute a fourth of the cost and their employers the balance, has been approved by the Medical Society of the County of New York.

At present only 2 companies, the Consolidated Gas and the Brooklyn Edison, have entered the plan, but Dr. Charles Everett Farr, new president of the county society, who explained the details, said he hoped it would be so successful that other concerns would participate.

The arrangement is limited to persons in the lower income brackets, whose annual contribution is estimated at not more than five-ninths of one per cent of their income. Single persons free of dependents can earn no more than \$900 a year to be eligible. Married employees without other dependents than their wives can earn no more than \$1260, with an additional allowance of \$200 for each additional dependent.

There is a free choice of doctors to a certain extent. The county society will compile from its 4200 members a list of those willing to give service at about half the normal rate, their fees to be paid from the fund created by the employee and employer contributions, estimated at about \$1,100,000 a year in the case of the 2 concerns already in the plan. A flat rate of \$50 will be paid the doctors for a major operation, but the physician may appeal to the society for an adjustment if the fee is obviously inadequate.

It is pointed out that many employees eligible for health insurance will be former patients of free clinics. Not only will they now contribute to the cost of their own medical care but will not have to waste hours of waiting in clinics.

The Experience of Physicians as Against the Theories of Propagandists.—The members of the medical profession do not claim that their viewpoints on sickness relief are infallible, but by and large, they do believe, and with right—because of close-up, first-hand, and more accurate and comprehensive understanding of the subject—that, other things being equal, the conjoint opinion of physicians should have as great and more merit than that of a handful of lay theorists and propagandists who, self-constituted in their imaginary leadership, are quite insistent that the plans they outline should be followed by medical men.—*Editorial, California and Western Medicine*, July, 1935.

Toronto Medical Profession Organizing.—The medical profession of Toronto, Canada, is organizing to demand adequate compensation for relief cases. Dr. W. H. Avery, secretary of the West Toronto Medical Association, states that "The doctors must organize into a solid unit and do their negotiating and business in a straight business fashion."

The Lay Propagandists May Now Turn Their Forces on Legislatures.—The pressure to which, in

recent years, the medical profession has been subjected by some of these lay propagandists and publications (now that they have found that the medical profession cannot be easily moved to approve illy matured plans or laws on sickness relief for low-bracket income groups of our population) will probably, in the days to come, be exerted with even greater force upon members of our legislatures, in the hope of securing certain legal enactments under the guise of sorely needed medical relief, even though the medical profession is opposed to the methods therewith submitted.—Editorial, *California and Western Medicine*, July, 1935.

Our Permanent Advance.—In assuming the office of president of the State Medical Society of Wisconsin for the ensuing year, Dr. Ralph M. Carter stated that it is his conviction that the present agitation for state medicine, better medical care for the American people, or whatever else it may be called, is nothing other than propaganda promulgated by the great foundations and certain self-exalted and self-interested theorists in their employ.

There has not been, and is not now, any great and widespread dissatisfaction on the part of the public with the medical care which they have been receiving. But such a condition cannot obtain much longer; the constant reiteration of a statement with no refutation of it will eventually lead to a belief in the truth of the statement on the part of the average individual.

Therefore, the task now confronting the medical profession of every state is the counteracting of this propaganda. The duty devolves upon each individual practitioner of medicine. The threat of state medicine is a very real one. Even though the agitation for it has apparently died down somewhat in the past few months, we should not allow ourselves to be lulled into a state of false security because this agitation will undoubtedly again be revived and probably with more force than ever.

Within the past few weeks, a survey of chronic illnesses and physical impairments in the general population has been begun, under the auspices of the United States Public Health Service, in co-operation with state and city health departments. According to the *Journal of the American Medical Association*, "It is understood that the stimulus for this survey came from the Secretary of Labor and that it meets with administration approval. It is expected to throw light on the problem of medical care for the people. . . . The survey is to be carried on in 19 states divided into 5 areas, which will include large cities, smaller cities, farms, and rural communities." If this survey is thoroughly and impartially conducted so as truly to represent a cross section of a large area of our population; if the results obtained are thoroughly and impartially evaluated, with all influencing factors taken into full consideration, much valuable information which has hitherto been lacking may be secured, and this information may help a great deal in the solution of many of our medical economic problems. On the other hand, in drawing the final conclusions, by the suppression of certain facts, by the overemphasis of certain others, and by the statement of half-truths, such surveys may be made to seem to favor a desired point of view. We have reason to think that this has been done in the recent past, and we have no reason to believe that it may not be done in the future. Keeping this in mind, and taking into consideration the attitude of the present national administration toward social security, including state medicine, is there not room for a certain amount of suspicion that this survey may be but a preliminary

to a renewed drive for socialized medicine? In any event, the survey is of vital interest to the entire medical profession, and must be closely watched.

Is it merely a coincidence that the high schools this year are to debate the subject of socialized medicine? If it could be ascertained where and by whom this topic was primarily selected, the knowledge would undoubtedly prove to be highly interesting, and might furnish an answer to the foregoing question. If these debates are propaganda, it can be counteracted only by our own efforts; no one else is going to do it for us. Our State Medical Society is already working hard to this end.

Every eligible practitioner of medicine should belong to his county society; it is not only his duty, but it is necessary for the furtherance of his own interests. And his duty as a member is not discharged by merely paying his dues; he should also attend the meetings and take an active part in the society's affairs. While individual practitioners can undoubtedly do much toward presenting the viewpoint of the medical profession among their own patients, and while such work on the part of individuals is of inestimable value, nevertheless the county societies represent the real point of contact with the public in the larger sense, and it is only through the county societies as the primary unit that legislative and other problems can be successfully attacked. For this reason, every member owes it to himself to take the meetings seriously, and to make every effort to attend them regularly.—*Wisconsin Medical Journal*, Nov., 1935.

The Mutual Obligations of the Medical Profession and the Public.—This is the title of the presidential address delivered before the Middle Tennessee Medical Association, Lewisburg, Nov. 14, 1935, by Dr. N. S. Shofner, of Nashville. He considered these obligations on the part of each as follows:

OBLIGATIONS ON THE PART OF THE PHYSICIAN

1. Adequate education and professional training.
2. Proper appreciation of the sanctity of the physician-patient relation.
3. A high standard of professional ethics.
4. Proper recognition of one's own limitations and willingness to have adequate consultation.
5. An earnest effort to keep informed of medical progress through society meetings, books and journals, and postgraduate institutions.
6. Conscientious regard for the patient's economic status as the basis for fees.

OBLIGATIONS ON THE PART OF THE PUBLIC

1. Realization that only through medical research and medical practice has the life span been increased and the general level of health been elevated. And realization that only by adequately trained physicians can medicine be practiced at all and that so-called philanthropic institutions, for all their wealth, cannot purchase or improve the public health without physicians.
2. Willingness to co-operate in prevention of disease by means of immunizations and sanitation.
3. Co-operation in scientific advances, and especially in the granting of necropsies.
4. Recognition of the earmarks of the charlatan and the fake. This is especially applicable to newspapers and magazines. If you wish specific names, I am pleased to name the *Cosmopolitan*.

5. An appreciation of the fact that medical ethics is primarily aimed at protecting the patient's interest and not at selfish gain for the physician.

6. Realization that a medical fee is a just obligation for a necessity of life, just as is rent, food, and clothing, and a willingness to pay it as promptly as possible.—*Journal of the Tennessee State Medical Association*, Dec., 1935.

Health Insurance Plan.—A health insurance plan has been offered to the students at Vassar College by which at a cost of \$12 a year a student can be insured for hospital, nursing, and medical expenses in excess of \$10 and not to exceed \$250, and for a surgical operation not to exceed \$250. The plan will go into effect only if 60 per cent or more of the students subscribe.—*N. Y. State J. M.*, Jan. 15, 1936.

The Medical Profession Has Always Cared for the Poor.—When one stops to consider that from one end of the United States to the other physicians have at all times met their altruistic obligations to their lay fellows in far greater amount and proportion than can be claimed for any other profession or vocation, and that during these days of economic stress and strain, in spite of their own financial hardships, they are continuing to give most generous service to the poor, it cannot be construed as unreasonable or improper conduct when the members of the profession scan closely the past careers and motivating forces and ambitions of some of the lay individuals who presume to have special knowledge in medical relief work and who have taken it upon themselves to outline the paths along which the many thousands of licensed physicians should carry on medical practice in the future.—Editorial, *California and Western Medicine*, July, 1935.

Additional Data on Medical Economics

Blair County p. 637

HOSPITAL ACTIVITIES

New Cancer Unit.—The Board of Estimate, New York City, authorized on Mar. 27, a \$60,000 issue of tax notes to furnish and equip the new cancer unit of Kings County Hospital, Brooklyn. The new unit will be a complete cancer hospital accommodating 82 patients.

May Specimens Be Retained at Necropsy for Later Examination?—This question, submitted by the director of a hospital in the East, is rather unusual. Although it is not often discussed, it nevertheless constitutes an important problem in almost every hospital in this country where necropsy work is done.

Few will deny that postmortem examinations cannot or should not be performed without the written permission of the nearest relative of the deceased. A body in the last analysis belongs to the person or persons who propose to defray the expense of its burial. Hence, hospitals, almost without exception, require the signing of a carefully worded legal necropsy permission. Only a few institutions include in their postmortem forms a request for permission to remove and retain organs. Nevertheless almost all hospitals make a practice of doing this.

If only sufficient tissue for histologic examination were retained at necropsy, much of the teaching value of the postmortem would be lost. The clinical-pathologic conferences of the hospital depend almost en-

tirely upon the comparison of postmortem findings as demonstrated by the pathologist with the recorded observations of the clinician. Yet there is but little doubt that the hospital has no legal right to retain pathologic specimens unless a specific permission so to do has been granted by a responsible person.

That so little difficulty has arisen on account of this practice is a fortunate circumstance. Hospital post-mortem examination percentages are likely to decline sharply whenever necropsy policies and technic begin to be criticized by the public or the press. It would seem a wise step, therefore, for all institutions to consider seriously the elements of danger inherent in the practice of retaining tissues at the time of necropsy. The postmortem permission form could well include authority for the retention of such tissues for examination and study as are deemed necessary by the pathologist.—*The Modern Hospital*, Dec., 1935.

Government and Voluntary Hospitals.—Can We Justify a Double Standard?—In this article by Dr. Joseph C. Doane, editor, *The Modern Hospital*, he asks the question, "Is there one grade of hospital service that is proper for the patient in government hospitals while another and higher standard is required for ward patients in the voluntary hospital?"

The purpose of this article is to challenge the hospital field to disprove that a double standard of service does rather generally exist, and to call upon those who support such a standard to justify the existence of low scientific zeal in the medical care of patients in many city and county institutions. Specifically, attention is directed to a number of queries that have direct bearing on this matter.

1. Does the type of control of government hospitals now commonly observed mitigate against the efficient care of patients?

2. How do the accounting practices in such an institution compare with those observed in a voluntary hospital? Are the system of accounts and vouchers, the collection from other government subdivisions for the board of patients and the restriction of free service to the economically deserving as efficiently carried out in a large government hospital as in a smaller voluntary one?

3. How effective is civil service in securing only the most highly trained and efficient personnel for government hospitals? What are the methods usually employed by the politician to evade civil service regulations, and how may the executive of a large state, city, or county hospital protect himself against the demands of the unfit for jobs?

4. What are the specific problems that confront the admitting office of the government institution? Politicians sometimes insist upon the free treatment of their friends. Special nursing without charge or a private room when the medical condition does not require it are practices not unknown in government hospitals.

5. Are there any differences in the schools of nursing in these 2 general types of institutions? Should nurses in government institutions be less well housed, less efficiently instructed, less carefully selected, of lower moral, ethical, or educational standards than those in the private hospital?

6. The dietary department of government hospitals is of immense proportions. What should be the dietitian's place in the institutional organization? Should she be subordinate to a steward? How may the stealing of food and supplies be curtailed? Is petty larceny more likely to occur than in other types of hospitals?

7. Should the government hospital be willing to exist without the confidence and understanding of the public, and if not how can this contact be brought about?

8. Should the scientific and investigative work of government hospitals be inferior to that of the voluntary institution? How far is such a hospital justified in employing taxpayers' money in learning about the cause and cure of disease?

9. Is it proper for the purely indigent, the mentally ill, the physically ill, and even the criminal to be housed under the same roof or in the same group of buildings?

10. What are the specialty services that the government hospital should offer? Can any valid excuse be given for the absence of physical therapy, occupational therapy, an adequate roentgen-ray and clinical laboratory, electrocardiography, and a well-conducted and carefully organized outpatient service?

11. Some contend that the government hospital represents the economic millstone around the neck of voluntary institutions and private physicians. Perhaps the charge is unjust but it is repeated sufficiently often to merit investigation.

12. Can the same high grade of social service be rendered in this type of institution as in the voluntary one?

13. How can and should the American Hospital Association and other national organizations serve the executives of government hospitals?

Dr. Doane concluded as follows:

If for any reason a stigma is attached to the conduct of state, city, and county hospitals, it is high time that the truth be recognized and the remedy sought. If respectable but economically unfortunate persons are justified in their unwillingness to patronize such institutions, the cause for this attitude should be brought forth. If such hospitals are suitable only for the degraded pauper, then such a state of affairs should be plainly made known to the community. If, on the other hand, the foregoing questions can all be answered in the negative, then the splendid work performed by many government hospitals should not be stigmatized by the failings of the few.

It is hoped that some of the distinguished and experienced administrators in the field will endeavor to discuss these topics and answer the challenge given.—*The Modern Hospital*, Dec., 1935.

Oppose Solicitation of Funds.—The National Medical Association and the National Hospital Association, organizations of negroes engaged in health work, have recently made public the text of resolutions adopted by the 2 associations concerning the Negro National Hospital Fund and its organizer, Rev. Amos H. Carnegie.

The gist of the long set of resolutions is that the 2 organizations "go on record as being opposed to the solicitation and collection of funds from the public by Rev. Amos Carnegie" for the purpose of building additional hospitals for negroes. The resolutions point out that several needed negro hospitals have been forced to close for lack of funds.—*The Modern Hospital*, Feb., 1936.

Harmful Publicity.—A radio news commentator recently scored a hospital for unfairness in refusing to accept a patient suffering with an acute inflammation of the vermiform appendix. The hospital, not believing the condition to be acute, had referred the case to an institution in the patient's own city to which he had been first directed.

Herein lies a nice point for the community to decide. Must a voluntary hospital accept every case which comes to its door irrespective of residence and ability to pay? Should the presence of an acute human need represent an open sesame to every hospital ward bed?

The answer is simple. No hospital administrator will wilfully endanger the life of fellow men within or without the institution. The acceptance of a patient with a contagious disease under most circumstances violates the hospital's obligation in regard to patients in the hospital while hesitancy in admitting nonresident or indigent patients with acute ailments certainly fails to safeguard the welfare of such persons. The hospital is not legally required to accept without question all patients who apply, but it should need no coercion to do its clear duty. When its duty is not clear, it must retain the right to decide on the urgency of the need as well as the effect on the welfare of those already under care.—Editorial, *The Modern Hospital*, Feb., 1936.

MEDICOLEGAL NOTES

Confusion of Prescriptions.—A general practitioner was called to the home of a child about a year old and found him in bed suffering from otitis media and upper respiratory infection. In the course of his treatment he gave the patient 2 prescriptions to be filled, one calling for "Tincture opii and olive oil—2 drams of each—instructions: 2 to 3 drops in ear 2 or 3 times a day"; and the other one, calling for "Elixir luminal, 20 drops, 3 times a day internally." Subsequent thereto the child developed pneumonia and was taken to a hospital where he remained for about 10 days under the care of another doctor and returned home in good condition and apparently cured. From what the doctor learned later it appeared that when the 2 prescriptions were taken to a druggist, the druggist compounded them properly but confused the labels so that the medicines were delivered to the parents of the child with instruction that the ear drops were to be taken internally and that the internal medicine was to be used as ear drops. Precisely what, if any, damages the druggist's mistake caused the child was impossible to ascertain.

An action was brought against the doctor and the druggist as co-defendants, charging them both with responsibility for the confusion of the prescriptions. A check-up of the prescriptions showed that the doctor had made no mistake in writing them. When the case was about to be reached for trial the plaintiff's attorney arranged with the attorney for the druggist to settle the case for a small sum and at the same time he made efforts to obtain an additional settlement of the matter from the doctor. Since the doctor insisted that he had made no mistake in the case no offer was made to contribute to the settlement on his behalf and finally the plaintiff's attorney consented to discontinue the matter as to the doctor, contenting himself with the small settlement which he had received from the druggist, thereby admitting he had no basis for his complaint against the doctor.—*N. Y. State J. M.*, Dec. 1, 1935.

Excessive Damages in Malpractice Action.—In an action for malpractice for leaving 2 gauze sponges in the wound after an operation for removal of the left kidney, the sponges being found on reopening the wound and there being only a bare possibility that they could have been placed there during a subsequent treatment, the question of whether defendant surgeons left

the sponges in the wound was left for the jury, which found for the plaintiff.

On appeal it was contended that the verdict for \$4000 was excessive. The Tennessee Court of Appeals, *Barry vs. Maxey*, 75 S. W. (2d.) 823, found that the plaintiff, a woman, age 68, suffering with a tuberculous kidney which was undermining her health, was operated upon late in March, remained in the hospital 2 or 3 weeks, and was confined to her bed until the removal of the gauze in early June, when she recovered slowly. The court said it was difficult to say just what part the gauze contributed to her slow recovery after its removal. Her own evidence showed that she suffered no permanent disability. She had been greatly benefited by the operation, notwithstanding she was caused unnecessary suffering and a delayed recovery on account of the negligence complained of, and the court thought the permanent benefit should be considered in the measure of her damages. She was entitled to recover only compensatory damages, and not any vindictive damages.

This was a major operation; the patient was old and was under the influence of an anesthetic, so it was important that the operation be performed in the quickest time possible. The surgeon was not guilty of any culpable negligence; he was putting forth his best efforts to save her, and by mishap negligently left the gauze within the wound. Under such circumstances the court considered the judgment should be scrutinized to determine that it did not include anything but compensatory damages. It thought \$2500 ample under the facts and suggested a remittitur of \$1500, failing which a new trial would be ordered.—*Medical Record*, July 17, 1935.

Palm Prints as Evidence.—The Michigan Supreme Court, *People vs. Les*, 255 N.W. 407, holds that palm prints are just as valuable and accurate as finger prints to connect an accused with the commission of a crime; that the evidence of experts as to the identity of latent and actual palm prints is a proper subject for the consideration of a jury, and the weight to be given such testimony is for the jury to determine.—*Medical Record*, Nov. 20, 1935.

"Physician" Under Michigan Statute.—The Michigan Supreme Court, *New York Life Insurance Company, vs. Modzelewski*, 267 Mich. 293, holds that the word "physician," in a provision in an application for life insurance that the insurance shall not take effect if the applicant has consulted or been treated by any physician since his medical examination, means a legally licensed physician or doctor of medicine and under the Michigan statute does not include a chiropractor although he may practice medicine.—*Medical Record*, Nov. 20, 1935.

Excessive Damages Where Original Injury Serious.—In an action for malpractice in the setting of a comminuted fracture of the ulna 2½ inches below the elbow joint of a 9-year-old child's right arm and a complete oblique fracture of the radius, about three-fourths of an inch from the joint, the St. Louis (Mo.) Court of Appeals held, *Gunter vs. Whitener*, 75 S. W. 588, that the rule for determining damages in such a case is that a physician or surgeon is liable only for the injury caused by his malpractice, and not for the results of the patient's original injury or illness.

The plaintiff had a limitation in pronation and supination of from 50 to 75 per cent, though flexion and extension were normal. She also had a disfiguring bony prominence on the side of the arm near the head of the

radius, but these were most likely subject to some improvement. Plaintiff's medical evidence showed that if a proper alignment of the bones had been made and kept, there would have been no ensuing limitation, but this evidence also admitted that an injury such as plaintiff's presents one of the most difficult fractures of the human anatomy to reduce; that a doctor cannot be positive of getting such fractures in apposition and of keeping them so; that sometimes it is impossible to reduce such fractures regardless of what method of treatment is followed; and that such fractures are not commonly reduced in perfect apposition, but only in useful apposition. The court held that a verdict for \$5950 was excessive and remanded the case for a judgment of \$3000 or a new trial.—*Medical Record*, July 17, 1935.

INDUSTRIAL MEDICINE

Finding Hygiene Problems in Industry.—In an effort to clarify important industrial hygiene problems in a typical industrial area, an industrial study was made by the United States Public Health Service. For the purposes of the survey, 615 plants, representing 10 main industries, were studied over a period of 7 weeks. The metal products industry made up 48.7 per cent of the whole. Plants having 10 or less employees constituted nearly half of those studied. This closely follows the general industrial distribution in the United States as a whole. It was found that only 5 per cent of the plants and 20 per cent of the workers were provided with a part- or full-time safety director, most of them being found in the tenth having over 100 workers in the plant. Medical and nursing services were found in about the same proportions. Among 19 per cent of the workers the common towel is in use and 13 per cent use a common drinking cup. Unguarded moving machinery was the most common potential source of accidental injury; floor hazards ranked next. About 7.5 per cent of the workers were not protected against the possibility of eye injuries from flying particles.

This study confirms the statement made by Dr. Elbert S. Sherman at the conference of the National Bureau of Casualty and Surety Underwriters that, despite the advances made by safety education and the great reduction in the number of eye accidents in industry, trauma is still one of the leading causes of blindness in this country. For every eye made blind as the result of an accident, there are probably 50 with lesser but serious degrees of visual impairment. In large plants, where a safety director has authority to correct safety abuses, such as carelessness about wearing goggles, laxity of enforcing the goggle rule, and faulty illumination, accidents are less frequent. It is in the small machine shops, automobile repair shops, and garages that accidents most frequently occur, and where there is still the greatest need for education in eye protection.—*The Sight-Saving Review*.

Occupational Diseases in Industry.—State legislatures have been adding in recent years to the list of just compensation causes those diseases known to be caused by special occupational hazards. Editorial comment in *Safety Engineering* calls attention to the preventive aspect of occupational diseases, a concern well in the field of the safety engineer's duty. Just as accidents have been dramatically reduced in many plants, through protection of workers and prevention of hazards, so occupational diseases may be reduced by eliminating some of the 9 major hazards—abnormalities of

temperature, compressed air, dampness, defective illumination, dust, infections, radiant energy, repeated motion, pressure or shock, and poisons. The Bureau of Labor's *Occupational Hazards and Diagnostic Signs* is a recent contribution to the subject.—*The Sight-Saving Review*.

PHYSICAL THERAPY

Education in Physical Therapy

The important place that physical therapy has attained in the present-day practice of medicine merits a careful consideration of the teaching of this subject, not only to the student, but to the graduate physician as well.

The marked advances which have taken place in medicine have added much to the present-day curriculum, and educators have difficulty in finding a place for essential subjects in an already crowded course. The medical course has been increased from its 2 years of a generation ago to a full 4 years. In addition, many essential premedical subjects are required before entrance. It is impossible to give full justice to every subject at the present time, and schools will have to aim to develop the well-rounded medical practitioner, without attempting to give a detailed knowledge of every specialty. This should be left for graduate work, after the physician has had several years of general practice.

Physical therapy is not a specialty in the sense that only specially qualified men can do the work, but it is a subject of vital importance to the general practitioner, and even to men pursuing special lines of work. Its importance has been recognized, and practically every class-A medical school now includes a course of instruction in physical therapy. The time allotted to this course permits only a general discussion of the subject, but the essential parts of all forms of physical therapy can be covered in a series of 10 lectures. These lectures are best given in the third year, when the student is beginning to participate in clinical work. It should be followed by clinical experience in the physical therapy department during the fourth year, when sections of the class can be shown the apparatus, its operation, the technic, and the type of patient who can be treated.

Those of us who are active in teaching are gratified at the interest shown by the present-day student, and it is a common occurrence to have several students visit the department daily, taking treatments themselves, or observing the work of the department.

The present-day student will be fairly well equipped to employ physical measures and, being interested, will take the trouble to develop a correct technic in his work. The graduate work may be divided into 2 groups. The first includes the present-day graduate who possesses a ground work in physical therapy, and can develop his work by study or attendance at a physical therapy clinic.

The second group includes the older graduate who has not had the advantage of a ground work in physical therapy but who realizes the value of its employment in his practice. For those men, the county medical society should endeavor to supply lectures on physical therapy by qualified men. Every year there should be several papers dealing with physical therapy included in its scientific program. These papers should be presented at a time when a subject is under discussion from the medical or surgical standpoint, but in which

properly applied physical therapy can add much of value.

Similarly, the State Society scientific program should contain a representation of physical therapy. The State Committee on Physical Therapy should be prepared to furnish qualified men to present papers before every county medical society so requesting it. Hospitals with physical therapy departments should prepare demonstrations for the staff and any other interested physicians. Those whose interest is more pressing should attend the sessions of the national physical therapy societies, where a wealth of material is presented every year.

It is very essential that organized medicine attempt to supply this graduate work. Many physicians are interested in physical therapy and are attempting to employ it to the best of their knowledge. The entire profession is constantly being solicited by salesmen of equipment, and they certainly should not be compelled to depend upon the distorted ideas of a salesman as to the value and technic of physical therapy.

The Council of Physical Therapy of the American Medical Association passes upon apparatus and should be consulted, and if we want to save the physician from spending money foolishly, and from disappointment in his results, we must supply authentic information as to the value and technic of physical therapy.

Abstracts

A report on comparative study in pelvic heating by short wave diathermy was made by Drs. John S. Coulter and S. L. Osborne, in the March, 1936, issue of the *Archives of Physical Therapy, X-ray, and Radium*.

These authors made a study of 9 different subjects, using 5 machines made by different manufacturers, and with wave lengths of 9 meters, 15 meters, $16\frac{1}{10}$ meters, and 24 meters. The fifth machine was an electromagnetic generator, with a wave length of 25 meters.

With the short wave machines, the so-called double pad, or through and through technic was used. With the electromagnetic induction, the double pancake (one over the abdomen and one over the back) was employed. Treatments were given over a period of 20 minutes. The vaginal, rectal, and mouth temperatures were reported. The final maximum temperature was selected as a means of comparison. The electromagnetic field produced the highest temperature in the vagina, with an average of $101\frac{1}{10}$, and $1\frac{1}{10}$ degrees higher than the next highest machine.

The short wave generators heated to about the same level, ranging from an average of $99\frac{1}{10}$ to 100 degrees. In the rectum the highest temperature was produced by the electromagnetic field, with an average final of $101\frac{1}{10}$, while the short wave field ranged from $99\frac{9}{10}$ to $99\frac{10}{10}$, lagging by $1\frac{1}{10}$ degrees. The mouth temperature, as might be anticipated, did not show much change.

The investigation was not made as a clinical evaluation of a method of treatment, but to find out whether it is possible to produce heat in the pelvic organs. It is the author's opinion that at the time of application the clinical practice should be longer than 20 minutes.

In the February, 1936, issue of the *Archives of Physical Therapy, X-Ray, and Radium*, Dr. Harry Eaton Stewart, of New Haven, Conn., gave a survey of the status of diathermy in pneumonia. Dr. Stewart is the person mainly responsible for the original use, about 15 years ago, of diathermy in this condition.

Dr. Stewart finds it gratifying that every fact presented in his early papers has been confirmed, and that physicians in widely scattered sections have surpassed his own mortality figures with reasonably large groups of cases. The correction of early errors, all of them on the conservative side, explains the great improvement in technic and mortality rate. Formerly the electrodes were too small; treatments too few and too feeble; and the treatment was discontinued in empyema and extreme degrees of hypotension.

Fifty-five articles and 13 medical texts have devoted space to its technic and attested to its usefulness. The method has been widely used in Great Britain and the Colonies, with very favorable reports. In a West Middlesex Hospital in London, a special ward for treatment of pneumonia with diathermy was opened. Dr. C. H. Robinson of the above hospital reported a 12 per cent mortality in a series of 170 cases; Dr. G. F. Walsh, Fairfield, Ala., 12 $\frac{1}{10}$ per cent mortality in a series of 95 cases; U. S. Marine Hospital, No. 21, New York, 19 $\frac{1}{10}$ per cent mortality in 36 cases, compared to 42 $\frac{1}{10}$ per cent mortality in 21 controlled cases; St. Mary's Hospital, Hoboken, 8 per cent mortality in 54 cases; Commander Stevenson, Medical Corps, U. S. N., 104 cases with 8 $\frac{1}{10}$ per cent mortality. Dr. Portman, of the Cleveland Clinic, is using diathermy routinely in the prevention of pneumonia in any post-operative case showing the slightest chest symptoms.

Dr. Stewart calls attention to a frequently quoted error in the work of Binger and Christie at the Rockefeller Institute. The general impression is that these investigators did not obtain a rise of temperature in the normal lung, whereas the truth of the matter is that there was a rise of more than 5 degrees in the normal lung. In the occluded lung, however, the rise was faster and considerably higher. If no claim for cure were made, the symptomatic relief is striking enough to justify its use.

There has been a remarkable uniformity of mortality figures, averaging around 12 per cent. Dr. Stewart's own series of 999 cases showed a mortality of 12 per cent with only 4 deaths occurring in cases treated within the first 48 hours.

The present technic consists of applying large electrodes, 1800 to 2800 M. A., for 30 to 40 minutes every 3 hours in severe cases. Relief of pain, deeper respiration, improved color, slower and steadier pulse, greater ease of expectoration, and a tendency to sleep are all noted in the literature. One unusual result is of particular significance—in more than 97 per cent of the cases treated the temperature fell by slow lysis instead of continuing high for the usual course of the disease and dropping by crisis.

He concludes that during the 15 years of its use diathermy has proven of steadily increasing value as an adjunct in the treatment of pneumonia. Symptomatic relief alone justifies its use and the mortality rate has been reduced at an average of about 70 per cent.

Dr. Samuel M. Edison, of Chicago, in a recent article in the *Archives of Physical Therapy, X-Ray, and Radium*, read before the Chicago Ophthalmological Society, reports on the treatment of trachoma by zinc ionization. After a résumé of the present unsatisfactory treatment and the variety of remedies, he describes his technic of treatment by ionization with zinc.

He had a special electrode made, which is a mere shell of zinc, to conform to the shape of the globe and completely insulate the corneal or posterior surface. On the anterior surface, which is applied to the conjunctiva of the tarsi and fornices, there is fastened

chamois skin or a gauze pad moistened with a zinc sulphate solution. In the center is riveted a post for the connection of the current. Butyn anesthesia is used. With the patient in the recumbent position, a negative pad is fastened to the patient's arm or back; the positive pole is connected to the eye electrode previously saturated with a 2 per cent zinc sulphate solution and inserted under the eyelids. A current of from 5 to 7 milliamperes, turned on slowly, is used for 10 minutes. After removal of the electrode, the fornices are thoroughly irrigated with a saline solution. A film remains for about 3 or 4 days before it gradually loosens. A series of 53 cases were treated; 44 received 4 treatments at weekly intervals; 9 received only 1 or 2 treatments. The cases represented all stages of the disease with various degrees of complication. Thirty-one cases were discharged with complete arrest of the disease, 9 with amelioration of all symptoms, and 4 with no improvement.

The results were a smooth mucous membrane with a thinning of the eyelids. The improvement in the structural changes of the conjunctiva and the papillary hypertrophy was noteworthy in all patients. The resulting cicatrization appeared scanty and smooth. Forty-seven patients had moderate reactions which were relieved by cold compresses; 6 had severe reactions.

His conclusions are that in all clinical stages of trachoma, zinc ionization produced complete arrest in 74 per cent who received 4 treatments; another 20 per cent were benefited; in 7 patients, there was no recurrence after 18 months. It was employed in all stages of the disease and resulted in a shortening of the course in all cases. No serious complications followed in any case.

PUBLIC HEALTH

Septic Sore Throat Traced to Raw Milk.—Many cases of septic sore throat are directly attributable to drinking raw milk from infected cows, C. S. Bryan of the Michigan State College told the members of the Society of Bacteriologists and Pathologists and Allied Workers of Michigan, Indiana, and Ohio.

Investigation shows that as high as four-fifths of herds tested, which supplied one large city with milk, were infected. In some herds only one cow had streptococcal mastitis, but as high as 26 per cent were involved. These infected cattle constitute a grave menace to public health because of the contagiousness of the infection.

From the standpoint of the farmer these cattle are also of little value, for such infected cattle produce 22 per cent less milk and their butter fat production is reduced 24 per cent.—*Science News Letter*, Feb. 22, 1936.

Sterilization of the Feeble-minded.—Sterilization of the nation's insane and feeble-minded totaled 23,092 on Jan. 1, the Human Betterment Foundation has reported.

The tabulation was on operations performed legally in the 28 states having sterilization laws and took no account of the many operations which the foundation said are performed in private surgical practice.

California, which adopted its sterilization law in 1909, performed 10,801 operations in its institutions up to the first of this year, or nearly half the national total.

Official sterilization began with the passage of the first law in 1907 in Indiana.

Other states which reported more than 1000 sterilizations each up to Jan. 1 were: Kansas, 1509; Michigan, 1555; Minnesota, 1154; Oregon, 1047; and Virginia, 2386.

West Virginia and South Carolina performed no operations. In the latter state, the law was adopted last year.

The Jan. 1 total showed an increase of 3029 over the number reported up to Jan. 1, 1935.

Other states which have sterilization laws are: Alabama, Arizona, Connecticut, Delaware, Idaho, Iowa, Maine, Mississippi, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Oklahoma, South Dakota, Utah, Vermont, Washington, and Wisconsin.

The sterilization prevents parenthood without unsexing the patient.—*Associated Press*, Mar. 29, 1936.

Public Health.—The health of the people depends a great deal upon their understanding of disease and the methods used in its prevention. The importance of the history of medicine in its relation to education is not given much recognition in our common school curriculum. History as it is taught deals with political events and glorifies political and military leaders. The development of medicine, its relation to science throughout history, and its importance to public health is scarcely mentioned among the forces that have marked the progress of the race from a condition of savagery to the threshold of a scientific era. This scientific era may not be more than glimpsed, for, if political powers and their conflicting economic aims continue to lead nations into war, science will be diverted into forces for destruction. The creative energy, the vitality necessary for creative effort, is destroyed by war. If we are to hold fast to that which science has attained and approach social problems with realistic insight and intelligent thinking instead of through primitive emotional responses, a foundation for such an approach is necessary in education. A healthy-minded emotional life can be developed only through knowledge; through self-knowledge and race-knowledge as well.

We, as physicians, should assert our influence toward the teaching of medical history in public schools, with its social implications and especially its bearing upon public health. Scientific knowledge is and always has been surrounded by ignorance and dark areas of prejudice and superstition. The proponents of science must overcome these obstacles if we are to hold to our objective of acquiring and applying facts to social needs. Medical science is of the greatest importance to society and its utility as a social and cultural force depends upon the breadth as well as the depth of public understanding.—Editorial, *The Journal of the Kansas Medical Society*, Nov., 1935.

Mortality Statistics for 1935.—The report of the Medical Board of the Mutual Benefit Life Insurance Company, for 1935 shows a mortality of 63.50 per cent. This rate is higher than the rate for 1934 (55.23 per cent), which year was exceptionally favorable.

During the past year there has been a complete reclassification as to the causes of death. This has been done so as to conform to the International Code which is now in general use.

In 1935 there were 109 deaths from tuberculosis, 2.82 per cent. The comparison in the percentage of deaths from this cause to deaths from all causes during this 20-year period is impressive and is indicative of the large measure of success that has been thus far achieved

by various agencies throughout the country for the eradication of this disease.

Only 8 deaths are attributed to syphilis. This number does not represent the actual mortality due to the effects of this disease. The vast proportion of the deaths due to syphilis are recorded under the various diseases of the nervous system and the circulatory system. In most instances the original infection is not referred to in the reports submitted. Consequently it is impossible to make even an approximate estimate as to the actual number of deaths due to syphilis.

It is a satisfaction to observe that during the past year there has not been any increase in deaths from cancer. The decrease has been very slight, the number of deaths in 1934 having been 425 and 417 during 1935.

During 1935 there were 83 deaths from diabetes. In analyzing these cases it is interesting to note that more than one-half of these deaths occurred after age 70. While insulin is not a cure for diabetes, its intelligent use does prolong human life. In fact their statistics for 1935 demonstrate the fact that many diabetics have attained and outlived their normal expectancy of life.

As in the case of syphilis the number of deaths attributed to the intemperate use of alcohol is misleading. Generally speaking deaths due to intemperance are included in the deaths attributed to certain forms of nervous and circulatory diseases and to cirrhosis of the liver. It is impossible to place an intelligent estimate as to the exact number of such deaths.

Diseases of the circulatory system continue to constitute the principal cause of death among their policyholders. Cerebral hemorrhage and chronic nephritis are so intimately associated with circulatory degeneration that it seems advisable to include these diseases with the various forms of heart disease. During 1935 there were 1901 deaths from these impairments. This number is equivalent to 49 per cent of all of their deaths.

During 1935 accidents of various kinds were responsible for 240 deaths; the automobile was the principal cause, 133 deaths having been automobile fatalities. During 1935, accidents were responsible for approximately 99,000 deaths in the United States. Of these deaths 36,400 were due to automobile fatalities. This is one per cent higher than 1934. Carelessness on the part of pedestrians as well as reckless driving is doubtless responsible for the heavy toll of human life, for more than 40 per cent of the automobile deaths were sustained by pedestrians. Since 1927 automobile deaths have increased more than 50 per cent whereas deaths of industrial workers have decreased to the same extent, only 16,500 having been sustained last year.

In this connection the reduction in accident fatalities to railway employees, who were struck or run over, is exceedingly impressive. In 1918, 1229 fatal accidents occurred to railway employees from these causes in the United States. In 1923 the number of fatalities decreased to 522, in 1928 to 359, and in 1933 there were only 101 deaths in this entire group. This remarkable reduction demonstrates the efficiency of the accident preventive measures employed by the railroad companies in this country.

During 1935 home accidents such as falls, gas asphyxiation, and fatal burns were responsible for 31,500 deaths in the United States. Apart from fatal accidents it is estimated that 365,000 permanent disabilities resulting from accidents were sustained during 1935 and that there were more than 9,000,000 accidents causing a temporary disablement.

Deaths from suicide show a slight decrease as compared to 1934. During 1935 there were 126 deaths from this cause and 129 deaths during 1934.

Of those who were insured for \$50,000 or over, the suicide rate of mortality was very greatly in excess of that relating to those who were insured for lesser amounts. Deaths from suicide were responsible for 9.2 per cent of all the deaths occurring among those insured in this company for \$50,000 or over, while deaths from suicide occurring among all of their policyholders irrespective of the amount of insurance in force constituted only 3.3 per cent of the deaths from all causes.

Morbidity in Pennsylvania in February, 1936

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	1	0	2	0	0
Allentown	4	11	5	0	27
Altoona	1	5	8	0	8
Ambridge	0	0	0	0	0
Arnold	0	0	2	0	2
Beaver Falls	0	1	2	0	0
Bellevue	0	10	0	0	1
Berwick	0	0	1	0	0
Bethlehem	0	24	3	0	5
Bradcock	0	0	3	0	2
Bradford	0	0	2	0	3
Bristol	1	0	0	0	0
Butler	0	5	0	0	9
Canonsburg	1	0	1	0	0
Carbondale	0	3	0	0	0
Carlisle	3	0	5	0	0
Carnegie	0	0	7	0	0
Chambersburg	0	0	17	0	0
Charlertoi	0	48	1	0	4
Chester	3	9	5	0	3
Chairton	0	0	0	0	1
Coatesville	0	0	0	0	0
Columbia	0	0	0	0	0
Connellsville	0	0	1	0	0
Conshohocken	0	0	1	0	0
Coraopolis	0	1	0	0	0
Dickson City	0	1	0	0	0
Donora	1	0	0	0	0
Dormont	0	0	3	0	0
Du Bois	0	91	2	0	0
Dunmore	1	1	3	0	0
Duquesne	0	22	0	0	0
Easton	0	17	2	0	3
Ellwood City	0	1	6	0	0
Erie	0	4	9	0	7
Farrell	0	0	0	0	1
Franklin	0	0	0	0	6
Greensburg	0	0	0	0	0
Hanover	0	0	1	0	0
Harrisburg	2	1	4	0	0
Hazleton	0	0	3	0	3
Homestead	0	0	0	0	0
Jeannette	0	2	8	0	0
Johnstown	1	3	6	0	21
Kingston	0	0	4	0	8
Lancaster	0	0	3	0	3
Latrobe	0	2	0	0	0
Lebanon	0	0	1	0	1
Lewistown	1	0	0	0	5
McKees Rocks	2	5	6	0	7
McKeesport	2	2	2	0	0
Mahanoy City	0	0	0	0	0
Meadville	0	0	3	0	0
Monessen	1	23	0	0	0
Mount Carmel	3	0	0	0	0
Munhall	0	9	0	0	0
Nanticoke	0	0	2	0	0
New Castle	2	2	13	0	6
New Kensington	0	0	0	0	0
Norristown	0	2	2	0	0
North Braddock	0	1	4	0	2
Oil City	1	0	6	0	5
Old Forge	0	0	0	0	0
Olyphant	0	3	7	0	0
Philadelphia	2	725	195	0	91
Phoenixville	0	0	2	0	7
Pittsburgh	25	99	294	0	40
Pittston	0	0	3	0	0
Plymouth	0	0	1	0	0
Pottstown	0	0	3	0	2
Pottsville	1	0	0	0	0
Reading	0	4	25	0	4
Scranton	2	27	32	0	2
Shamokin	0	0	0	0	0
Sharon	0	2	2	0	1
Shenandoah	1	0	0	0	0
Steelton	0	1	0	0	0
Sunbury	0	32	3	0	0
Swissvale	0	1	2	0	0
Tamaqua	0	0	3	0	7
Taylor	0	0	0	0	0
Turtle Creek	0	0	2	0	6
Uniontown	0	1	2	0	4
Vandergrift	0	0	2	0	0
Warren	0	1	0	0	0
Washington	0	0	0	0	0
Waynesboro	0	0	3	0	0
West Chester	0	0	6	0	12
Wilkes-Barre	6	1	28	0	12
Wilksburg	0	3	2	0	6
Williamsport	1	2	10	0	12
York	2	0	1	0	0
Townships					
Allegheny County:					
Harrison	0	3	0	0	0
Mt. Lebanon	0	3	2	0	2
Stowe	1	9	0	0	0
Delaware County:					
Haverford	0	4	7	0	2
Upper Darby	0	4	32	0	41
Luzerne County:					
Hanover	0	0	5	0	1
Plains	0	0	0	0	0
Montgomery County:					
Abington	0	22	14	0	1
Cheltenham	0	9	7	0	2
Lower Merion	0	1	13	0	1
Total Urban ..	72	1263	867	0	399
Total Rural ..	67	897	973	15	328
Total State ..	139	2160	1840	15	727

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the co-operation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

EARLY promoters of the tuberculosis movement hoped that tuberculosis might at least be curbed. Today some are advocating that the objective should be to eradicate disease rather than merely to maintain partial control. It is a grave matter, however, says Wade H. Frost, in an article in the *American Review of Tuberculosis*, to hold out to the public the expectation of eradicating such a disease as tuberculosis unless the expectation rests upon sufficiently solid ground. This ground he examines critically and suggests that further search be made for every item of information that might throw light on the subject. Abstracts of the paper follow.

CAN TUBERCULOSIS BE ERADICATED?

The most conspicuous fact in the history of tuberculosis in the last 50 years has been its steady and rapid decline in mortality. In view of the circumstances under which this has taken place and in the light of what is known of the natural history of the disease, is it reasonable to expect that the downward trend may continue indefinitely, perhaps to the point of regional suppression of the disease, or is it more reasonable to anticipate a compensating upward swing to a higher level?

The extermination of an infectious disease is not simple. This is especially true of the endemic diseases caused by obligate parasites of man transmitted directly from person to person by way of the respiratory tract. In general, the diseases of this group have shown no consistent, substantial decrease in recent years. Diphtheria and scarlet fever have, indeed, declined greatly, but it is by no means certain that this has been due largely to environmental control. Their past history shows wide variations in prevalence

and severity, and in diphtheria specific immunization and therapy have played a part.

It seems evident that the best modern environment sets no effective barrier against the common endemic infections transmitted directly by way of the respiratory tract. It is demonstrable, in one way or another, that very few people escape infection, clinical or subclinical, and that escape from the diseases themselves must be credited more often to human resistance than to avoidance of exposure. Against such diseases specific immunization appears to be the logical method of attack, and smallpox, against which it has been applied, is the only disease of this group which has been regionally eradicated.

The belief that it is practicable completely to prevent dissemination of infection transmitted from person to person by way of the respiratory tract is no longer tenable. Therefore, if the expectation of eradicating tuberculosis rests upon complete avoidance of infection, it must needs be abandoned for the present. However, the condition necessary for eradication of an obli-

gate parasite is not that transmission be immediately and completely prevented, but that it be lowered and held permanently below the level at which a given number of infectious hosts succeed in establishing an equivalent number to carry on the succession. If, in successive periods, the number of infectious hosts is continuously reduced and this declining ratio is continued long enough, extermination must be the result. Within historic times many species of animals have been exterminated, regionally or entirely, by man's intervention, throwing the biologic balance against them, and it is not inherently improbable that the tubercle bacillus should be similarly exterminated as the result of human interference with its propagation.

It is true that the tubercle bacillus falls in that general group of pathogens against which environmental barriers are of least effect, namely, those which enter and escape by way of the respiratory tract; but it is differentiated from the other organisms of this group by an unusual combination of conditions limiting its propagation and rendering it peculiarly vulnerable to artificial interference. These conditions are first, that in order to escape from its host it must cause a lesion which breaks through to the surface, and, second, that it succeeds in producing such lesions in only a limited proportion of infected persons. Various other pathogens limited to the human host are subject to one or the other of these conditions, but not to both. For instance, the virus of measles appears to be spread only from persons actually suffering from or in process of developing the eruptive disease, but it is so highly infective that it succeeds in producing this effect in nearly all persons who survive to adult age. On the other hand, the diphtheria bacillus, the pneumococcus, the virus of poliomyelitis, and various other pathogens transmitted by way of the respiratory tract cause clinical disease in only a small proportion of those who are infected; but actual disease is not essential to propagation of these micro-organisms, since subclinical infections, being equally "open," suffice to spread them from host to host, and to perpetuate the species. The combination of the 2 limiting conditions is the peculiarity of tuberculosis.

Because of this combination of limiting conditions, it is reasonable to infer that tuberculosis may be reduced to an indefinitely low level, even to regional suppression, by isolation of identifiable cases and by other measures of environmental control which are ineffective in the control of numerous other diseases transmitted directly from person to person by way of the respiratory passages. This inference is broadly confirmed by the facts known about the past and present distribution of tuberculosis in different parts of the world and in different strata of the population. The fact that at the present time tuberculous infection, as distinguished from the disease, is widely prevalent is not inconsistent with this view of the controllability of the disease.

With improved measures of control which are within the limits of practicability, including better detection and isolation of open cases, with higher standards of living and personal hygiene, there appears to be no fundamental reason why tuberculosis may not be virtually eradicated from large areas in this country. While there are certain contingencies which obviously might bring about a recrudescence after the disease has reached an extremely low level, it does not appear that this result is inevitable in accordance with any accepted biologic law or that it is especially to be anticipated.

Admitting that we cannot actually know the future of tuberculosis, it is none the less important that we should clearly define what are reasonable expectations in the light of present knowledge, since present activities in study and control necessarily are directed chiefly toward the future. If, as I believe, it is reasonable to anticipate control to the point of permanent regional suppression, the establishment of this as the objective has obvious and important implications as to the scope and intensity of control measures. It has less obvious but important implications with respect to indicated lines of investigation.

The Outlook for the Eradication of Tuberculosis, Wade H. Frost, Am. Rev. of Tuberc., Dec., 1935.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

AMENDMENTS TO THE CONSTITUTION

Proposals for amendments or alterations to the Constitution and By-Laws of our Society, if offered during the interim between annual sessions, must be sent to the Secretary of the Society at least 4 months before the next annual session and must be published in the JOURNAL at least 3 months in advance. The Official Call for our next annual session, which will be published in the June number, should include all proposals for amendments or alterations. Same should be mailed so as to reach the Secretary's office not later than June 1.

AN INDISPENSABLE INFLUENCE

There are too many physicians today, members of county and state medical societies, who take the position that the organized medical profession concerns itself too much with the preservation of good health legislation now on the statute books of the state and with the introduction of new health legislation. This indifference, amounting at times to criticism of those endeavoring to stimulate or maintain such interest, must perforce be due to ignorance of historic accomplishments by our predecessors in the practice of medicine in Pennsylvania.

When The Medical Society of the State of Pennsylvania was organized in the City of Lancaster, in 1848, 21 existing medical organizations pooled their interests for the purposes, then avowed, which we epitomize in the following words: The objects of this society shall be (1) advancement of medical knowledge; (2) elevation of professional character; (3) protection of the interests of its members; (4) extension of the bounds of medical science;

(5) promotion of all measures adapted to relief of suffering; (6) improvement of the health and protection of the lives of the people of the community.

Throughout the years, the existence within our Commonwealth of most of the beneficial and protective health services has been due entirely to persistent support of the above purposes by The Medical Society of the State of Pennsylvania, under which title our society has existed since its creation 88 years ago.

At its first meeting, our State Medical Society moved to sensitize the next legislative body of the Commonwealth to the need for law enactment controlling the qualifications of those assuming to practice medicine. They addressed these words, among others, to the Pennsylvania Legislature of 1848: "Interest and scientific attainments are essential prerequisites in every department of professional life, and paramount in the assumption of the medical character."

Forty years elapsed before the constant endeavors of the organized medical profession of the state were rewarded by the adoption of Pennsylvania's Medical Practice Act, which, to this day, requires constantly, for the protection of the health interests of the people, great expenditure of energy and money by our society in defense of its regulatory and educational requirements.

In contrast with the above experience, in 1851, "The Medical Society of the State of Pennsylvania was immediately successful in bringing about the enactment of House Bill No. 649 relative to the registration of marriages, births, and deaths; and the more comprehensive State Bureau of Vital Statistics of

today owes its development to the energies and the interest of The Medical Society of the State of Pennsylvania."

In 1851, the committee of the State Medical Society appointed to receive and arrange the reports from county medical societies on "medical topography, epidemics, and contagious disorders," perhaps inspired by the report for the previous year from Berks County Medical Society, "accompanied by a beautifully colored map founded on a geologic survey of the county," offered a resolution, which was adopted, "to memorialize the Legislature for the passage of an act to secure the gratuitous vaccination (against smallpox) of the poor throughout the Commonwealth."

The thoughtful reader of the official transactions of The Medical Society of the State of Pennsylvania, which are advantageously bound and carefully preserved in the archives in our Society's building at 230 State Street, Harrisburg, will not only be rewarded with highly interesting comments on the activities of medical practitioners and their organizations, but may become thoroughly imbued with the spirit of our profession's responsibility to the Commonwealth, in spite of the fact that a few well-trained doctors of public health and many doctors of social science have come into existence within the past very few years.

Concluding this very sketchy and far from complete résumé of the activities of the organized medical profession in behalf of health benefits to the people of Pennsylvania with the reminder that "the bill creating the Pennsylvania State Department of Health was drawn up and introduced into the Pennsylvania legislature in 1885 by The Medical Society of the State of Pennsylvania," we pass on to the purpose of this review, which follows:

Having historically established the irrefutable and essential contribution of the organized medical profession to the development of all forms of preventive and corrective medical service as furnished by the state, and the inauguration and defense of high educational and licensing standards, we turn in a few sentences to the response of the organized medical profession to sickness service needs arising suddenly out of the economic stress which developed nationally in the year 1929.

In the years that have elapsed since 1929, the organized medical profession in practically every

county, associating itself with other health groups, has, through the medical advisory committees to the emergency relief boards and through the functioning of the emergency child health committees, provided service to those in economic distress in a manner that may safely be said not to be excelled in any other state. All this prolonged and not always happy experience has been based on our State Society's adopted policy expressed in the following sentence: That provision of minimal adequate sickness service to the indigent is the economic liability of society at large (the taxpayers) and the professional responsibility of the county medical societies.

Our success in the development and demonstration of various forms of sickness service, based on the above principle, has been so acceptable to all that we now find ourselves sought by state and federal governments in connection with the inauguration of health and sickness services related to federal social security legislation. From this it is but a step to confidence and consultation by similar governmental divisions regarding the development of sickness service for the benefit of employed groups with low incomes. It is to this end that we must now apply ourselves, hoping to demonstrate further county medical society leadership.

The Dauphin County Medical Society has taken the lead in that section of the state in the development of a comprehensive service plan which is already attracting attention and commanding respect throughout the state.

The Huntingdon County Medical Society, with only 33 members, has reached the point, with a credit and sickness service plan that is practically self-supporting, of concentrating the attention of the public on the allied health groups of the county as the source not only of sickness service but of humanized consideration for those who must budget for sickness service before or after such service is rendered.

Readers of this department of the JOURNAL must be surfeited with our references to existing agreements between county medical societies and county poor authorities for the extension of medical service on a free-choice-of-physician-and-fee-payment basis to the indigent of 7 Pennsylvania counties.

However, we cannot refrain from further repetition when, in closing, we again urge each county medical society to maintain active committees, constantly studying the problem, occasionally visiting other county medical societies, and at all times maintaining contact with county

authorities responsible for medical service to the indigent as well as to those temporarily on relief.

Your obligation to the traditional accomplishments of your predecessors in medicine requires that you never relinquish the responsibility to the public which education, training, and association have imposed upon you.

THE BEAVER COUNTY PLAN FOR MEDICAL CARE OF THE INDIGENT

We recently brought to attention in this department (see page 363, February JOURNAL) the so-called Mercer County plan, now in its fourth year of successful operation on a basis of agreement between the county medical society and the poor board of the county, typical of similar plans in force also in Blair, Crawford, Lehigh, Northampton, and York counties.

We reproduce herewith a plan and an agreement for similar service now in its second satisfactory year in Beaver County. It will be noted at once that, while this plan also permits of free choice of physician and payment on a fee basis, it includes, in contradistinction to the other plans, a "lump sum," monthly method of settlement between the county commissioners and the representative committee of the county medical society as the source of payment for services rendered individually by the physicians of the county.

Conferences held in Harrisburg last month between representatives of your State Medical Society and the Pennsylvania Emergency Relief Board further emphasize the need for demonstrations in actual practice of county medical society ability to develop and sponsor plans for noninstitutionalized sickness service to all the indigent in each county who are cared for by public funds.

Accomplishments along these lines are essential to acceptable evidence that we can also provide satisfactory service to low income groups. Inaugurate and maintain such contact with the poor and the relief authorities in your county. Write to the following societies for suggestions:

Beaver Co.—Thomas W. McCreary, Monaca.

Blair Co.—Harold F. Moffitt, 1115 Twelfth Ave., Altoona.

Crawford Co.—Clifford W. Skinner, 295 Main St., Meadville.

Lehigh Co.—William F. Herbst, 37 Fifteenth St., Allentown.

Mercer Co.—Jonathan B. Perrine, Grove City.

Northampton Co.—Arno R. Zack, 216 E. Broad St., Bethlehem.

York Co.—Pius A. Noll, 117 S. George St., York.

William H. Mayer, Chr., State Society Committee on Public Relations, Jenkins Arcade, Pittsburgh.

George L. Lavery, Chr., Medical Advisory Committee to SERB, 226 State Street, Harrisburg.

Francis F. Borzell, Chr., State Society Committee on

Medical Economics, 4940 Penn Street, Fkfd., Philadelphia.

THE PLAN

A. The Beaver County Commissioners appropriate the sum of \$6000 annually for the noninstitutional medical care of the indigent. This sum is paid in 12 monthly installments of \$500 each, on the first of every month, to the secretary of the Beaver County Medical Society.

B. No fees are paid for hospital attendance. Hospital bills are paid from a separate appropriation, and do not enter into this plan.

C. Fee schedule:

Office calls	\$1
House calls	3
Obstetrical	20

D. If total bills for physicians' services rendered in one month exceed \$500, they are then paid on a pro rata basis.

E. All physicians' bills for services rendered must be in the hands of the secretary of the County Medical Society by the tenth of the month following that in which the service was rendered, whether the patient has been discharged or not. Bills rendered after that date will not be paid. This rule is enforced to prevent overloading in any month.

F. A committee meets on the eleventh of the month to check and pro rate the bills submitted. The County Society secretary pays by check the following day.

G. Every patient has the free choice of physician, as every physician in Beaver County participates.

Those physicians who were previously paid a salary by the county, and who continue to do the larger part of the county work, received more money in 1935 than they did previously, and for less service because other physicians in their districts carried some of the load. Also, the people are pleased, because they have whom they want—their "family physician"—attending them, rather than a stranger recognized as "the county doctor" sent by the county commissioners.

FLOOD RELIEF

In the Officers' Department of the April issue of the JOURNAL appeared general comments regarding the reactions of members of the medical profession to the destruction caused by the statewide St. Patrick's day flood. They concluded with a reference to extensive losses suffered by many members of our own State Society.

As a result of considerable study of the situation a letter (see below), which contains many statements of fact and pertinent comment, was issued in behalf of our members suffering severe personal flood losses.

The reactions of our members in groups as county medical societies and as individuals have been splendid; but fine as has been the response of those contributing to the Flood Relief Fund of our Benevolence Committee, none can match

the spirit manifest throughout and expressed in the concluding paragraph of these observations.

We trust that many members of our Society will read again the letter which they received from the Benevolence Committee, April 10 to 13, and then without fail read below the quotations from some of the replies—scores of which were similar in character.

April 8, 1936

SUBJECT: Financial aid to members of our State Society suffering severe flood losses of property and equipment.

To the Members of The Medical Society of the State of Pennsylvania:

It is believed that the thousand or more members of The Medical Society of the State of Pennsylvania who served faithfully as volunteers in behalf of the refugees of the recent state-wide floods, and who were at the same time unable to serve their own office clientele because of the interruption of utility services, such as water, heat, light, and electric power, will best appreciate the more permanent plight of a hundred or more of their fellow members scattered across the state who lost practically everything through damage by the flood.

No doubt their first reaction will be that of all members of our State Society, namely, what can I do to help?

Evidently with such situations in mind our own House of Delegates of an earlier year included the following in Section 6 of Chapter VI of our State Society's By-Laws, which is descriptive of our Benevolence Fund and its administration:

"The Committee on Benevolence may also receive subscriptions to be used for the relief of members in distress from the effects of any special catastrophe."

A communication from the State Society secretary to the secretaries of all component societies on March 23, 1936, concluded with the following paragraph:

"Kindly notify the undersigned or the trustee and councilor for your district promptly if you have knowledge of any of our members being in economic distress due to personal flood losses."

A typical response referred to the Benevolence Committee is as follows: "One of our active members, 54 years in practice, has not accumulated any surplus. His first floor combined offices and home were ruined by 7 feet of flood water. His more fortunate medical neighbors have contributed a small sum for his immediate 'bread and butter' needs, but his rehabilitation in practice is another and a larger problem."

Members of our Benevolence Committee, together with other representatives of our State Society who have visited the area in which is concentrated the largest proportion of flood sufferers among our membership, having seen the damage wrought, were immediately responsive to the formal request of the medical society of the county for such assistance as may be given those members who shall be recommended to the committee.

Unless one has actually seen the devastation left by a flood he can scarcely understand that automobiles, furniture, medical supplies and books, and diagnostic and therapeutic instruments that have been for a day or more under from 5 to 18 feet of flood water cannot be restored to usefulness.

The Board of Trustees of our State Medical Society has approved the recommendation of the Benevolence

Committee for the issuance of this appeal. Our members are reminded that the Red Cross makes no cash contributions toward the permanent rehabilitation of the victims of any catastrophe.

It is therefore the hope of the Benevolence Committee that enough of our members throughout the state will contribute a minimum of \$2.50 each to create a worthwhile fund.

Please make checks payable to—*Benevolence Fund, M. S. S. P.*—and forward promptly in enclosed envelope. May we suggest that you also write on the check *Flood Relief*.

Sincerely yours,

HOWARD C. FRONTZ, *Chr. Benevolence Committee*,
ALEXANDER H. COLWELL, *President*,
EDGAR S. BUYERS, *Chr. Board of Trustees*,
WALTER F. DONALDSON, *Secretary*.

"I was caught in the center of the flood section here in Wilkes-Barre and saw how sad many folks were because of their great losses, and so hope that any doctor who was caught by the flood water will be helped to an appreciable extent by the society and thus be relieved of worry."

"I regret that I cannot make this a much larger sum, because my heart goes out in sympathy to the boys who have suffered the hardships and must bear the knocks."

"If you find subscriptions fall short of expectation, I will gladly answer a second call."

The following was addressed by the secretary of a component society to the Benevolence Committee:

"I have already interviewed 4 great flood sufferers on my list and their response to the offers to assist in the rehabilitation of their professional equipment has been identical—. . . 'I can use some help, but if there are those who need it more, or if there isn't enough to go around, please cross my name off your list.'"

Another:

"We have not had a single direct request for help from more than 20 of our members that we know need it badly. One such member when offered a sum of money by a more fortunate fellow practitioner replied, 'Send it to the State Society, then I may get my share along with the others.'"

LIBRARY NEWS

The package library service continues to grow in every way. More reprints are being received from authors, more packages are being loaned, and greater interest is being evidenced by the borrowers.

Several members have visited the library headquarters and have been very favorably impressed by the beauty of the early American furnishings and the walls of natural wood finish. The method of filing and classifying was examined with interest. It is always enlightening to see at first hand just how a service of this type operates.

Typical of the favorable comments which have been received during the past month is that of Dr. Thomas G. McQueen, Millheim, who wrote, "The package library recently loaned is being returned today. This material was very useful and covered the field for which it was requested very well."

Members desiring to borrow reprints on a subject should send 25 cents in stamps to cover the postage and part of the expense of collecting the material. Address the Librarian, 230 State Street, Harrisburg, Pa. Only one package may be borrowed at a time and it must be returned within 14 days.

Packages loaned between March 17 and April 13 are as follows:

Hugh A. O'Hare, Corry—*Esophageal Atresia, etc.* (4 articles).

Walter J. Stein, Ardmore—*Periodic Health Examination* (6 articles).

David C. Pewterbaugh, Saint Thomas—*Rôle of Cholesterol in Thyroid Dysfunction* (2 articles).

Maurice Seltzer, Philadelphia—*Thrombo-angitis Obliterans* (19 articles).

John H. King, Carlisle—*Vivisection* (1 article).

Angelo L. Luchi, Wilkes-Barre—*Scleroderma* (14 articles).

C. Paul Reed, Indiana—*Erythema Nodosum* (7 articles).

Myer W. Rubenstein, Pittsburgh—*Cutaneous Manifestations of Leukemia* (2 articles).

D. Paul Greenlee, Pittsburgh—*Dietary Therapy of Urinary Calculi* (7 articles).

Thomas G. McQueen, Millheim—*Heart Diseases of Middle Age and Their Prophylaxis* (22 articles).

Julius Margolis, Coatesville—*Phimosis and Pyonephrosis* (5 articles).

Kenneth M. Corrin, Wernersville—*Physiologic Effects of Hot and Cold Baths* (12 articles).

William C. Schultz, Jr., Waynesboro—*Relation of Colloids to Medicine; Parathyroids, Extirpated* (21 articles).

Louis W. Schwindt, Philadelphia—*Trauma as Cause of Carcinoma* (10 articles).

George S. Zugsmith, Pittsburgh—*Polycythemia Vera* (6 articles).

Hugh A. O'Hare, Corry—*Esophageal Atresia, etc.* (6 articles).

Henry R. Douglas, Jr., Harrisburg—*Agglutinin Content of Blood in Typhoid Immunization* (1 article; 25 miscellaneous articles).

Eli Eichelberger, York—*Medical Education and Economics* (17 articles).

Augustus S. Kech, Altoona—*Carbon Monoxide Poisoning* (9 articles).

Myer W. Rubenstein, Pittsburgh—*Tumors of Lymphatic System* (2 articles).

Angelo L. Luchi, Wilkes-Barre—*Scleroderma* (3 articles).

Harold J. Bayer, Pittsburgh—*Leiomyosarcoma of Uterus* (3 articles).

Lois M. Merkel, Sharon—*Toxicity of Lead and Carbontetrachloride* (21 articles).

Harvey F. Smith, Harrisburg—*Socialized Medicine* (22 articles).

Boyd D. Stewart, Clairton—*Psittacosis* (8 articles).

Howard K. Petry, Harrisburg—*Agglutinin Content of Blood following Typhoid Immunization* (1 article).

Henry R. Douglas, Jr., Harrisburg—*Typhoid* (3 articles).

George L. Laverty, Harrisburg—*Agglutinin Content of Blood following Typhoid Immunization* (1 article).

THE GENERAL PRACTITIONER'S SCIENTIFIC EXHIBIT

Not only does the list of exhibitors sound like "Who's Who in Medicine," but the subject matter which is being presented might also be entitled, "What's What in Medicine."

It is our determination to take this scientific exhibit business seriously, and talented physicians, old and young, have been asked to participate. There is still one type of exhibit which is lacking, however, and which, as a matter of fact, should be made the outstanding feature—one which the writer, for want of a better term, calls "The General Practitioner's Exhibit," contributed by a general practitioner on a general subject quite separate from any institutional practice.

Surely there is something of that nature which can be developed. Come on, men. Don't hold back. Let's have such an exhibit. We are keeping the choice part of the hall vacant for this if it fills the bill. Communicate with the chairman of the Scientific Exhibit Committee.

LESTER HOLLANDER, M.D.,

Chairman, Scientific Exhibit Committee.

631 Jenkins Building,

Pittsburgh, Pa.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to April 10:

ADAMS: *Removal*—Harry J. Jordan from New Oxford to Washington, D. C.

ALLEGHENY: *New Members*—Charles E. Englehart, 308 Camp Ave., Braddock; David L. Cooper, 623 Arch St., N. S.; Francis B. Edmundson, 5317 Fifth Ave., Anna B. McCoy, 626 Bellaire Ave., Frederic S. Morris, 520 S. Aiken Ave., Elmer W. Rebbeck, 520 S. Aiken Ave., Pittsburgh; Joseph J. Settino, 614 Penn St., Sharpsburg; Daniel C. Dantini, 800 Broadway, McKees Rocks. *Resignation*—Paul C. Bruce, Oteen, N. C.; Harold Lee Schlesinger, Natural Bridge, Va.; Walter R. Carey, Sheridan, Wyoming.

BEAVER: *New Member*—Robert B. Dawson, R. D., Smiths Ferry. *Transfer*—John H. Gemmell, Rochester, from Clearfield County Society.

BEDFORD: *New Members*—Joseph W. Allwein, Alfred S. Stevenson, Bedford; Donald G. Egolf, Bedford Valley.

BERKS: *New Members*—Albert H. Niebaum, 26 E. Wyomissing Ave., Mohnton; Margaret Hassler, 417 N. Fifth St., Reading.

BRADFORD: *Removal*—Ronald L. Hamilton, from Sayre to 43 Main St., Binghamton, N. Y.

BUCKS: *New Members*—P. J. McFadden, Andalusia; Arthur J. Wise, Souderton; W. W. Bonney, Perkasie; Ralph C. Worrell, Springtown; Francesco Di Imperio,

Bristol. *Reinstated Members*—Herbert T. Crough, Doylestown; George T. Fox, 336 Radcliffe St., Bristol; Henry L. Bassett, Yardley. *Transfer*—Walter M. Smith, Richlandtown, from Carbon County Society; Bradford Green, Buckingham, from Philadelphia County Society.

CAMBRIA: *Transfer*—Florizel Janvier, Nanty Glo, from Allegheny County Society. *Death*—Dennis E. Fisher, Needmore (Balt. Med. Coll. '83), recently, aged 83.

CENTER: *Reinstated Members*—Ernest H. Coleman, State College; James C. Rogers, Bellefonte.

CHESTER: *New Members*—Horace F. Darlington, West Chester; Edward Suckle, 338 E. Chestnut St., Coatesville. *Removal*—Harvey R. Glenn, from Colamer to Cochranville. *Transfer*—Charles H. Aufhammer, Thorndale (formerly of Pittsburgh), from Allegheny County Society; Samuel J. Dickey, West Chester (formerly of Harrisburg), from Dauphin County Society.

CLEARFIELD: *New Member*—Marlowe C. Wolfe, Madera.

COLUMBIA: *Transfer*—Edward C. Crowl, Elysburg (Northumb. Co.), from Montour County Society. *Deaths*—Ferdinand C. Sommer, Bloomsburg (Jeff. Med. Coll. '29), Oct. 15, 1935, aged 31; Henry Bierman, Bloomsburg (Hahnemann Med. Coll. '88), July 22, 1935, aged 72.

CRAWFORD: *New Member*—Luther M. Marshall, Geneva. *Death*—Oliver H. Jackson, Meadville (St. Louis Univ. '02), July 23, 1935, aged 61.

DELAWARE: *New Members*—Fred W. Bencker, 9 S. Columbus Ave., Austin L. Kimble, 25 Columbus Ave., Gary W. Henderson, 8307 W. Chester Pike, Upper Darby; Lances McKnight, 25 W. Fourth St., Media; David M. Farell, 818 Church Lane, Eugene F. Carpenter, Jr., 664 Church Lane, Yeadon; James H. Cumnie, 100 Ashby Road, Upper Darby. *Transfer*—Jefferson A. Jones, Swarthmore, from Philadelphia County Society. *Resignation*—Joseph C. Jenkins, Highland Park.

ERIE: *New Members*—Madeleine A. Roueche, 226 W. Eighth St., Donald D. Williams, 551 W. 26th St., Erie. *Death*—Herman C. Galster, Erie (Cleveland Med. Coll. '92), March, 1936, aged 74.

FAYETTE: *Reinstated Member*—Earl F. Harris, Connelville. *Deaths*—Edward W. Steeves, Brownsville (Coll. Phys. & Surg., Balt., '98), Mar. 24, aged 69; Samuel E. Hibbs, Uniontown (Univ. Pgh. '04), Apr. 1, aged 62.

HUNTINGDON: *New Member*—Frederic H. Steele, 803 Washington St., Huntingdon.

INDIANA: *New Member*—Thomas W. Kredel, Indiana.

JEFFERSON: *Death*—Jacob A. Walter, Punxsutawney (Hahnemann Med. Coll. '87), Mar. 30, aged 76.

LACKAWANNA: *New Member*—Murray Finkelstein, First National Bank Bldg., Olyphant. *Death*—Sidney W. Rivenburg, Scranton (Balt. Med. Coll. '94), Mar. 25, aged 79.

LANCASTER: *New Members*—John S. Gates, Mount Joy; George Wm. Beacher, Jr., Gap; Paul S. Schantz, 103 W. Main St., Ephrata. *Reinstated Member*—Wilson A. Foust, New Holland. *Transfer*—James S. Hammers, Lancaster, from Allegheny County Society.

LEBANON: *New Members*—Ralph W. Thumma, Schaefferstown; Chester A. Conrad, 1 Maple St., Palmyra; Ernest O. Moehlmann, Richland. *Transfer*—Paul S. Seabold, Lebanon, from Delaware County Society. *Death*—Joseph R. Beckley, Lebanon (Univ. Pa. '85), July, 1935, aged 77.

LEHIGH: *Removal*—Eugene V. Robertson from Allentown to Hazleton (Luzerne Co.).

LUZERNE: *New Members*—Howard Y. Harris, 40 James St., William Pearlman, 217 Chestnut St., Kingston. *Resignation*—Albert R. Kaufman, of New York City.

McKEAN: *Death*—Howard K. Eaman, Bradford (Maryland Med. Coll. '10), Jan. 22, aged 50.

MERCER: *Death*—Ralph M. Tidd, Clark (Rush Med. Coll. '02), Mar. 11, aged 59.

MIFFLIN: *New Member*—Joel Goldman, Lewistown.

MONROE: *Transfer*—Malachi W. Sloan, Jr., E. Stroudsburg, from Dauphin County Society.

MONTGOMERY: *New Members*—Mollie Orloff, Marjory K. Hardy, State Hospital, Norristown; George Wagoner, Haverford. *Transfer*—Thomas K. Rathmell, State Hospital, Norristown, from Philadelphia County Society.

MONTOUR: *Resignation*—Walter W. Hammond, Jr., Lewisburg.

NORTHAMPTON: *New Member*—Richard W. Morgan, Bethlehem. *Deaths*—Thomas R. Morgan, Wind Gap (Univ. Oklahoma '28), recently, aged 37; Paul H. Walter, Bethlehem (Jeff. Med. Coll. '13), Nov. 16, 1935, aged 49.

PHILADELPHIA: *New Members*—Frank M. Beresford, Provident Life Ins. Co., 46th and Walnut Sts., Daniel L. Dozzi, 3 E. Willow Grove Ave., John L. Ingham, 4205 Chester Ave., Chalmers E. Cornelius, 2107 Fairmount Ave., Joseph E. Forman, 535 S. 57th St., Isador Kaplan, 3029 Diamond St., Abraham Kramer, 6534 Lebanon Ave., Samuel E. Rynes, 1147 N. 65th St., Edwin L. Lame, 5501 Greene St., Gtn., Theodore H. Mendell, 5907 Walnut St., Charles D. Coppes, 421 Green Lane, David B. Fishback, 2806 Frankford Ave., Nathan M. Smolens, 5915 Greene St., Gtn., Samuel J. Levitt, 428 E. Rockland St., Philadelphia; Samuel Cohen, Hospital for Mental Diseases, Byberry; Jefferson H. Clark, Maple Ave. and Wash. Lane, Wyncote. *Reinstated Members*—Charles T. C. Nurse, 749 S. 16th St., Solomon Seilikovitch, 2444 S. Fifth St., Isaac Buckman, 231 Telpchocken Ave., Gtn., Philip Q. Roche, 27th floor, 255 S. 17th St., Washington Merscher, 6118 Greene St., Gtn., Alexander Charles-Cohen, 1921 E. Dauphin St., Chester A. A. Gordon, 4062 Haverford Ave., Frederick S. Schofield, Room 822, 1601 Walnut St., William F. Hebsacker, 3200 Cottman St., Philadelphia. *Resignation*—Frederick W. Steinbock, Avonby-the-Sea, N. J. *Deaths*—Joseph A. Cramp, Philadelphia (Med. Chi. Coll., Phila., '91), Mar. 29, aged 70; Theodore Le Boutilier, Philadelphia (Univ. Pa. '98), Mar. 4, aged 60; Edward A. Crueger, Philadelphia (Med. Chi. Coll., Phila., '94), Mar. 12, aged 75; Charles B. Schoales, Philadelphia (Univ. Pa. '86), Mar. 17, aged 71; Alice M. Seabrook, Beverly Hills, Calif. (Woman's Med. Coll. '95), Mar. 10, aged 79.

SCHUYLKILL: *New Member*—Frank Olmes, Orwigsburg.

SOMERSET: *Death*—Henry A. Zimmerman, Holsopple (Med. Coll., Ohio, '05), Mar. 16, aged 54.

TIOGA: *Transfer*—Harry B. Knapp, Nettie E. Knapp, Wellsboro, from Monroe County Society. *Death*—George E. Yeomans, Mansfield (Jeff. Med. Coll. '94), May, 1935, aged 68.

VENANGO: *Death*—Philip J. Sheridan, Oil City (N. Y. Homeo. Med. Coll. '08), Mar. 12, aged 50.

WASHINGTON: *New Members*—Victor W. Bair, Edwin L. McCarthy, Lawrence; George S. Wallace, Marianna; Joseph S. Wilson, Canonsburg.

WAYNE-PIKE: *New Members*—Clifford H. Mack, George T. Rodman, Hawley.

WESTMORELAND: *New Members*—George C. Stamm, 16 S. Broadway, Scottsdale; William A. Marsh, 729 W. Main St., Mount Pleasant; Charles Henry Poole, Ruffsedale. *Reinstated Members*—Winfield S. Bell, 332 Main St., Latrobe; James F. Trimble, Cope Bldg., Greensburg.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contributions to the fund:

Woman's Auxiliary, Lackawanna County Medical Society \$10.00

Woman's Auxiliary, Lawrence County Medical Society	\$17.50
Woman's Auxiliary, Butler County Medical Society	35.00
Total contributions since 1935 report	\$801.50

PAYMENT OF PER CAPITA ASSESSMENT

The following payment of per capita assessment has been received since March 10. Figures in first column indicate county society numbers; second column, State Society numbers:

Mar. 11	Warren	26	4821	\$7.50	Mar. 27	Clearfield	44-49, 51-59	5615-5629	\$112.50
	York	113-115	4822-4824	22.50		Montgomery	172-182	5630-5640	82.50
	Mifflin	24-26	4825-4827	22.50		Lawrence	44-45	5641-5642	15.00
	Luzerne	128-213	4828-4913	645.00		Venango	43-44	5643-5644	15.00
12	Berks	88-94, 96-127	4914-4952	292.50		Beaver	76-85	5645-5654	75.00
	Greene	19-20	4953-4954	15.00		Lebanon	34	5655	7.50
	Cumberland	33-35	4955-4957	22.50		Delaware	146-156	5656-5666	82.50
	Lawrence	32-43	4958-4969	90.00		Washington	121-124	5667-5670	30.00
13	Washington	101-120	4970-4989	150.00		Northumberland	65-67	5671-5673	22.50
	Bucks	47-60	4990-5003	105.00		Mifflin	27	5674	7.50
	Adams	16-18	5004-5006	22.50	30	Carbon	8	5675	7.50
	Huntingdon	23-28	5007-5012	45.00		Huntingdon	29-30	5676-5677	15.00
14	Lackawanna	154-173	5013-5032	150.00		Adams	19-21	5678-5680	22.50
	Northumberland	61-64	5033-5036	30.00		Northumberland	68	5681	7.50
	Mercer	68	5037	7.50		Luzerne	251-261	5682-5692	82.50
	Schuylkill	73-104	5038-5069	240.00		Lackawanna	194-224	5693-5723	232.50
	Beaver	37-75	5070-5108	292.50		Fayette	95-99	5724-5728	37.50
16	Indiana	30-36	5109-5115	52.50		York	127-131	5729-5733	37.50
	Somerset	32-34	5116-5118	22.50		McKean	24, 26, 27, 33-45	5734-5750	127.50
17	Delaware	111-145	5119-5153	262.50		Clinton	11-15	5751-5755	37.50
	Tioga	1-18	5154-5171	135.00		Tioga	19-23	5756-5760	37.50
	Lehigh	73-97	5172-5196	187.50		Greene	22	5761	7.50
	Armstrong	24-26	5197-5199	22.50		Wayne-Pike	16	5762	7.50
	Clarion	23-26	5200-5203	30.00	31	Venango	45	5763	7.50
	Erie	106-121	5204-5219	120.00		Jefferson	23-40, 42-50	5764-5790	202.50
	Westmoreland	41-58,				Lancaster	103-151	5791-5839	367.50
		60-95	5220-5273	405.00		Berks	95, 128-150	5840-5863	180.00
20	Franklin	48-55	5274-5281	60.00		Cambria	105-144	5864-5903	300.00
	Lycoming	94-98	5282-5286	37.50		Carbon	31	5904	7.50
	Columbia	29-30	5287-5288	15.00		Cumberland	38	5905	7.50
	Fayette	87-94	5289-5296	60.00		Mercer	70-73	5906-5909	30.00
	Chester	58-89	5297-5328	240.00		Wayne-Pike	17	5910	7.50
	Carbon	23-27	5329-5333	37.50		Indiana	37-46	5911-5920	75.00
	Butler	42-43	5334-5335	15.00		Tioga	24	5921	7.50
	Mercer	69	5336	7.50		Franklin	59-60	5922-5923	15.00
	York	116-126	5337-5347	82.50		Armstrong	31-37	5924-5930	52.50
	Cumberland	36-37	5348-5349	15.00		Chester	93-97	5931-5935	37.50
	Montour	33-38	5350-5355	45.00		Crawford	52-59	5936-5943	60.00
	Montgomery	164-171	5356-5363	60.00		Somerset	38-39	5944-5945	15.00
	Luzerne	214-215	5364-5365	15.00		Mercer	74	5946	7.50
	Wyoming	1-14	5366-5379	105.00		Indiana	47	5947	7.50
	Somerset	35-37	5380-5382	22.50		Armstrong	38-39	5948-5949	15.00
	Venango	35-42	5383-5390	60.00		Potter	10	5950	7.50
	Bradford	23-30	5391-5398	60.00		Armstrong	40-41	5951-5952	15.00
	Lackawanna	174-193	5399-5418	150.00		Bedford	1-13	5953-5965	97.50
	Blair	74-86	5419-5431	97.50		Greene	23	5966	7.50
	Elk	16	5432	7.50		Washington	125-127	5967-5969	22.50
	Franklin	56-57	5433-5434	15.00		Lawrence	46-56	5970-5980	82.50
	Erie	122-136	5435-5449	112.50		Mercer	75	5981	7.50
	Lebanon	1-33	5450-5482	247.50		Montgomery	183-188	5982-5987	45.00
	Bucks	61-68	5483-5490	60.00		Northumberland	69-76	5988-5995	60.00
	Dauphin	175-184	5491-5500	75.00		York	132-141	5996-6005	75.00
	Chester	90-92	5501-5503	22.50		Washington	128	6006	7.50
	Greene	21	5504	7.50		Cumberland	39	6007	7.50
	Armstrong	27-30	5505-5508	30.00		Adams	22-24	6008-6010	22.50
	Luzerne	216-250	5509-5543	262.50		Fayette	100-104	6011-6015	37.50
	Wayne-Pike	14	5544	7.50		Mifflin	28	6016	7.50
	Fayette	115-116	5545-5546	15.00		Clarion	27	6017	7.50
	Wayne-Pike	15	5547	7.50		Schuylkill	105-148	6018-6061	330.00
	Crawford	10-51	5548-5589	315.00	Apr. 3	Delaware	157-168	6062-6073	90.00
	Carbon	28-30	5590-5592	22.50		Dauphin	185-210	6074-6099	195.00
27	Franklin	58	5593	7.50		Erie	137-157	6100-6120	157.50
	Monroe	2-19	5594-5611	135.00		Armstrong	42-43	6121-6122	15.00
	Monroe	20-22	5612-5614	22.50		Wayne-Pike	18	6123	7.50
						Lackawanna	1, 225-251	6124-6151	210.00
						Center	16-25	6152-6161	75.00
						Schuylkill	151	6162	7.50
						Chester	98-100	6163-6165	22.50
						Bucks	71-75	6166-6170	37.50
						Mercer	76	6171	7.50
					4	Montgomery	189-192	6172-6175	30.00
					6	Luzerne	262-300	6176-6214	292.50
						Berks	151-160	6215-6224	75.00
						Franklin	61	6225	7.50
						Clearfield	60-65	6226-6231	45.00
						Susquehanna	13-14	6232-6233	15.00
						Lawrence	57-64	6234-6241	60.00
						Monroe	23-24	6242-6243	15.00
						Fayette	105-106	6244-6245	15.00

Apr. 6	Tioga	25-26	6246-6247	\$15.00
7	Westmoreland	96-153	6248-6305	435.00
	Susquehanna	8-12	6306-6310	37.50
	Schuylkill	152-155	6311-6314	30.00
	Lycoming	99-111	6315-6327	97.50
	Lackawanna	252-255	6328-6331	30.00
8	Northampton	84-127	6332-6375	330.00
	Beaver	86-91	6376-6381	45.00
	Butler	44-51	6382-6389	60.00
	Lancaster	152-164	6390-6402	97.50
	Washington	129-132	6403-6406	30.00
	Allegheny	3, 5, 16, 17		
		804-1170	6407-6777	2782.50
	Wayne-Pike	19	6778	7.50
9	York	142-143	6779-6780	15.00
	Luzerne	301-307	6781-6787	52.50
10	Bedford	14-15	6788-6789	15.00

COMMITTEE ON SCIENTIFIC WORK

FREDERICK B. UTLEY, M.D., *Chairman*

PROGRAM OF THE SECTION ON SURGERY

The Section on Surgery has prepared a program this year which will be of interest to general practitioners as well as to surgeons. The officers of this section have endeavored to procure speakers who are especially qualified to speak on the subjects which they have chosen.

On Tuesday there will be a symposium on diseases of the stomach and diseases of the lungs. The guest speaker on this day will be Dr. George Crile of Cleveland who will speak on "The Genesis and Surgical Treatment of Essential Hypertension." The papers on the chest on Tuesday will cover the various phases of drainage for suppuration as well as bronchoscopy.

On Wednesday there will be papers presented which will be of interest to the orthopedists, the obstetricians, and those who are doing minor surgery. There will also be a symposium on the repair of hernias with the guest speaker, Dr. Frederic W. Bancroft, New York City, speaking on "Inguinal Hernia" with special reference to the cure of hernia by injection.

On Thursday there will be symposiums on diseases of the esophagus, stomach, gallbladder, and the intestines.

Many of these papers will be illustrated by slides and motion pictures, and a number of essayists will participate in the Scientific Exhibit.

I could never divide myself from any man upon the difference of an opinion, or be angry with his judgment for not agreeing with me in that from which, perhaps, within a few days I should dissent myself.—SIR THOMAS BROWNE, *Jour. M.S.M.S.*

EMERGENCY MEDICAL RELIEF IN PENNSYLVANIA

HAROLD A. MILLER, M.D., *Director*
Harrisburg, Pa.

The pamphlet entitled "Standard Treatment Procedure in Early Syphilis" may be had by sending a request to the Superintendent of Documents, Washington, D. C., and enclosing 5 cents in stamps. They are not distributed by the State Department of Health nor the State Emergency Relief Board.

Wassermann tubes and syphilitic medication should be requested through the local relief administrator. He must certify to the fact that the individual is on relief and is entitled to the treatment outlined in the Syphilitic Survey. The exact quantity of medication necessary for the treatment must be given, together with the name of the relief recipient. The local administrator, provided the request meets with his approval, requests the materials either directly to Dr. Edgar S. Everhart, State Department of Health, or to this office.

County Society Reports

BERKS

Mar. 10, 1936

The monthly meeting was held at Medical Hall, Reading, President Ralph L. Reber, presiding. There were 45 members and guests present. John T. Farrell, Jr., associate professor of roentgenology, Jefferson Medical College, Philadelphia, addressed the meeting on "Roentgenologic Aspects of Common Pulmonary Diseases." Dr. Farrell said in part:

The radiographic appearance of any pulmonary disease depends upon the character of the abnormal shadows due to the disease, and the effect the disease has upon the shadows of the other thoracic organs, particularly the heart, the diaphragm, and the trachea. Two forces whose influences are evident in the radiograph are operative in the production of the structural changes of pulmonary diseases, namely, bacterial action and interference with the normal entrance and exit of air from the lungs. The changes which these 2 forces bring about in the radiographic appearance of the chest are determined by the location of the disease, its extent, the contour of the diseased area, and whether it produces an increase or a decrease in the content of air in the involved portion of the lung.

Pulmonary abscess, sinopulmonary disease and sometimes bronchiectasis are examples of conditions in which the action of bacteria is principally responsible for the changes detected radiographically. The best example of the effect of mechanical interference with the normal entrance and exit of air is the inhaled foreign body. Many pulmonary diseases show radiologically a combination of both the effects of bacterial invasion and of mechanical interference with normal respiratory function.

The radiographic appearance of pulmonary abscess is determined by the location, size, and the stage of development of the disease. These same general factors determine the appearance of the changes detected radiographically in all pulmonary diseases. In bronchiectasis, the radiologic characteristics are determined to a great degree by the cause. When bronchiectasis occurs as part of disease of the mucosal lining of the entire respiratory tract, it is usually bilateral and basal;

but when secondary to bronchial occlusion, it is usually unilateral, and in most instances, basal, though it occurs on both sides and in any portion of the pulmonary fields.

The radiologic appearance of the lungs after bronchial occlusion has been described in detail by Manges, whose descriptions of the effects of inhaled foreign bodies are universally known. Manges has pointed out that these radiologic appearances are determined by the degree of occlusion. When there is but partial bronchial occlusion, air is able to enter the lung during the inspiratory phase but is unable to pass out during expiration, because the bronchial wall contracts and prevents its egress. This mechanical interference with the normal respiratory function is reflected in the radiograph. On a film made at expiration, the occluded lung, because it remains full of air, permits the ray to go through more easily than the opposite lung, and consequently, its shadow is darker; the diaphragm is unable to rise and remains at a lower level than the half on the normal side; and the heart and mediastinal structures are displaced away from the obstructed lung, for its volume and intrapulmonary pressure are greater than its normal fellow. With complete bronchial occlusion, air distal to the point of occlusion is absorbed and the lung collapses. As a result, the ray cannot pass through as readily as through the normal lung and the shadow of the involved portion becomes of the same character as the shadow of the fluid-filled muscular heart and the solid liver. With collapse of the lung, its volume diminishes, the diaphragm rises, and the heart and mediastinal structures are displaced toward the side with the collapse.

The inhaled foreign body is the classic example of intrabronchial occlusion but other conditions produce it, and it may follow compression from without the bronchus. Intrabronchial new growths, scar tissue, and retained tenacious secretions as seen in postoperative massive collapse also lead to intrabronchial plugging. Metastatic and inflamed lymph nodes, when enlarged and fixed to the bronchus, may lead to occlusion. Aneurysm of the aorta and of the innominate may also produce narrowing of a bronchus. Tumors of the mediastinum may act similarly.

When in many of the conditions mentioned, the radiographic appearance is pathognomonic, in some instances the final diagnosis cannot be made without full consideration of all clinical facts and resorting to other diagnostic aids.

Dr. Farrell illustrated his discourse with graphs and lantern slides.

In discussion, Henry A. Gorman, Hamburg, said we depend too much on roentgen-ray study, in fact so much so that we let up on the use of the stethoscope. There is no question that roentgen-ray study is very valuable and gives a great deal of information as to diagnosis and progress of disease. At the State Hospital, Hamburg, a great many cases are seen in which the diagnosis is not clear. At times even the roentgen ray fails to reveal a diagnosis.

PEARL E. HACKMAN, *Reporter.*

BLAIR

Feb. 25, 1936

The monthly meeting was held at 3:30 p.m. at the Altoona Hospital. The scientific program consisted of a symposium on pneumonia.

It was considered advisable occasionally to have the meetings during the evening instead of the afternoon,

to keep better informed about the progress of lay groups in their campaigns for state medicine, to learn the values to be obtained by medical economics meetings in addition to the regular society meetings, and to increase interest in the activities of the State Society.

Ralph Himes presented a paper on "Lobar Pneumonia." Lobar pneumonia is an acute infection of the lungs characterized by suddenness of onset, high temperature, toxemia of varying intensity, and a marked tendency to terminate by crisis. It is one of the most prevalent and fatal of the acute diseases. The pneumococcus is the sole excitant in lobar pneumonia except in the small percentage of cases in which the streptococcus, staphylococcus, bacillus of Friedlander, or the bacillus of influenza may be the infecting agent. It is most prevalent in the winter and spring months. Climate plays a minor rôle. Residence, sex, age, occupation, individual predisposition, state of health, cold, traumatism, and etherization all play their parts in the development of pneumonia. It is more prevalent during ages 1 to 10, 20 to 40, and after 60, when it is very grave. The lower lobe of the right lung is more frequently affected although any lobe may be involved.

Symptoms begin abruptly with a decided chill, lasting from 15 minutes to 1 hour, accompanied by or soon followed by more or less pain on the affected side. The temperature rises rapidly, from 103° to 104° F., remaining almost constant except for slight diurnal remissions, until the fifth, seventh, or ninth day when it usually terminates abruptly by crisis, reaching normal in 12 hours, or gradually lowering by lysis. The pulse varies with the temperature rarely exceeding 120 to 130 per minute. A cough is present from the beginning. It is short, painful, and partially suppressed. At first it is dry but becomes productive about the second or third day and is associated with a characteristic reddish-brown sputum. Breathing is embarrassed and dyspnea may be marked. Respirations range from 40 to 60 per minute. There is a ratio between the pulse and temperature of 1 to 3 or 1 to 2. The face is flushed, the expression anxious, the tongue is furred, the urine is scanty, and in most cases there is a mild delirium. Sweating is quite marked and is profuse at the crisis.

Prominent among the physical signs are evident limitation of the affected side and increased vocal fremitus over the affected lung. The percussion note is tympanitic at first; as hepatization occurs the note becomes dull. In the early stages of pneumonia respiration is feeble and bronchovesicular breathing is usual. This merges into bronchial breathing and bronchophony, often about the second or third day after the onset but may be delayed to the later stages of the disease. This condition usually disappears at the crisis but may last a few days longer. As resolution takes place crepitant râles appear. These may be followed by moist râles of varying intensity. Bronchial breathing merges into vesicular breathing and the dullness gives way to impaired resonance and finally normal resonance.

The mortality rate in lobar pneumonia varies in different localities. It may be more severe at one time than at another in the same locality. This is due possibly to the types of pneumococcus prevailing. Types 1 and 2 comprise about one-third of pneumonia cases; type 2 about one-fourth; type 3 about one-sixth and the balance a combination of types 1 and 2, or 3, 4, 5, 6, and 7. The prognosis is greatly influenced by the age of the patient. The death rate is high in infancy and past the age of 60. The general physical condition of

the patient, the amount of lung tissue involved, the degree of toxemia, and the development of bacteremia are all factors to be considered in the recovery of the patient.

The most important part of treatment is absolute rest. The number of visitors should be limited. An abundance of cool, fresh air is essential. A cold room is not absolutely necessary in the treatment of pneumonia but the type of patient and his general condition must be considered when regulating the temperature of the room. The room should be well lighted and the patient well protected from drafts and sudden chilling. Food should be nourishing and easily digested. Water and fruit juices should be given frequently. The bowels should be kept open by the use of mild laxatives or enemas. If the temperature is quite high, cold sponges may be of service. The cough should be controlled by the use of codeine or morphine. Circulatory stimulants should be kept on hand to be available if the need for them arises. Preference should be given to strychnine, digitalis, caffeine-sodiobenzoate and camphor. Atropine sulphate, grains $\frac{1}{150}$, given hypodermically is used to control excessive pulmonary secretions or threatened edema. Whiskey or alcoholic beverages are not essential. They may, however, be used with a confirmed alcoholic. Tympanites may be relieved by the use of pituitrin, turpentine stupes, or enemas.

Regarding digitalis therapy, the drug in any of its forms may be used with value during the early stages of the disease. If the heart muscle is digitalized early and if the need arises for digitalis therapy, the full physiologic effect may be obtained quickly by small doses of digitalis. At the present time, specific sera for types 1 and 2 is of greatest value. The sputum should be typed as soon as possible and if types 1 and 2 are present antipneumococcic serum from 60,000 to 100,000 units should be used immediately and repeated every 5 hours until the temperature comes down to normal. Before giving serum it should be determined as to whether the patient is sensitive to serum. This can be done either by the intradermal method or the conjunctival test. When reaction does follow the administration of serum, adrenalin 1:1000 in dosage of one-half to 1 c.c. should be given hypodermically. Many times there is a combination of types 1 and 2 and some other types; in this case the serum for types 1 and 2 should be given for often there are good effects from it. The death rate from pneumonia, since the use of serum, has been reduced from 25 to 40 per cent. Oxygen may be used either by funnel, catheter, oxygen chamber, or oxygen tent. When using the oxygen chamber 40 to 50 per cent oxygen should be given. Oxygen tends to overcome cyanosis and restlessness. It makes the patient much more comfortable and consequently may be used either throughout the entire course of the disease or during the period of dyspnea, cyanosis, and restlessness. Diathermy may be used to produce intrapleural heat, and this is done best with the high frequency current. It should be used as early as possible and the duration of actual treatment should be from 30 to 60 minutes daily until the temperature comes down to normal. It assists in the removal of tissue congestion, relieves pain, lessens cyanosis, helps to overcome dyspnea, and gives the patient a feeling of well-being. The use of pneumococcic antigen is questionable, although some report good results and the lessening of the duration of the infection. Artificial pneumothorax (the introduction of air into the intrapleural space) may be helpful. The quantity of air used is 400 to 500 c.c. and should be used every 24

hours. When used early it helps to overcome cyanosis and dyspnea and may limit the spread of infection. This form of treatment is in the experimental stage and should not be used in outside practice.

In discussion, Augustus S. Kech detailed the differences between the types of pneumonia seen in the larger centers of Pennsylvania, especially Pittsburgh, and those seen in Altoona. He advised the use of serum in all types of pneumonia but suggested that the typing always be done so as to have a check on the efficiency of treatment. Dr. Alleman suggested if diathermy be used at all that it be given to maximum effect and not merely tried once or twice.

In the absence of Harry W. Weest the paper prepared by him on "Bronchopneumonia" was read by Elwood Stitzel. A simple definition of bronchopneumonia is difficult, since, unlike such diseases as typhoid fever or acute lobar pneumonia, the bronchopneumonias comprise a group of conditions of widely differing etiology, pathology, and course. The term is usually applied, however, to an inflammatory process in the lungs consisting of multiple diffuse or focal lesions primarily or secondarily associated with the presence of infectious micro-organisms and eventually involving the actual lung parenchyma.

In practically every case the lesion is associated with the presence of bacteria. The predisposing causes are: 1. *Mechanical injuries*, trauma, foreign bodies, tumors and cysts in the lung, disturbances of respiratory and deglutitory reflexes, and ruptured lung abscesses; 2. *thermal injuries*, exposure to cold; 3. *chemical injuries*, gas poisoning and inhalation of irritants; 4. *infectious diseases*, contagious diseases of childhood, smallpox, influenza, dysentery, and typhoid; 5. *age*, the very young and the very old; 6. *general causes*, cachexia and wasting disease. The exciting causes or pathogenic micro-organisms may produce bronchopneumonia by primary infection or may be secondary to one of the predisposing causes. These causes are streptococcus, pneumococcus, influenza bacillus, gram-negative cocci, tubercle bacillus, plague bacillus, diphtheria bacillus, staphylococci, yeasts, members of the typhoid-colon group, and many other bacteria.

The disease is sometimes conveyed when there is crowding or concentration of large numbers of individuals and these conditions may become epidemic. Ordinarily, however, it is autogenous in origin.

Because bronchopneumonia is often a secondary infection, the symptoms are complex and it is often difficult to state the exact time of onset of the disease. In a typical case the onset is often sudden. The patient complains of lack of well-being, chills, malaise, aching and fever with local symptoms of cough, dyspnea, expectoration, and perhaps pain in the chest. On examination there is found fever, a rapid pulse, fine râles, particularly over the lower lobes. As the disease progresses the râles spread over the whole of both lungs and there is labored breathing, cyanosis, prostration, and a productive cough which yields a greenish-mucopurulent sputum. The disease may run a course of from a few days to weeks or even months.

The laboratory findings show an increased leukocyte count with a moderate secondary anemia or even in a severe case a leukopenia. The urine shows no special features except the findings noted in any acute fever. Sputum may be small in amount or very profuse and is found to be mucopurulent, purulent, bloody, or foul. As a rule blood cultures are sterile.

Diagnosis is made by the symptoms, physical signs, roentgen-ray examination when it is possible, and by

sputum culture. Regarding the complications and sequelae it may be stated that bronchopneumonia is rather a complication or sequel to some other condition than itself a cause of complications or sequelae. One attack of bronchopneumonia tends to be followed by others. An attack may be followed by pleurisy with effusion, lung abscess, bronchiectasis, chronic bronchitis, emphysema, chronic cardiac impairment, and a general septicemia.

The most essential point about treatment is immediate rest in bed and nursing of a character which will produce both physical and mental rest. Room temperature should be 60° to 70° F. A high caloric diet of 2000 to 3000 calories per day should be secured in the form of milk, eggs, custards, junkets, broth, scraped meat, fruit juices, etc. Fluids should be forced to the amount of 2 to 4 quarts daily. Enemas or mild laxatives should be given, morphine for pain, other sedatives for restlessness and cardiac stimulation when needed. The prognosis depends upon the age, the patient's general condition, and the type of primary infection.

Louis Lass presented a paper on "Pneumonias in Children," and divided these into 2 major forms—lobar pneumonia and bronchopneumonia. The causative organism is usually one of the types of pneumococcus although the *Streptococcus hemolyticus*, the bacillus of influenza, the *staphylococcus* and bacillus of Friedlander may be causative. In many of these, especially where the influenza bacillus is found, it is merely associated with the pneumococcus.

After a description of the etiology, symptomatology, bacteriology, and epidemiology of these 2 types of pneumonia, the chief diagnostic differences between each were given. Bronchopneumonia is often secondary to bronchitis and acute infectious diseases and accounts for 75 per cent of all pneumonias under age 10 and a very small percentage of those over age 3. It occurs fairly often in debilitated and poorly nourished children. The bacteria in primary cases is usually the pneumococcus and in secondary cases may be any one of a mixture of various bacteria. The onset is often gradual and the course not typical. The duration is from 1 to 4 weeks, the termination by lysis. Respirations are dyspneic in character and the cough is frequent and distressing. It involves both lungs as a rule and most frequently the lower lobes posteriorly. There are signs of bronchitis throughout both lungs with evidence of consolidation on the fourth to the seventh day. However, bronchopneumonia may cause none or the distribution may be patchy. Resolution is slow and relapses and recurrences are frequent. Among the sequelae are empyema, chronic interstitial pneumonia, and pulmonary abscess.

Lobar pneumonia is seldom secondary to anything except a mild upper respiratory infection. It accounts for 25 per cent of all pneumonias under age 2 and the great majority over age 3. It occurs in well-nourished and robust children and is usually caused by the pneumococcus alone. The onset is abrupt and the course typical. Duration is about 5 to 8 days and the termination is by crisis. There is most often only accelerated normal respirations. The cough is usually not distressing and may be absent altogether. Frequently one lobe or part of a lobe is involved and this especially in the apices. The signs are limited to the consolidated area and the râles are few in number except in the early stages or during resolution. Consolidation on the second or third day is usually complete and well defined. Resolution is rapid and relapses are rare. There are no sequelae except empyema.

In lobar pneumonia there is a mortality of about 10 per cent. The younger the child, the graver the prognosis. Complications such as empyema, meningitis, and peritonitis are additional burdens on the path to cure. The weaker the child, the worse the prognosis. In summarizing the treatment of lobar pneumonia there is probably no acute illness of children requiring less interference on the part of the physician than does uncomplicated lobar pneumonia. The disease is self-limited—about 70 per cent of all cases recover with treatment and another 20 per cent in spite of it. Dr. Lass stated that in his service in the Children's Ward of the Altoona Hospital all cases of pneumonia are digitalized in spite of the fact that there is a marked difference of opinion as to the advisability of doing so. It was also reported that the use of Felton's pneumococcal antibodies was encouraged especially when types I and II were present. Pneumococcal antigen has been used although it is not as spectacular as the antibodies but does seem to help some cases.

The prognosis of bronchopneumonia in children is always serious, especially in infancy. Cases with subnormal temperatures and excessively high temperatures have a very poor outlook. The previous state of health determines the prognosis very often. There are certain danger signals such as persistent cyanosis, convulsions, sudden collapse, and rapid extension of the areas involved. The more widespread the pneumonic process the more serious the outlook. The essentials in treatment are plenty of fresh air and sunlight, adequate nursing, no expectorants, small doses of codeine, paregoric or Dover's powder for cough, whiskey for stimulating effect, digitalis in many cases, and stimulants as indicated. Oxygen is often advisable and is of considerable value for cyanosis. Felton's pneumococcal antibodies are worth using although the effect is not as beneficial as in lobar pneumonia. Likewise pneumococcal antigen given subcutaneously every 6 to 12 hours seems to benefit some patients.

Mar. 31, 1936

The monthly meeting was held at 9 p.m. in the Jaffa Mosque, Altoona; Harold F. Moffitt, president, presided. More than three-fourths of the county society membership was present as well as numerous dentists and pharmacists.

Among the business matters brought up was the question of holding meetings during the evening hours rather than during the afternoon. It was decided that until the summer recess the meetings would be held in the evening at 9 p.m. The application of Russel L. Barnes, of Tyrone, for membership was presented.

Edward L. Bortz, of Philadelphia, gave an address on "The Security of the Physician and Social Security."

Dr. Bortz stated that social workers would probably estimate that in a city the size of Altoona about one-fourth of the population or 20,000 people are not receiving adequate medical care. These workers believe that this is due to lack of ability to pay. Consequently they are trying to sway public opinion to the point that it will demand federal grants to pay the bill. Furthermore, they are attempting to spread the impression that the physician is at present asking too much for his services and they will attempt to dictate the amount of the fee. These social propagandists are endangering the modern high plane of medical work in the United States by this attitude, and may be able to compel physicians to be legislated into socialized medicine if the latter do not become organized against it.

Regarding the costs of medical service, Harry Moore, a layman, organized a Committee to Study the Costs of Medical Care. This committee which was prejudiced in its viewpoints made a 5-year study, not of the country as a whole but of isolated groups of people. The figures thus secured were multiplied so that they would apply to the country as a whole. This method was grossly unreliable and the statistics so gathered were presented in such a manner as to give only part of the true story.

The rank and file of physicians may not think that state medicine is a possibility. However, prominent men throughout the nation believe that it is very probable. Dr. Bortz read a letter from the medical editor of the magazine *Time* which stated that the only way out of the present situation is socialized medicine.

In 1880 Bismarck guaranteed socialized medicine as a favor to the population of Germany. The doctors were not asked their desires on the question but had the system forced upon them. This scheme has stifled medical progress in Germany and besides is not entirely agreeable to the people themselves. Dr. Bortz, while in Berlin several years ago pursuing graduate work, found that the main concern of the physicians was in satisfying the government and not the patients.

In England, Lloyd George forced a Medical Practice Act through Parliament at a time when the medical profession was apathetic. The Ministry calls it contract practice or the panel system and promised a great deal to the medical profession, but has not kept faith. Any inquiry into the workings of this Act is inaccurate if addressed to the lay administrators of it. However, Dr. James Cook, one of the physicians on the panel system, writes that under it quantity and not quality of medical service counts most in England. Physicians are at the beck and call of politicians and are required to fill out many forms and blanks. The point has been reached where fines or penalties are assessed on physicians who fail to conform to lay methods of management.

Dr. Bortz considers the practice of medicine as being at the crossroads and that the determination of the relationship between the profession and the public is in a very unsettled state. Medicine must do something about this and if it rises to the occasion there will probably result much good out of all this agitation. The situation now is that the United States has about 150,000 doctors of medicine and about 62,000 dentists. Approximately $3\frac{1}{2}$ billion dollars are spent annually for medical care. Only about 850 million dollars goes to regularly licensed physicians and about 350 million to regular dentists. This is about one-third of the total cost. Then about one-third goes to hospitals, nurses, etc., and the remaining third goes to quacks, charlatans, and proprietary medicines. A public that does things like that and then criticizes the practicing physician as to his fee needs to be educated and not censured.

In Germany there are 55,000 physicians and under socialized medicine it requires 52,000 workers and administrators to direct them. In Poland malingering became so great under state medicine that physicians described a new disease—"inibilism"—meaning nothing the matter. In Sweden under state medicine there was so much malingering that army officials said if it got any worse the whole army would be in the hospital. In some countries this tendency is aggravated by the fact that cash benefits are given to the ill.

The problem of paying the physician is a complex one but in brief it resolves itself into paying cash, charge accounts, installment payment, and voluntary

health insurance. Voluntary health insurance is to be condemned because it leads to compulsory health insurance, it lowers standards due to its routine nature, it does not eliminate but increases charlatanism, and it increases the total costs due to bureaucracy.

What shall we physicians do about this complicated problem? Henry Pritchard, of the Carnegie Foundation for the Advancement of Teaching, states that every individual has as his problem the right and obligation to determine his own welfare. So it is with medicine. Charles Dawes, in writing of professions, stated that if you work in a profession, work for it; if you live by it, live for it; work with others of your profession; speak well for it and never belittle its importance.

One constructive criticism of present-day medicine is that there is lack of interest in the profession as a whole. Physicians are too much interested in their individual problems of treating the sick and too little interested in the broad program of treating the ill. They must attend their local and state society meetings and must make a deliberate effort to educate the public on the type of loose thinking that is being done by those who wish to change the status quo of the medical profession. We do not know just what is coming next, but we should study plans and means of caring for the unemployed, indigent, and improvident. If we do not have such plans we will be forced into something that is very unsatisfactory both from our standpoint and the welfare of the community. One example of this planning is the Emergency Child Health Committee which not only has been beneficial to the children of the State but has shown that the medical profession has the interest of the people at heart. Credit must be given to Dr. Samuel McC. Hamill for his vision and work in starting that program.

In conclusion, be alert and active in medical organization because we rise or fall as a profession and not individually. Have active medical economics committees and participate in things for the common good. Be well informed on these problems in order properly to instruct others.

In discussion, Augustus S. Kech stressed that socialized medicine is an ever-present danger. J. D. Findley described the big factor in our problems as being the propagation and survival of the unfit. Social degenerates and mental defectives are on the increase. W. H. Howell challenged the statement that any appreciable number of folks in Altoona are not having proper medical attention. He believed that anybody who wanted medical attention could get it whether able to pay or not if they really asked for it.

MARLYN WALTER MILLER, *Reporter.*

CENTER

Feb. 13, 1936

The meeting was held in the Sandwich Shop of Old Main at State College, where dinner was served. President Paul M. Corman welcomed the guests and requested John V. Foster to introduce the guest speakers.

James W. Kennedy, of the Joseph Price Hospital, Philadelphia, spoke on "Some Urgent Conditions in Which I Am Not in Accord with Popular Teaching." He said in part:

Ninety-five per cent of deaths are due to human errors. He stressed the early hour for operation for acute appendicitis, and contrasted the mortality rate of

those operated upon early with those in which a policy of watchful waiting had been carried out. Many cases that seem to have a diffuse peritonitis do not show this condition at time of operation. In cases where peritonitis is found, the adhesions are broken up and the patient eviscerated under a stream of warm water and packing inserted to prevent postoperative obstruction. There is less than 5 per cent mortality in the peritonitic patient.

In ectopic pregnancy the diagnosis can be made from the clinical history. The signs and symptoms that are usually characteristic are: The missed period; pain, severe and lancinating in character, that comes on suddenly; bloody discharge, "spotting"; the tender cervix. The ectopic patient does not die from loss of blood, but from shock. Operation should not be deferred even in the very bad cases. Operate quickly but gently, and even the severely exsanguinated patients will respond so that it is not necessary to give blood transfusions or intravenous medication to these patients.

Slides were shown during the course of the paper. W. W. Cadbury, superintendent of the Canton Hospital, Lingnan University, Canton, China, read a paper on, "At the Point of a Lancet." Dr. Cadbury has been in practice in China for 27 years and is associated with the Missionary Hospital established by Dr. Peter Parker in 1835. This institution by medical and surgical skill has gradually broken down the opposition to the West. The first medical school for Chinese people was started there.

Dr. Cadbury outlined the story of medicine as it has been practiced by the Chinese for the past 4000 years. He began his paper with a Chinese proverb, "The skilled doctor learns by observation; the mediocre doctor learns by interrogation; the ordinary doctor learns by palpation of the pulse."

There are 2 divisions of medicine in China. One is linked with the superstitious or religious; the other is the art of medicine, which entails the administration of herbs and remedial agents.

The theory of medicine is made up of 2 elements, the positive (Yang) and the negative (Ying). These 2 elements must be in perfect balance or symptoms will occur according to which is in predominance.

Their ideas of anatomy are fantastic as there has been no dissection in China for 2000 years. The body is divided into 3 sections, the upper or head, the mid-section or chest, and the lower or abdomen and legs.

The heart is considered to be the organ of thought, and it is thought that the larynx leads directly into it. The lungs are believed to be the organs that move the blood. Each organ has a corresponding element as wood, water, earth, metal, etc. There is also a color for each organ.

The feeling of the pulse is the basis of all diagnosis and is done by the "scientific" doctors. It is performed in a ritualistic manner by using the third, fourth, and fifth fingers of each hand in 11 different places. This procedure takes 10 to 15 minutes or longer, and weak, moderate, and strong palpation is carried out to determine one of the 24 varieties of pulse that are recognized.

As the materia medica was revised 4000 years ago, the ideas of drug therapy are extremely primitive. Tiger bones are given for nervous breakdown. Mercury is used in gunshot wounds to dissolve the bullets, and a rooster is cut in half and the bleeding surface is applied to the chest for stroke.

Dr. Cadbury also spoke of the progress made by the staff of the Canton Hospital by pointing out that, al-

though there are only 7000 doctors for 400,000,000 people in China, 100 years ago there was only one.

Tuberculosis is the most common disease encountered in China. Malaria occurs in 90 per cent of the population, and hook worm is present in 50 per cent. Typhoid fever is very common, and cholera and bubonic plague occur in epidemics. Scarlet fever, rheumatic fever, rickets, and pernicious anemia are extremely rare or absent.

Mar. 12, 1936

The meeting was held in the Center County Hospital and was well attended. Negotiations were started through E. H. Adams for seminars for graduate study in conjunction with Mifflin and Huntingdon counties.

A paper on "The Diagnosis of the Childhood Type of Tuberculosis" was presented by Charles H. Light. Dr. Light emphasized that the history of an opportunity to acquire infection is very important. Symptoms and physical signs are of little value in the diagnosis of this type of tuberculosis. The eliciting of physical signs, however, should be carried out in order to differentiate other conditions.

The tuberculin reaction is the most efficient method for detecting tuberculous infection in children. Koch's old tuberculin in dilutions of 1:10,000 is injected intracutaneously in 1 c.c. amount. The result is read in 48 hours. In children a positive reaction indicates that viable bacilli are present. A negative reaction to a dose of 1:100 is good evidence that infection has not occurred and that active disease is not present.

The roentgen-ray examination is second in importance, and the interpretation of the films should be made by the roentgenologist, but the actual diagnosis should be made by the clinician and the roentgenologist working together.

In discussion, J. P. Ritenour, of the Pennsylvania State College, presented the following interesting data in regard to tuberculin testing in incoming freshmen in the college: In 1933, of 672 students tested, 51 per cent reacted positively and 49 per cent negatively; in 1934, of 1104 students tested, there were 40.5 per cent positive and 59 per cent negative; in 1935, of 1220 students tested, 38.4 per cent showed positive reactions and 61.6 per cent reacted negatively.

J. G. Weixel presented a paper on "Surgery in Pulmonary Tuberculosis," in which the various methods of collapse therapy were discussed. Indications and contraindications for pneumothorax, pneumolysis, phrenicectomy, and thoracoplasty were given, and statistics of various clinics detailed to show the efficacy of this form of therapy.

J. G. WEIXEL, *Reporter*.

CHESTER

Mar. 17, 1936

A regular meeting was held at the Chester County Hospital. Luncheon was served.

The Executive Committee approved of the suggestion of the Economics Committee that the society make an effort at this time to collect funds for either the medical care of indigent patients or the medical care of contagious patients. It was deemed unwise to include both of these worthy needs at the present time but to concentrate on one particular effort in the very near future. It was agreed by the society that the Public Health Commission should contact the County Commissioners relative to obtaining funds for the Contagious Unit, and that the matter of county funds for the medical care of the indigent be postponed.

The Executive Committee also presented for discussion the society's purchasing a life membership in the Historical Society. It was approved that the society go on record as expressing interest in obtaining a life membership in the Historical Society, but that final action should be delayed until such time as the Historical Society could present to the Medical Society a more complete and definite agreement concerning the terms of membership.

A letter was read from the State Secretary regarding the fee bill for those physicians doing work subject to the Workmen's Compensation Law. It was felt that no action was required concerning this matter, but if any physician is asked for a fee schedule he should first confer with the Economics Committee.

Mr. Francis T. Chambers, Jr., read a paper on "The Alcoholic from the Psychologic Aspect." Mr. Chambers spoke of obtaining the confidence of the individual and stimulating in him a most necessary desire to get well. There is no chance for success unless the patient completely gives up the idea of using alcohol. He spoke of the difference between drinking in a social sense and the alcohol habit addiction. It is necessary for the individual to be frank and honest with the physician and many interviews, often over a period of a year or more, are necessary to accomplish the desired result. Adjustment of financial, marital, and other difficulties is most essential to aid in the cure.

Everett S. Barr gave a talk on "Alcoholism from the Viewpoint of the Psychiatrist." Dr. Barr, speaking very decidedly concerning the fanatical impression which many people hold concerning the use of alcohol, said that alcohol is not responsible for the great number of cases of so-called alcoholic psychosis, but that many underlying psychologic conditions are aggravated by the constant use of alcohol. Dr. Barr particularly urged the use of common sense and intelligence in the handling of alcoholics, and felt that considerable harm had been done by many so-called intelligent people who had a very emotional and distorted viewpoint of this condition. JOSEPH T. SCATTERGOOD, JR., *Reporter*.

DAUPHIN

Apr. 7, 1936

The monthly meeting was held at the Academy of Medicine, with President Park A. Deckard in the chair.

John H. Fager, Jr., presented a paper on "Chronic Prostatitis and Prostatism." He said in part:

Chronic prostatitis is caused mainly by infections introduced through 2 avenues, the urethra and the blood and lymph streams. That introduced through the urethra is gonorrheal; that introduced through the body fluids may be due to various organisms.

If the prostatitis is gonorrheal, the first effort should be directed to increase the body resistance to these bacteria, which can best be done by using the Carbus-Ferry gonococcus filtrate, supplemented later by massage of the gland.

If there is no history of gonorrhea, an autogenous vaccine, made from the organisms found, should be used and at the same time a careful search should be made for a focal infection in the teeth, tonsils, nasopharynx or other areas. With the removal of the focus of infection, the vaccine is used and massage of the prostate instituted a little later.

Massage should be done gently and on a full bladder so that the proper pressure and stroking may be done more easily and so that the lower urinary tract may be cleared of any possible infectious material by the simple expedient of emptying the bladder.

The patient developing prostatism should be diagnosed early. This can be done only by taking a careful history, noting especially changes in disposition and incipient neuroses, palpating the gland with very leisurely care, determining the amount of residual urine, and doing a careful urinalysis.

If the history indicates a more or less prolonged prostatic obstruction that does not respond to conservative treatment, the patient is willing to have an operation, and his physical condition will permit it, then an operation with as little delay as possible is indicated.

Should the operation be of the transurethral type or a prostatectomy? The literature at present is full of the pros and cons of this question. Owing to the availability of the resectoscope, a large number of unnecessary operations are being done—transurethrally. Almost all the leading urologists believe that the resection operation is best adapted to: (1) Small, hard, fibrous prostates, (2) vesical neck contractures, and (3) relief of inoperable carcinomas.

Edgar S. Everhart spoke of "Fever Therapy in the Treatment of Syphilis and Gonorrhea." A compendium of his remarks follow:

The recent advances in the use of fever therapy, whether fever is induced biologically or mechanically, in the treatment of syphilis and gonorrhea make interesting reading. In both syphilis and gonorrhea fever therapy certainly has not been established as a success in the case of the primary disease. Its greatest success has been with what may be termed the complications. For example, gonorrheal arthritis has responded in the main better than has acute specific urethritis. Fever therapy, as it is applied today, is not practical for routine treatment of acute specific urethritis. Fever therapy has been of untold benefit in the treatment of syphilis of the central nervous system. It has not been shown that it is of great service in the treatment of acute syphilis. The standard procedure consisting of arsenic, bismuth, and mercury is in no danger of being displaced by fever therapy as so far reported.

The adverse action of heat on the organism of syphilis has been responsible for the development of a number of high-frequency machines and radiant heat cabinets for the induction of artificial fever, but to date no well-controlled experiments, giving the results of comparative treatment in large series of cases, have been reported.

Within the past few years, attention has been directed to the results obtained with malaria therapy in those cases of paresis in which some permanent damage had been done to the central nervous system before fever treatment was undertaken. Large numbers of patients are improved physically but are left mental cripples as a result of fever therapy, and have to be cared for in institutions for the remainder of their prolonged lives. The only way to reduce the number of such imperfectly cured patients is to diagnose general paralysis early and administer malarial treatment before marked nervous symptoms occur.

In discussion, Richard F. L. Ridgway said that for the best results it is imperative that the parietic be given malarial therapy early in the condition. Do not wait until an obvious mental defect calls the condition to attention, but check regularly on the spinal fluid of syphilitic patients. If a +4 spinal fluid is found with a parietic gold curve, close questioning will disclose some mental aberration sufficient to admit the patient to a state institution. Dr. Everhart stated that there is evidence of some difficulty in admitting incipient parietics to state mental hospitals. Should our laws on this point be revised or should the court refer these cases

to expert commissions? John F. Culp asked the reason for prolonging the life of those paretics that are useless to themselves and to society. Could not a selection of cases be made? Richard F. L. Ridgway said that at some hospitals all paretics are treated with malaria. At the Harrisburg State Hospital the cases are selected. The treated cases represent only 58 per cent of the paretic admissions.

Samuel L. Grossman expressed the belief that transurethral resection is the only method of treating cancer of the prostate with obstruction. Resection is indicated in a few selected cases with median bar obstruction and contracture of the bladder neck.

A. HARVEY SIMMONS, *Reporter*.

DELAWARE

Mar. 12, 1936

The regular meeting was held at 9 p.m., at the Chester Hospital; President John Sweeney presided.

Six members were elected. The president introduced Drs. Roxby, Miller, and Wyman, who were elected to membership at the February meeting.

Correspondence was read from the American Medical Association defining membership and fellowship in the A. M. A.

It was approved that a committee of 3 be appointed to confer with the Delaware County Commissioners regarding the possibility of adopting rules and regulations for medical services for the indigent of Delaware County. The rules suggested are a modification of those enforced in Merceer County.

The secretary was instructed to write to the State Secretary of Health, Dr. Edith MacBride-Dexter, that the society profoundly regretted that an effort was being made to remove Miss Denny from the tuberculosis clinic. Miss Denny has rendered more than 21 years of faithful and valuable service.

District Councilor Edgar S. Buyers, of Norristown, detailed the many phases of the activities of the State Society. As to finances, he hinted that unless financial conditions improve it might be necessary to increase the State Society dues. The Medical Defense Fund is an active fund that is used to defend all members of the State Society from malpractice suits of unwarranted nature. In referring to the Medical Benevolence Fund, Dr. Buyers praised the work of the Woman's Auxiliary of the State Society in furthering the objectives of this fund.

There seems to be a decline in the activities in socialized medicine. However, this probably will last only until the Legislature meets again. The Board of Trustees of the State Society has asked the Governor to continue the Emergency Medical Relief. This will probably be done until about July 1.

In discussing hospital insurance schemes, the councilor stated that the State Society and organized medicine are opposed only insofar as medical service is concerned. If the physician is called upon to give free service in these schemes, then organized medicine is in opposition. At the present time, however, only a few of these plans involve medical service. But there is a danger that these plans may be an opening wedge to include medical service later.

The society was advised to have its members interview candidates for the Legislature now, with the approach of primary election, for it is desirable to ask the candidates to consult the representatives of the Medical Society if and when subjects of medical legislation are presented to the Legislature.

President Sweeney spoke of the advisability of the revision of the Delaware County Medical Society's by-laws. On motion a committee of 3 was appointed to consider the subject; the president appointed Drs. Stiteler, Cross, and Aitken.

Dr. Donahoo commented on the recent deaths in Delaware County from diphtheria and urged all physicians to begin active immunization. The matter was referred to the Committee on Child Welfare with the request that the committee study all phases of immunization and submit to the society a definite plan of action.

Charles Mazer, Philadelphia, of the University of Pennsylvania Graduate School of Medicine, gave an address on "Symptoms and Treatment of the Menopause."

Dr. Mazer stated that the symptoms of the menopause very often antedate the cessation of menstruation. The term climacteric is a better term, but the 2 are generally used more or less interchangeably. The symptoms of this transition of life are so variable that cases are seen by physicians in practically all the specialties of medicine. The reason for this is that the symptoms may affect any part of the body. Hence the differential diagnosis is extremely important and frequently difficult. The conditions which mimic the menopause are: Cardiorenal disease, uterine fibroid, arteriosclerosis, etc. The basic principle of the symptoms is that of abnormal functioning of the ductless glands. Not only are the gonads affected but also the anterior lobe of the pituitary, the thyroid, and the adrenals. There is ample experimental evidence to prove this.

About 30 per cent of all women have sufficiently annoying symptoms to require treatment. More than 70 per cent of all women go through the menopause without untoward symptoms. The production of progestin is first eliminated in the woman approaching the menopause. The production of the estrin substance continues for many months and even years.

When abnormal uterine bleeding occurs a eurette is essential for an adequate differential diagnosis. This may be done in the doctor's office. Microscopic examination of the scrapings make the diagnosis relatively sure. Such conditions as fibroids and cancer should be eliminated before attempting to treat the symptoms of the menopause.

At present there is no endocrine product which will stop abnormal bleeding of a nonmalignant nature. Roentgen ray or radium are the treatments of choice.

The libido is not affected by the menopause whether operative or natural. This is because the libido is of nervous and habit origin and is not endocrine in nature.

The time of the cessation is not predictable. It varies according to climate and racial characteristics. The average age at onset is 41 years. The average age of cessation of menses is 46 years. During the menopause the thyroid gland often shows hyperactivity. This is demonstrated by increase in pulse rate, tendency toward fright, and emotional disturbances. There is also a hyperfunctional state of the adrenals which is manifested by a fluctuation of the blood pressure, changes in the voice, and the growth of facial hair. The unstable hypertension is due to intermittence in the production of adrenalin.

Hyperexcitability of the autonomic nervous system is manifested. The sympathetic nervous system is especially affected and exophthalmos may be a manifestation of this without evidence of thyroid disease.

The circulatory symptoms are the most annoying; the well-known hot flashes, choking sensation, and

paresthesias are common and require rather intensive treatment. Other common symptoms include insomnia, depressed state which may lead to melancholia, tinnitus aurium, vertigo, nervous instability, and spells of uncontrollable crying.

As to treatment, huge doses of follicular hormone are required to accomplish an inhibition of the anterior lobe of pituitary. It is this inhibition which brings results. Two hundred rat units by hypodermic injection is the minimum dose and the method of choice. Relatively large doses of one thousand rat units every fourth day will relieve the most annoying of symptoms. The dose should be tapered down gradually month by month reducing the amount given by $\frac{1}{2}$ each month. The minimum dosage will be reached in the average case in about 6 months.

As to the cost and quality of the products available, progynon-B, a German product of the Schering Corporation, is superior and more reliable than theelin, the American product. The German product is more expensive but the results are more reliable. For a 6 months' course of treatment in the average case the cost of the product would be approximately \$40.

It is advisable to tell patients that a long course of treatment is essential for the best results. Many patients feel improved after a few injections and then will cease treatment unless warned beforehand. Not all patients can be cured of the symptoms but a large majority will be markedly improved, if not cured, by following the entire course of the treatment.

The knowledge of roentgen-ray treatment is somewhat limited but in ordinary cases 600 roentgen units given over a period of 2 to 3 months would suffice to cause cessation of the symptoms.

Refreshments were served.

E. ARTHUR WHITNEY, *Reporter*.

FAYETTE

Feb. 6, 1936

The regular meeting was held at Medical Hall, Uniontown.

James L. Gilmore, Pittsburgh, presented a paper on "Breech Presentation." He said in part:

Breech presentations account for considerable mortality and morbidity in infants and mothers. Three per cent of all presentations are of this type. The diagnosis is not difficult. In the obese, roentgen ray is of value in determining position. In the management of these cases, there is the choice of several procedures:

1. Hands-off policy, allowing the natural forces to deliver the child, provided the fetus is in good position and passages are ample.

2. Prophylactic external version. The best time for this is about one week before expected confinement. Under anesthesia a vertex presentation is produced, the physician being alert for loops of cord around neck and allowing labor to proceed. This is a good method provided there is no disproportion between the head and pelvis.

3. Decomposition of the breech presentation, followed by extraction. Too much traction should not be used. Each leg is brought down separately with gentle traction. The after-coming arms are delivered, each separately. In some cases it may be necessary to free and deliver them. In those cases in which the arms are extended above the head, the scapula is pushed mesially, bringing the arm down when the elbow may be located and used as a lever. In those cases in which the arm is found around the back of the neck, the body

of the child is rotated through half a circle in such a direction that the friction of the birth canal will serve to draw the elbow towards the face. If this fails, the arm may be forcibly extracted by hooking 2 fingers around the arm. Fractures of the clavicle and humerus are very common, but fortunately heal readily. Delivery of the head is next. This is done by flexion with gentle pressure on the head above the symphysis, or by extension of the body upward with a finger of one hand in the child's mouth and the fingers of the other hand forked over the back of the child's neck.

Preparation for delivery includes cleanliness, empty bladder and rectum, and a table rather than a bed.

Prophylactic episiotomy is advisable in primiparae. The cervix should not be dilated manually.

Roentgen-ray pelvimetry is not always accurate but may be used.

The causes of maternal mortality in breech cases are anesthesia, infection due to too long labor and non-asepsis, and injudicious movements or haste with consequent tears and postpartum hemorrhage.

The causes of death of the fetus are asphyxia caused by pressure on the cord and delay, and injuries—hemorrhage and fractures.

In discussion, Charles H. LaClair, Uniontown, stressed the waste of haste. As to how much time the operator had to deliver an after-coming head, the color of the skin and the heart rate might be nicely used in judging his course. He discussed his method of giving gas to the stage of analgesia, then injecting 2 to 3 minims of pituitrin at intervals of 30 minutes. This has been used with considerable degree of success and no ill effects. He believes that episiotomy in the majority of cases to prevent irregular tears, with subsequent relaxation of perineal support and at the same time enabling the operator to repair a weakened pelvic support from previous pregnancies, serves a good double purpose.

A communication from the State Society concerning the film on periodic health examinations to be shown before lay groups was approved. This film is for the express purpose of laying before the public the steps involved in periodic health examinations.

A meeting on health work in the county by welfare and social workers is to be held in the near future. Charles H. Smith was appointed by the president to attend the meeting and present the physicians' side of the problem.

The question of a county fee bill for compensation was discussed. A committee was appointed to draft a uniform fee bill that county society members might follow, and present it to the new Compensation Board.

LOUIS F. ROGEL, *Reporter*.

HUNTINGDON

Apr. 9, 1936

The meeting was held at the J. C. Blair Memorial Hospital, Altoona.

Mr. Sedgley Thornbury, manager of the Central Pennsylvania Physicians and Dentists Service Bureau, prefaced the regular meeting with pertinent remarks regarding this newly formed organization. From all indications it will be a permanent and valuable institution, and will be beneficial to the allied professions and patients alike.

Howard C. Frontz, chairman of the Committee on Medical Benevolence, and Augustus S. Kech, District Councilor, gave brief reports regarding the needs and despair of many members of the profession through-

out the flood-stricken areas. Many physicians with heavy losses are greatly disheartened, and those of us who escaped with little or no personal losses can be of great aid by sending contributions to the responsible party designated in a letter from the State Society.

Dr. Frontz suggested that this county society join with those of Center and Mifflin counties in the initiation of a graduate seminar. A committee comprised of Howard C. Frontz, C. R. Reiners, and William B. West was selected by President Walter Orthner to meet with committees from the other societies and make the necessary arrangements. It will be necessary to have an enrollment of at least 25. There will be 6 meetings, one to be held each week.

Fred R. Hutchison read a paper on "Treatment of Head Injuries." The paper was based upon a study of 10,044 cases of head injuries reviewed by the leading surgeons of the country. It is an interesting fact that the great majority of head injuries are medical rather than surgical in scope and that many of those treated by the general practitioners are improperly treated simply because a thorough examination of a simple appearing scalp wound is not made. The gloved digit should be placed in all scalp lacerations in order to determine the extent of skull injury or the presence of foreign material. Proper débridement should be done before cleansing the wound and suturing. It is better perhaps to place drainage in all scalp lacerations.

It is estimated that there are 112,000 skull fractures each year and about 28,000 or approximately 25 per cent of these die. This does not include those cases of laceration or slight skull fracture which recover quickly with little treatment other than first aid.

The latest classification of head injuries is as follows: Those that recover in spite of what is done, those that die in spite of treatment, and those who would live with proper treatment. Perchance 30 per cent are in the third named group, and these are the cases which should receive exacting care.

It is much better to take the physician to the patient at the scene of an accident than to take the patient to the physician. This helps to reduce the degree of shock that a great many of these patients are found in, and at the same time gives them the much needed rest immediately following the accident. The injured should not be placed in any vehicle that happens along following the accident and rushed to a hospital, but should be moved carefully to a quiet spot and an attempt made to furnish proper shock treatment, and then moved with the least possible roughness in a vehicle intended for transportation of injured persons. It is interesting to note that the highway patrol is being instructed as to the above and the members are co-operating in a manner worthy of commendation.

For the treatment of shock the following steps might be mentioned as being essential. Apply heat in every possible manner, i. e., heated blankets, hot water bottles, or other heating appliances. Give intravenous glucose or a transfusion in case of great blood loss. Morphine is to be condemned; the barbiturates, paraldehyde, or other worth-while sedatives might be used in place of morphine. Caffeine sodiobenzoate should be given as a stimulant.

Röntgen ray is important but not to such an extent that a patient should be moved within the first 6 hours of treatment because this may be the period which will mean life or death for him. From the medicolegal standpoint, roentgenograms should be taken.

The blood pressure should be checked frequently with the pulse rate in order to have all the necessary signs in determination of the progress of the case.

Lumbar punctures should not be attempted during the first 6 hours of treatment but may be done after this period if necessary. The tap is not done to reduce the pressure as many believe but to remove the blood from the injured area. If the spinal fluid is clear it is rarely under pressure but if it is bloody it should be removed with the use of a manometer, enough being drained off to reduce the spinal pressure to one-half that of the blood pressure. This procedure should be repeated as necessary. Incidentally, it is dangerous to do a lumbar puncture in the presence of a compound fracture of the skull.

There are only 2 indications for opening the skull—a compound fracture and hemorrhage from the middle meningeal artery.

All persons who have been rendered unconscious should be under the care of a physician for at least 24 hours and preferably 48 hours.

WILLIAM B. WEST, *Reporter.*

LACKAWANNA

Mar. 3, 1936

The regular weekly scientific session was held in the auditorium of the Chamber of Commerce, Scranton. President Jacob J. Lonsdorf, Jr., presiding. William Schmidt, of Philadelphia, associate in nervous diseases and physical therapy at Jefferson Medical College, read an address on "New Developments in Physical Therapy." He said in part:

More than 70 per cent of all hospitalized patients may be benefited to some extent by physical therapy. Does the patient leave your office feeling better or simply with a prescription? The patient today expects the up-to-date physician to relieve pain and to employ the modern methods offered by present-day physical therapy equipment. If we cannot relieve the patient by modern medicine, is the patient to be blamed for going to an osteopath or to a chiropractor who will at least make the attempt, and who, in a great number of instances, will employ physical therapy devices and manipulations? Regardless of diagnosis, their aim is to relieve pain, by any means which they may employ.

The diagnosis being determined, the method of treatment must be decided. Physical therapy should never be prescribed by anyone other than a physician. There is no question that the patient may be returned to normal much more rapidly with physical therapy than without it. In hospitals where physical therapy is employed in a rational way, the length of stay of patients is frequently lessened by 50 per cent, decreasing the expense to the patient and making a bed available. The period of disability is lessened in industrial cases, as well as the number of cases with permanent disability. In 471 cases over a period of 51 months, where modern methods of physical therapy were used, there was an actual saving of \$163,000 in the costs of medical care.

In pelvic inflammatory disease, hospitalized patients, after the temperature had returned to normal and diathermy started, were able to go home and return for treatment at intervals, instead of remaining as bed patients for from 3 to 4 weeks. In fracture work, physical therapy is of marked value. Treated with early mobilization, the patient is saved a large amount of disability and a long period of rehabilitation. The use of diathermy in pneumonia may often shorten the duration of the acute phase of the disease. If treatment is begun in the first 24 hours, lysis may be hastened and the period of toxicity decreased. Routinely used, it aids materially in relieving pain, dyspnea, and

cyanosis and yet does not interfere with any other form of therapy.

Only one effect is produced with diathermy—heat. Therefore it should be used only where heat is of value. By regulating this heat, we may produce successively hyperemia, desiccation, coagulation, and carbonization. The latter effects are of value in the removal of benign and malignant growths, and in tonsillectomy in the limited group of cases unsuitable for the usual methods.

Another application of heat has been the development of fever therapy, originating in the treatment of paresis by means of malarial infection. About 40 per cent of cases showed some improvement with this therapy, but the fever was controlled with difficulty and there were too many side-effects to make the method popular. Numerous methods have been followed in producing hyperpyrexia, such as diathermy and electric cabinets, constant temperature baths, and the many types of nonspecific protein reactions, with favorable results in a wide variety of diseases. In a series of 200 cases of multiple sclerosis recently reported, 30 to 40 per cent were restored practically to normal by fever therapy. If treatment is begun early, cases of encephalitis (Parkinsonism) can be helped much. Some cases of arthritis, particularly the multiple form, have been aided. In gonorrheal infections, particularly of the joints, there is marked improvement after a few treatments in which the temperature of the pelvic organs is raised to 110° F. Fever therapy plays an important part in the prophylactic treatment of many chronic conditions, such as hypertension, nephritis, and arthritis. Raising the body temperature to 101-102° F. increases metabolism and rids the body of early conditions. Cases of optic atrophy often respond to fever therapy.

In many chronic conditions, galvanic ionization is of value. Iontophoresis with histidine is employed with success in arthritis, iritis, and vascular disease. Ionic zinc is used in chronic middle ear infections and frequently cures the discharges of 1 to 13 years' duration in 3 or 4 treatments.

The sinusoidal current has a sedative effect in painful conditions such as tic doreux and sciatica. In a recent series at Jefferson Hospital, 36 out of 40 patients were relieved of pain for from 3 months to 4 years, without areas of anesthesia or trophic changes.

Alternate suction and pressure in vascular diseases, such as Buerger's, Raynaud's, diabetic gangrene, and trophic ulcers, is a new departure in physical therapy. By alternating the positive and negative pressure, we may dilate and constrict the vessels of the extremities with consequent improvement in circulation. With such treatment, intermittent claudication may disappear after 2 or 3 treatments. Ulcerations heal rapidly. However, the method cannot be used if there is an acute infection present.

The short wave diathermy has been a tremendous improvement over old-time diathermy. With the short wave, there is more uniform heating in all tissues, because of the fact that there is a rise in temperature in any tissue in the condenser field between the electrodes. Short wave diathermy can be used in the presence of acute infections as a definite therapeutic aid. In carbuncle with severe pain and pyrexia, treatment often continues for 3 to 6 weeks. With the short wave diathermy, pain is relieved in 1 or 2 treatments, the carbuncle begins to discharge and the condition rapidly disappears. In infections of the fingers, osteomyelitis of the extremities and other similar conditions, the use of diathermy results in much improvement. However,

a great deal of care must be taken with the short wave method in order that the deep heat produced may not be destructive to internal tissue. It is not necessary to produce a marked sensation of heat at the surface in order to effect the desired result.

Mar. 10, 1936

The monthly business meeting was held, the president, Jacob J. Lonsdorf, presiding. District Councilor John J. Brennan reported on legislation and stated that a special auxiliary committee to the State Society Committee on Medical Economics is being organized in an attempt to formulate plans to provide medical care for the low income group. In this district the many debates on state medicine in the various schools and colleges have been ably conducted and material provided for both sides of the question. W. Rowland Davies, for the Medical Economics Committee, reported that a complete survey of the nursing situation in Lackawanna County had been made, the results compiled and forwarded to the State Society. Frederick J. Bishop, for the Public Relations Committee, reported that since the institution of SERB work, \$156,000 had been paid to physicians in Lackawanna County. In regard to the debated question as to whether the local society should appoint a referee or advise any of its members to serve as referee in determining the status of employable or unemployable at a fee of \$2.00, the society went definitely on record as opposing this imposition on the part of state relief authorities unless adequate compensation is allowed for such a responsible position.

Murray Finkelstein, of Olyphant, was elected to membership.

Mar. 17, 1936

The regular scientific meeting was held; President Jacob J. Lonsdorf presided. R. Adams Dutcher, head of the departments of biological and agricultural chemistry at Pennsylvania State College, delivered an address on "Recent Trends in Vitamin Research."

Mar. 24, 1936

The meeting was held in the auditorium of the Chamber of Commerce; President Jacob J. Lonsdorf presided. Irving Hotchkiss Pardee, assistant professor of neurology at the Columbia University Medical Center, New York City, spoke on "The Pituitary Gland—Clinical and Therapeutic Applications." He said in part:

Almost countless properties and characteristics have been ascribed to the pituitary gland by clinicians, physiologists, and endocrinologists. The anterior lobe of the pituitary gland is definitely a glandular structure, whereas the posterior lobe is made up mostly of nervous tissue, intimately connected with the base of the brain from which it is derived. The nuclei of the hypothalamus, vegetative in nature, control the posterior lobe and probably the anterior lobe.

There are certain hormones ascribed to the anterior lobe which are generally accepted and whose nature has been quite thoroughly studied. The growth hormone is an essential factor in controlling the growth of the organism. When the acidophilic cells of the anterior lobe become decreased or overactive, there is an abnormality of growth, particularly in the bones and connective tissues. Splanchnomegaly and overgrowth of the sexual organs may result. The sex-stimulating, or gonadotropic, hormone has occasioned much comment and research in recent years. Primarily, its action is on the ovary—increasing development of the ovarian follicle with maturation, hemorrhage, and

luteinization. This action in prolan is the gonadotropic principle of the anterior lobe. Antuitrin-S and fol-lutein act upon the ovary and do not produce menstruation per se. An overdose may be definitely harmful to the ovary. In using these products, their place in the menstrual cycle must be understood and they must not be administered with a blind disregard to the physiologic requirements. The thyrotropic hormone is active in hyperplasia of the thyroid, but its function is incompletely understood. Whether there is a specific adrenotropic hormone is still open to question. Ketogenic and diabetogenic hormones have been described in disturbances of carbohydrate and fat metabolism. In connection with this, remember that lesions of the hypothalamus produce obesity or emaciation with disturbances in the blood sugar content. Any other hormones ascribed to the anterior lobe may be considered doubtful in so far as actual proof is concerned. In considering the location of the pituitary body in such an extraordinarily well-protected location—"in a skull within a skull"—we realize that this must be because its functions are so absolutely vital—growth and propagation.

Mar. 31, 1936

The regular weekly scientific session was held at the Chamber of Commerce with President Jacob J. Lonsdorf in the chair. David N. Davis, professor of urology at the Jefferson Medical College, Philadelphia, gave an address on "Some Recent Developments in Urology."

Apr. 7, 1936

A special business session was held in the auditorium of the Chamber of Commerce. It was voted to send \$500 from the society treasury for immediate relief of physicians in the flood areas through the Medical Benevolence Fund. Individual contributions were also urged for this very worthy cause. A large audience greeted the speakers in the scientific session, Attorneys Charles P. O'Malley and Thomas J. Howley, who took for their respective subjects, "Common Medicolegal Problems," and "The Doctor in Court." Attorney O'Malley said in part:

There is a kinship between law and medicine because they both have to do with the ills of mankind. The physician treats the aches and pains, and the lawyer handles the financial troubles and entanglements with the law. They succeed in some cases and fail in others. Both are profuse in promises. If the physician is successful, he is a hero until the bill is sent—then he is a robber. If he is unsuccessful, then he is a ruthless robber.

It is surprising to many physicians to know how much professional blackmail there is. This was particularly so prior to 1929. In almost every case locally in which a doctor has been sued, it has been by a charity patient. In olden days all suits were for breach of contract. The negligence law in England is only 100 years old. Now malpractice leads the list. Malpractice, which is simply negligence, lack of ordinary care under the circumstances, or failure to employ the skill and care ordinarily used by members of the profession, could be proved only by members of the profession in the locality. A mistake of judgment is not negligence; there must also be carelessness—something done which the physician knows that he should not do.

The Davis-Kerr case introduced a new ruling as applied to physicians. A sponge was left in the abdomen following operation. The case was tried and nonsuited because no physician would swear that ordinary care was not employed. The Supreme Court decreed that

whenever a sponge is left, there is definite evidence of negligence and the case must be tried by jury. Recently a strict ruling was brought down applying to dentists—but applicable to doctors as well—making it necessary only for a patient to swear that a drill dropped to the floor and was used before proper sterilization. If proper sterilization is not done in a minor operation, the patient may bring suit and swear negligence. And juries are easily convinced.

There has been only one roentgen-ray burn case in Scranton during the past 10 years. Lawyers have sought to prove that the fact of a burn, by roentgen ray or otherwise, is evidence of negligence, stating that the highest degree of care should be required. But the courts have ruled that only ordinary care is required.

One of the most serious cases locally was one in which the patient fainted during treatment and fell against a hot sterilizer while the physician was out of the room. A settlement was obtained outside of court. There has never been a case in Lackawanna County won against a physician, although there have been settlements. If the physician employs common sense and good judgment and follows a course of treatment used by a number of members of his profession, he is not indulging in malpractice.

Attorney Howley said in part:

May I speak particularly to the physician who seldom appears in court and who is not familiar with his rights in court procedure. The doctor enjoys many privileges as a licensed practitioner. It is his duty to testify when called, and he must appear to testify as to known facts in the interest of justice.

When the doctor takes the stand, he is asked to qualify himself in regard to medical education and training. As an expert witness, he may also be asked as to further honors attained in his profession. This adds weight to his testimony. The doctor may not pass on facts; that is the province of the jury. As jurors are naturally ignorant of medicine, expert witnesses are necessary. However, the doctor may draw a conclusion on a hypothetical question similar to the one involved in the case being tried.

The use of medical books in the courtroom is not allowed because of the "hearsay rule" (fact cannot be proven by showing a book). Books are often erroneous and the language too technical.

The doctor on the stand should observe the following conduct: He should not exaggerate the truth; he should always come prepared with notes and other data; he should not be afraid on the stand; if a question is asked and not understood, he should always ask the lawyer to repeat—this gives him time to organize his answer; he should be frank and courteous; he should speak loud and clearly; he should never try to be the lawyer in the case.

Books recommended as guides included "The Art of Cross-Examination" by Francis Welling and "Courts and Doctors" (nontechnical).

FREDERIC B. DAVIES, *Reporter*.

LANCASTER

Apr. 1, 1936

The monthly meeting was held at the Club rooms, Lancaster. Irving Sherwood Wright, of New York, gave the scientific address of the evening. He said in part:

Studies of the capillaries have been rather meager, those diseases in which most intensive investigations have been made being Raynaud's, thrombo-angiitis ob-

litaners, arteriosclerosis, and erythromelalgia. In Raynaud's disease the capillaries of the nail bed between attacks are long, dilated, atonic loops through which blood flows slowly, frequently stopping. The number open per field is above normal. The response to changes in temperature is marked. Landis with his micropipet studied changes in the capillary pressure. The pressure at the summit of the loop during spasm falls to 5-8 mm. Hg. During the first 8-12 minutes of recovery, with an accompanying hyperemia, the pressure rises, reaching a maximum of from 32-45 mm., then falls to normal. The skin temperature is dependent on room temperature during the spasm. With recovery it rises definitely above room temperature and gradually returns to normal. During spasm the capillaries are sharply defined; during recovery the outlines are blurred and the skin at the base of nail is visibly raised due to the increased fluid in the hyperemic tissue. Probably the high pressure plus the increased permeability due to asphyxia explains swelling of the fingers during recovery. Landis showed that during spasm the inflow was retarded on the arterial side.

In thrombo-angiitis obliterans (Buerger's disease) there are 2 groups. The first exists without vasoconstrictor phenomena, the capillaries are moderately dilated, and the number open is increased. The flow is slow, often stopping. If extremity is lowered below heart level, rubor is increased and more capillaries and venules open. The second group with vasoconstrictor phenomena were more common in the essayist's series. At room temperature or colder there is marked constriction of the capillaries. The flow is slow and the blood is cyanotic. With a rise in temperature, capillary flow slowly increases, not becoming marked until high levels are reached. The flow is jerky with many gaps. Many of these small vessels show actual thrombosis on pathologic section.

In arteriosclerosis there are no unusual tortuosities. The rate and constancy of the flow are diminished.

In erythromelalgia the capillary loops may be gigantic, grotesque, and irregular in form. The flow is exceedingly sluggish and stagnant pools may form at the end of the capillaries, helping to produce the characteristic changes in the color of the skin.

While nothing definite concerning the causative effect of tobacco in thrombo-angiitis obliterans can be proven, it undoubtedly has a distinctly deleterious effect on the disease. Experiments on patients with this disease and controls showed, among other things, the following conclusions:

1. Marked drop in surface temperature at tips of fingers and toes. This varied in different individuals and also in the same individual at different times. Average drop was 5.3° F. The surface temperature at the forehead and waist did not show this change.

2. Slowing and stoppage of the blood flow in the capillaries of nail bed was frequently observed. The length of time a person had been a smoker and the number of cigarettes he habitually smoked daily had no noted effect.

3. There were slight if any differences noted between the effects of standard, denicotinized, and menthol brands of cigarettes.

4. No effects on the peripheral circulation were noted after smoking "ashless filter paper cigarettes."

5. The lack of symptoms noted by experienced smokers under usual conditions of smoking is probably not due to a development of immunity to toxins of tobacco smoke, but rather to conscious or subconscious control

of the rate and depth of inhalation, which keeps the toxic effect at a submanifest level.

6. It is not definitely proven, but evidence seems to indicate that nicotine is at least one of the toxic factors and that carbon monoxide and the products of the cigarette papers may be eliminated as offending mediums.

Thrombo-angiitis obliterans occurs in males almost exclusively and most commonly is found between ages 30-60. A number of causes have been suggested, *viz.*, foci of infection, tobacco, trauma (especially cold), malaria and typhus, and ergot ingestion. Of these the last deserves more careful investigation. As a rule the blood pressure is low in this disease. Doubtless there are mild symptoms for several years before acute symptoms develop, as for instance gangrene. Treatment depends on 2 factors—the relation of the organic change to spasm and the ability to establish collateral circulation. Medical treatment should be directed to prevent further progress of the disease and to increase the blood flow. Since rye bread (ergot), tobacco, and phenolphthalein are known to produce constriction of the capillaries, their use should be stopped. Alternate hot and cold baths, diathermy, typhoid vaccine, or some other protein vaccine are among the medical measures used. Ganglionectomy is sometimes done. In addition acetylcholine may be used to produce vasorelaxation.

If no relief is obtained by the above measures, there is a predominance of the occlusive features of the disease with little or no spasm. These usually come to amputation. The use of an uncontrolled heat tent is bad as it raises the metabolism, which causes increased need for blood. If the heat in the tent is controlled by a thermostatic arrangement, it may be helpful. Hot wet packs on a limb threatened with gangrene are usually of little use unless watched constantly by a nurse who will keep the temperature correct. If the packs get cold, vasoconstriction will result and their value is not only lost but harm is done.

If amputation is needed, the site can be determined by the surgeon with the help of arteriography. Amputation does not cure the disease, however, and all medical measures must be continued.

Special mention was made of the use of mecholyl by mouth and by iontophoresis. The latter method seems preferable and has not shown consistent or marked change in the basal metabolic rate. A marked drop in the blood pressure can be produced, but this is only transient. This treatment has not been of value if organic occlusion has been a factor, but it is very helpful if spasm is the major factor.

This drug has also been used to advantage in the treatment of chronic varicose leg ulcers.

Experiments were done on the use of theobromine sodium salicylate which seemed to prove that this drug is of little value in the treatment of peripheral vascular disease.

Dr. Wright advised against the purchase by general hospitals of expensive equipment for the treatment of these cases. WILHELMINA S. SCOTT, Reporter.

LUZERNE

Mar. 4, 1936

The regular meeting was held in the Medical Building, with V. P. Edwards presiding. Drs. Malcolm Borthwick, Shafertown, Michael M. Burscak, Hazleton, Gilardo S. Serino, Pittston, and Hugh G. Boyle, Kingston, were elected to membership.

Lewis T. Buckman reported a case of his in the Wilkes-Barre General Hospital of lingual thyroid. These

cases are rare as there was only this one case in 2620 cases of thyroid disease. Slides illustrating embryologic structures, the anatomic relationship of the important structures of the neck, and cross sections of the thyroid and of the lingual thyroid were demonstrated.

Benjamin F. Griffith read a paper on "The Hollow or Contracted Foot." He said in part: Talipes cavus may present only an abnormally high arch or an exaggeration of the normal arch, this primary type being an inherited peculiarity or otherwise attributed to the use of high heels or overuse of the calf muscles.

The secondary variety is that type of high arch associated with limitation of dorsiflexion or raising of the foot upward. This deformity is likewise often attributed to the use of high heels with consequent nonuse of the dorsiflexor of the foot or anterior group of leg muscles. When the deformity is marked the origin often can be traced to a transient form of anterior poliomyelitis or to a neuritis in early childhood. Also, this type may be due to posture.

The common complaint in the simple type is that the leather of the shoe worn presses on the top of the arch, and there are areas of callosity over the prominent region behind the base, usually of the first metatarsal bone. In more pronounced cases callouses and corns form at the center of the heel and under the metatarsal heads. Pain complained of is under the anterior arch or in the sole of the foot.

On examination, the high arch is noted and an imprint of the sole shows that weight is borne on the heel and heads of the metatarsal bones. On palpation of the plantar surface, under the ball of the foot, the metatarsal heads are found prominent under the thickened skin.

The anterior, transverse, or metatarsal arch being weakened or obliterated, there is dorsiflexion of the first phalanges of the toes which is manifested by a row of corns on the top of the joints.

Tenotomies for flexion deformities of the toes or for shortening of the heel cord and fasciotomies or surgical section of the tightened bands have long been standard procedures. The use of the method of stripping the site of the origin of muscle as advocated by Dr. Steindler, University of Iowa, in 1924 is limited. The procedure is best applied where points of origin of involved muscle structures present a rather broad base.

Stripping of the os calcis is preliminary to further correction by wrenching, osteotomy, or cutting through the tarsus or wedge resection. In all methods of operation adequate fixation for prevention of recontraction is the keynote to success. The simplest of accessory measures is wrenching of the forefoot into correction with a Thomas Club Foot wrench. More severe contractions may be controlled by cutting through the tarsus in the region of the calcaneus cuboid joint or removal of a wedge of bone and cartilage from this region in order to straighten the alignment of the foot.

In many instances it is not necessary to tenotomize the heel cord for the equinus or plantar flexion. This should never precede other operative procedures. After operation a plaster cast must be worn for 8 weeks, and the patient is urged to walk on it.

Ten per cent of recurring cases following attempted congenital club foot correction are attributed by Dr. Steindler to failure of correction as such and not to failure of the calcaneal stripping operation.

Lachlan McA. Cattanach gave a case report with roentgen-ray film to illustrate it. The patient, female, age 68, came under his observation for rectal bleeding

May, 1934. A right inguinal herniorrhaphy was done in 1895; 10 years previously a left herniorrhaphy had been done and a truss was worn on this side. In the gastro-intestinal pictures, 4 pieces of wire and a round object like a marble were seen in the line of the incision and inguinal canal on the right side. Patients in the early days were operated upon externally with inversion of the sac and a marble slipped into it. After 40 years this patient had good results. This patient in 1895 had been operated upon by Howard A. Kelly in Baltimore.

The diagnosis for the bleeding now was diverticulitis of the sigmoid and colon. In May, 1934, 12 inches of colon was removed. Left inguinal hernia was repaired in July, 1934. In December, 1934, she had a strangulated left femoral hernia. In April, 1935, she had an operation for the femoral hernia and has been well since. Reason for occurrence of a femoral hernia after the inguinal hernia repair is the tendency to elevate Poupert's ligament and enlarge the femoral canal.

In discussion, Joseph Connoles said that in the summer of 1931 he and Frank Pugliese had a case similar to the one reported of lingual thyroid. They were not sure what the mass was, but on microscopic examination, it showed thyroid tissue. Frederick J. Bishop reported in 1934 that there were 130 cases on record, 10 having been seen in the Mayo clinic. The condition occurs in the newborn, during childhood, and middle age. Dr. Bishop's patient had a pedicle which was removed with a snare. Dr. Pugliese said that a doctor from Philadelphia advised against an operation because of the wide base and so electrocoagulation was used, and the tissue shrank. She has had no symptoms since.

Harry Smith said that claw feet or contracted feet are interesting. The type seen in the office is with the high arch, callouses of the sole of the foot, toes bending back. A very high arch may need a tenotomy. The treatment is to use a long shoe with steel shank and broad toe.

Apr. 1, 1936

The meeting was held in the Medical Building, with V. P. Edwards, Kingston, presiding. William Pearlman and H. Y. Harris, Kingston, were elected to membership.

Charles C. Higgins, Cleveland, O., gave an address supplemented with slides on "Experimental Production and Solution of Urinary Calculi with Clinical Application and Dietary Treatment."

This work has been going on for 4 years and has been extremely interesting. It has been found that stone areas exist in the world. These are chiefly in Florida, China, Palestine, and Dalmatia. The stones of the three former areas are chiefly composed of calcium and magnesium phosphate and carbonates, whereas those in Dalmatia are chiefly uric acid stones. It has been found that diets are such as to form either too acid or too alkaline urine with precipitation of the substances to form stones. A slide demonstrated 3000 stones removed from patients at a hospital in Canton, China.

The Cleveland cases studied totalled 1143. In the United States the period for stone formation is between ages 40 and 50; in England it is in childhood between ages 6 and 9, with 65 per cent occurring under age 15. Since the World War there has been an increase in calculi because of the deficiency in diet.

A group of 4 children in Palestine were shown by slide who had stones in bladder or kidneys, 2 of whom had night-blindness and vitamin A deficiency. When sufficient cod liver oil was given, the symptoms and signs disappeared.

In the experimental work rats were used for $2\frac{1}{2}$ years and dogs for $1\frac{1}{2}$ years. Diets deficient in vitamin A were given. They became cannibalistic and developed pulmonary complications. Then a vitamin A diet was given and these symptoms were corrected. Stones were found in the bladder. If P_h is kept below 0.9, the phosphates and carbonates are in solution. If above, stones of these materials will form. It is an alkaline urine. The individual may also have lamellated stones. These are due at times to the urine being too acid with the formation of uric acid stones. At other times the urine is too alkaline, causing the formation of phosphates and carbonate masses.

By the use of proper diets patients may be kept free of stones, or by an excess of foods and drugs causing an alkaline or acid urine some stones may become dissolved partially or completely.

In discussion Carlyle N. Haines, Sayre, said he had been using Dr. Higgins' diets with success for $2\frac{1}{2}$ years in unobstructive stones. They are of value in bladder infection and prostatic cases. He has found the high acid ash diet of great value. He has had 2 cases for 8 months upon whom he has been unable to get the P_h below 7.0 and this is no doubt a Proteus infection. Charles A. Judge, Forty Fort, asked the cause of difference in the reactions of both kidneys at the same time. William Baurys, Nanticoke, asked if the P_h can be reduced to 4.5 by diet alone. What percentage of urinary calculi react to the mentioned type of treatment?

Dr. Higgins, in closing, said that it is not definitely known that certain types of cases will react to a treatment or that changes in the size of the stones can be obtained. A patient having a stone the size of an olive began passing sand 2 days following an attack of pain. In a few days all of it had disappeared. Washing the bladder with phosphoric acid solution seems to help the condition. P_h can be reduced by acidifying agents, but they must be used for a long time. It is better to use the acid ash diet and vitamin A. In 18 cases the urine was sterile and there was retention of the monosodium phosphates.

MARJORIE E. REED, *Reporter*.

LUZERNE (HAZLETON BRANCH)

Mar. 24, 1936

The regular meeting was held at the Hazleton State Hospital. Robert A. Gaughan, superintendent and chief surgeon of the State Hospital, officiating as chairman of the program committee, presided and acted as host at a supper following the scientific program.

Edward J. Klopp, Philadelphia, professor of surgery, Jefferson Medical College, and Garfield H. Duncan, assistant in medicine, Jefferson Medical College, chief of Metabolic Clinic and associate attending physician of Pennsylvania Hospital, presented the subject "Surgical and Medical Problems of Diabetes Mellitus." A compendium of their remarks follows:

Dr. Duncan stated that, according to the statistics of the Metropolitan Life Insurance Company, the incidence of diabetes is increasing in those beyond age 40, while it is decreasing in children.

The major medical problems presented by the disease are:

1. Those occurring in children. Years ago these patients died, but now they are reaching maturity and thereby are presenting new problems.

2. The types of diabetes are dealt with according to the weight and age of the individual, thus the overweight adult is usually of the mild type which can be controlled by diet; the normal weight adult presents the

questionable type, one which may be controlled by diet but then again may need insulin; the thin adult is usually of the severe type which will require insulin; and the child presents the severe type of diabetes which always requires insulin. The types mentioned are those in the uncomplicated classes.

3. The diet. Of the numerous diets advocated, Dr. Duncan prefers the following low caloric diet. With overweight patients, reduce the body weight by allowing 15 calories/kg.; for the patient of normal weight, allow 25 calories/kg.; and for those underweight, use a diet providing 35 calories/kg. of body weight per 24 hours. The protein figure allows $\frac{2}{3}$ of a gram/kg. as a minim, which is increased to 3 grams/kg. per 24 hours. The carbohydrate figure depends on the insulin intake. Those requiring insulin are given 100 or more grams while those not requiring insulin are given 100 or less grams of carbohydrates per 24 hours. With the protein, carbohydrate, and caloric figures determined, the fats make up the balance of the caloric value.

4. Insulin therapy. The indications in the uncomplicated case are as follows: In the diabetic not controlled by diet, in the child, and in the thin adult.

To arrive at the quantity, the use of the quantitative glycosuria test is fallacious, but the best index of practical value is that offered by fractional urinalysis. To start a case, 4 to 8 units may be administered before breakfast, and the urine specimen most likely to contain sugar is the specimen at about 8 p.m. The morning dose may be increased to 24 units. If more insulin is required divide the morning dose into 2 doses, not increasing total intake of insulin because a divided dose is more effective. The afternoon (4 p.m.) specimen of urine and the morning (8 a.m.) specimen of urine are more apt to contain sugar; hence, increase insulin until these are sugar-free. If 2 doses do not control the sugar, start with the third dose. Individual urine specimens are examined between meals. Sugar in any specimen means the preceding insulin dose should be increased. The interesting problem of hypoglycemia in the daytime with hyperglycemia in the early morning is adjusted by shortening the night interval by giving the evening insulin later and the morning insulin earlier. If this does not solve the problem, a small night dose of insulin should be given. With protamine insulinate this problem is practically eliminated.

5. The severe diabetic or complicated cases respond best to equal diets at equal intervals during the 24-hour period. Individual insulin doses should be graded by fractional urinalysis. In infectious cases such as pneumonia, a diet consisting of protein 2 grams/kg., carbohydrate 150 grams to 250 grams/24 hours, and a proportionate decrease of fat is divided into 4 equal feedings given every 6 hours. In this way the insulin doses can be equally divided, thereby facilitating control of the sugar level and preventing states of hypo- and hyperglycemia.

Any condition causing an increased total metabolism makes the diabetes more severe. In a child, fever, hyperthyroidism, overeating, increased weight, and wounds will react unfavorably. In hyperthyroidism increased basal metabolic rate means increased insulin intake while decreased basal metabolism means decreased insulin. The same is true of adrenal cortical tumors and anterior pituitary conditions. A subtotal thyroidectomy or the removal of the anterior pituitary alleviates diabetes but does not cure it. The severity of the diabetes is lessened because of decreased metabolism. The same is true of pregnancy; terminating the pregnancy causes a decrease in the severity of diabetes.

Of 12 pneumonia cases with diabetes treated to date with equal feedings at equal intervals per 24 hours, there have been no deaths.

Dr. Duncan referred to the protamine insulinate, which according to his results he believes is here to stay. He considers it second in importance to insulin in this disease. Its advantage over insulin is slower absorption, therefore prolonged reaction. However, several days' administration is necessary before the maximum action is obtained. Because of this, he has not used it in urgent cases and prefers insulin because of rapid absorption and rapid action. In summation of this product, he states that unquestionably it is valuable but it is still in the experimental stage.

Edward J. Klopp continued with a discussion of the surgical problems of diabetes mellitus. An abstract of his address follows:

The surgeon, in the treatment of a case, should have associated with him a medical man trained in diabetic cases and having the faculty of exercising sound judgment. If operation is necessary, the anesthetic desired is one giving the least amount of postoperative nausea and vomiting; thus spinal, ethylene, nitrous oxide, or local anesthesia is the most satisfactory.

In diabetic gangrene the best indication that collateral circulation is established is that determined by the history of pain followed by an absence of pain. Other tests are the histamine reaction, the injection of chemicals to determine the patency of the vessels, and the oscillometric tests.

The procedure followed with diabetic gangrene depends on the clinical findings. A case presenting an infected toe with infection extending on the surface of the foot, temperature 101° F. or over, and a pulse rate proportionately increased should be treated as an emergency. The patient should be seen frequently to determine the response to conservative treatment. If red lines appear on the leg, they may signify lymphangitis or indicate an infection along the vessels and an oncoming septicemia. Those who die do so from septicemia; therefore, the treatment should be conservative with saline dressings, heat, ample fluids, and diabetic treatment. If the condition subsides, continue treatment conservatively. If the plantar surface has a collection of pus, which may extend along the fascial planes involving the tarsal articulations, drain along the sides of the foot with through and through drainage.

In a case with infection of the great toe, swelling localized and constant, the chances are that it will not extend, so do a local drainage. If the dorsal pedis pulsation is good, the chances are that there is good arterial circulation. No importance is paid to the posterior tibial artery. If cellulitis goes to the ankle, few of these feet will be saved but will require amputation. The ideal amputation is just above the knee with the patella saved and placed so that it rests at the lower end of the femur. Dr. Klopp believes that frequently amputations are postponed too long.

There is a tendency to treat all boils and carbuncles with roentgen ray, which does not always prove to be the best treatment. A conservative attitude should be assumed in dealing with an ill patient who is too sick to withstand an operation; only the fluctuant areas should be opened. In patients not too ill, with tense carbuncles surrounded by much branny induration, crucial incisions with flaps are made by undermining slightly beyond the carbuncular margins, thereby insuring a release of tension resulting in the stoppage of extension. If the patient can tolerate excision, it is well to excise; but if not, making the flaps will suffice, the important feature being the relief of tension.

Occasionally an abdominal emergency is seen in a patient approaching diabetic coma. These patients will present symptoms and signs of such severity as to simulate an acute perforated ulcer, such as excruciating pain with marked abdominal rigidity. Because of the gradual onset of diabetic coma the patient should be treated as a diabetic.

Removal of a toxic thyroid in a diabetic patient affords satisfying results. There is usually a splendid convalescence with a dramatic response to diabetic treatment.

Those with calculous cholecystitis tolerate operations well, the danger occurring 3 or 4 weeks postoperatively when the attendants are most apt to relax. Dr. Klopp's experience causes him to be most careful about diabetic treatment at this time following gallbladder operations.

In discussion, Louis A. Dessen asked about the treatment of diabetic coma. Robert A. Gaughan detailed a case of hyperthyroidism taken into the hospital on repeated occasions in diabetic coma. The patient refused thyroidectomy at each instance until finally he agreed to undergo the operation. Since then this patient has been in good health, illustrating the beneficial results thyroidectomy had on the diabetes. John M. Dyson inquired as to the status of duodenal extract in the treatment of certain types of diabetes.

Dr. Duncan, in conclusion, stated that the acute surgical abdomen picture in diabetes is more common in the young. To differentiate, a sign of importance is that the temperature in diabetes is not as high, usually being subnormal. The pain usually is due to a dilated stomach. Draining the stomach will give the patient immediate relief and the rigidity will subside. In the treatment of coma, give insulin at once every half hour because frequent small doses are more effective. Administer intravenously, but do not depend on this route. Also use subcutaneous doses. Use 40 units subcutaneously, 20 units intravenously, buffered with 60 grams of glucose. In a half hour repeat the dose. The best index of progress is the determination of plasma acetone. There have been no deaths in which the plasma acetone test was negative. A simple test is an excess of ammonia sulphate crystals, 2 drops of 5 per cent sodium nitroprusside, and 2 drops of ammonia water to 2 drops of plasma. A deep blue shading to light to no color signifies heavy to mild to absence of acetone. After reacting from coma, the patient is placed on the equal diet, equal insulin administration at equal intervals per 24 hours.

With regard to duodenal extract, Dr. Duncan has been unable to duplicate his original favorable results. He believes that it might be of value if the islands of Langerhans of the pancreas are normal but the activator of the pancreas absent. In such a case duodenal extract may be of some value.

Apr. 9, 1936

The monthly meeting was held in the Altamont Hotel, Hazleton, with Vice-president James A. Kutz presiding.

David M. Davis, professor of genito-urinary diseases, Jefferson Medical College, Philadelphia, gave an address on "Hematuria." A résumé of his address follows.

To generalize, the causes of hematuria, according to frequency noted as percentage, may be classified in the following order: Systemic causes, 25.5 per cent; adjacent structures, 11.1 per cent; genito-urinary tract, 63 per cent (upper tract, 44 per cent; lower tract, 19 per cent).

Of the systemic diseases, hemophilia, polycythemia, purpura hemorrhagica, leukemia, scurvy, Hodgkin's dis-

case, menstruation, and occasionally severe exertion are more apt to cause blood in the urine.

Of the adjacent structures, an inflamed appendix is very apt to cause blood in the urine. It occurs rather frequently, in some instances the symptoms at the beginning of the disease being referable to the urinary tract. Some believe that the nearness of the inflamed appendix to the ureter seems to be the cause, however others have noticed that blood came from both ureters; thus Dr. Davis believes that perhaps it is due to a toxemia or bacteremia being present in acute appendiceal conditions causing an acute nephritis. This urinary symptom in appendicitis is to be kept in mind in appendiceal conditions.

In the urinary tract commencing with the kidney, the following conditions may produce blood in the urine:

Polycystitis. In a number of these cases hematuria is not uncommonly the first symptom; it may be troublesome, sometimes fatal. After the diagnosis is made, there is not much that can be done. The diagnosis may be suspected when symptoms and signs are of a bilateral nature; it is confirmed by a retrograde urogram.

Tuberculosis of the kidneys is apt to cause hematuria. A diagnosis of this condition can be made by careful and persistent urinalyses. Pus and the organisms are found in the specimen. A specialist is usually consulted to determine whether it is unilateral or whether both kidneys are involved. If the former is the case, the kidney should be removed.

Hydronephrosis is another condition causing hematuria. This probably results from a disturbance of circulation in the large kidney. The treatment is to determine the cause and locate and relieve the obstruction, if any, after which the kidney may return to normal.

Acute nephritis is another important cause of hematuria. This condition may occasionally occur in one kidney only, giving unilateral signs and symptoms. Not infrequently so-called essential hematuria is due to an inflammation of the kidney either in the form of a pyelonephritis or glomerulonephritis. However, this condition is rare, requiring thorough and repeated study. The diagnosis should be made only by exclusion.

Neoplasms may cause hematuria, the bleeding occurring at intervals and being of short duration. The intervals may be of weeks, months, or years in duration. Because of this, at the sign of blood in the urine an accurate diagnosis should be made, for in such a condition the earlier the diagnosis, the more satisfactory the result. To establish the diagnosis retrograde urograms are of importance.

Angiomas of the kidney are rare and fortunately so, for they cause serious bleeding which is difficult to control.

Calculi of the kidney is a disease usually causing hematuria and pain; however, these stones may be present without pain, mainly of the large stone variety. Dr. Davis has seen completely degenerated kidneys secondary to large calculi producing no pain whatsoever. In making a diagnosis of this condition intravenous urography is important.

Infarction of the kidney and *traumatism* are other conditions which are apt to cause blood in the urine.

The ureteral conditions causing hematuria are neoplasms, calculi, ureteritis, tuberculosis, and strictures. Discussion of these conditions is similar to like lesions of the kidney.

Hematuria may be a symptom of the following conditions of the bladder: Tuberculosis, calculi, neoplasms, acute cystitis, ulcers (commonly due to tuberculosis or neoplasms), and foreign bodies. As to foreign bodies,

the essayist cited the unusual case of a man falling backwards on a spike, puncturing the rectum and bladder. A rectovesical fistula formed which reacted and closed within 3 weeks by the use of a retention catheter. One year later a stone was removed from the bladder. Dr. Davis cut the stone and found a small piece of woolen cloth which was apparently punched by the spike from the trousers into the bladder.

The same is true of neoplasms here as elsewhere—the longer the time elapsed in making a diagnosis, the smaller the chance of cure. Hence, because of this and because of some foreign bodies not showing on roentgen-ray pictures, cystoscopic examination is very important.

The prostatic causes of hematuria are hypertrophy, tumors, median bar and contractures, acute prostatitis, and calculi. The benign types of prostatic tumors are more apt to yield blood in the urine than the malignant tumors. With a urethroscope, projections of varicose-like veins are occasionally seen on the surfaces. They are significant in that they can be easily traumatized in instrumentation or they may erode, causing serious exsanguination. Calculi of this organ are not as rare as they are thought to be. Their presence usually leads to hematuria after prostatic massages during which the prostate tissue is damaged. A diagnosis is usually made by rectal examination.

The urethral causes of hematuria are acute urethritis, neoplasms which are rare, strictures, foreign bodies, traumatism, and calculi. This sign occurring in children is usually due to a congenital stenosis of the urethra at the outlet, and a meatotomy will produce good results. In persisting infections another condition is usually present in the form of an obstruction of a congenital or acquired nature. Because of the presence of a stricture or some other form of obstruction, urologists lately have accepted this abnormality as a cause for the persisting types of urinary infection. Illustrating this contention with lantern slides, Dr. Davis showed that, in many cases of a persisting low-grade gonorrheal infection, a serious lesion of the urethra near the neck of the bladder was usually present. These lesions are in the form of polyps, scar tissue contractures, median bars or prostatic abscess cavities which never healed and thereby distorted the course of the urethral channel. All these conditions produce obstruction; upon relieving this obstruction, marked improvement was noted. Slight obstructions in the female urethra are important in the cause and persistence of urinary infections. In fact, many times after cystoscopic examination was done to determine the cause, the urinary infection disappeared. Instrumentation apparently relieved the obstruction which resulted in a cure.

In conclusion, Dr. Davis emphasized that if blood is found in the urine, systemic diseases should be ruled out. If it is due to a disturbance of the urinary tract, an exhaustive attempt should be made to arrive at a definite diagnosis. Interval hematuria should not be misleading, for it does not mean that the condition is receding but that the cause may be of a serious nature.

JOSEPH V. FESCINA, Reporter.

LYCOMING

Apr. 10, 1936

The meeting was held at 1:30 p.m. with President Galen D. Castlebury presiding. This was the first of the combined seminar meetings under the following plan: The regular monthly meeting is held with the usual scientific program, then dinner at a local restaurant;

this is in turn followed by a second scientific program open only to members of the seminar group. The afternoon meeting is the usual meeting attended by the entire membership.

Frank N. Allen of the Lahey Clinic, Boston, Mass., presented "The Treatment of Diabetes." He said in part: Complete success in the treatment of diabetes depends almost entirely upon early and adequate care. If the patient is diagnosed early, there is much reason to believe that the progress of the disease will be entirely satisfactory and that the treatment may be carried out in a moderate manner. Also if this early treatment is adequately done, it is often true that the disease not only remains stationary but very often becomes much less severe. This is true psychologically as well as physically for it is much easier to control a patient who is able to control the illness by moderate measures than it is to control a patient who is forced to undergo a severe and trying régime. Less discouragement is always the result.

So well known are the 4 cardinal early symptoms of diabetes—thirst, loss of weight, lack of energy, and polyuria—that often the patient comes to the physician and presents him with the diagnosis. However, it is often true that not only one, but many times all, of these symptoms are lacking, and an increased urinary sugar, confirmed by a blood sugar determination, is the starting point of treatment.

Always be on the lookout for glycosuria and treat no case without an initial blood sugar estimate. In suspicious cases the glucose tolerance test is of great value. The indications for the glucose tolerance test are as follows:

1. In the presence of glycosuria: Normal fasting blood sugar, and sugar excretion independent of sugar intake.

2. In the absence of glycosuria: History of glycosuria, and presence of secondary manifestations of diabetes, such as hemochromatosis or retinitis.

The contraindications are hyperglycemia and dietary control (when absence of glycosuria is due to treatment).

The difficulty of treatment with insulin is that its effect must spread over a period of hours. It is somewhat difficult to keep the blood sugar level constant throughout a 24-hour period, often entirely impossible. Insulin-protamine substance is now thought to be of value. Careful trial is necessary to balance insulin with diet, and such trials and errors are best gauged by the blood sugar methods although urine sugars are of course indicative.

In discussion, Stuart B. Gibson asked how much fat should be included in the daily diabetic diet. Dr. Allen replied that the fat should be reduced and less used than the usual 200-250 mg./day. The carbohydrates should be increased. In the Middle West they still maintain the high fat diet. Additional questions: (Q) How much exercise is optimal? (A) Use glucose tolerance test; all right if blood sugar goes to 170 but returns to normal within 2 hours. (Q) Why is rainbow trout a source of protamine? (A) Reason unknown, but it is true that this type of fish has the highest protamine content. Dr. Allen believes the use of protamine-insulin a real advance in diabetic therapy. (Q) Is insulin intranasally practical? (A) No, because of the large quantity necessary for results and the variable absorption.

A high fat diet is not harmful to diabetics under good control. Prescribe 120 gm. carbohydrate to start with and prescribe fats to meet caloric requirements.

The patient most likely to develop early arterio-

sclerosis is the mild type who has been long undiscovered and untreated.

Additional statements by Dr. Allen included: The urine sugar is usually sufficient indication during treatment, with enough blood sugar to give definite idea of course. The blood cholesterol test is a good check as the urine sugar returns to normal. Low cholesterol fats are now being investigated. Try to seek a program which will please the patient and thus secure co-operation rather than being exclusively guided in treatment by the laboratory findings. Patient co-operation is the primary essential.

In diabetic coma the initial dose of insulin should be 40 units unless the coma has been prolonged, in which case 80 units should be used. Pancreatic preparations by mouth are of no value; the improvement noted is entirely the result of dietary control.

G. Walter Muffly reported a case of diabetes mellitus in a female infant, age 14 months, who presented loss of weight, weakness, polyuria, irritability, and glycosuria. The initial blood sugar was 450 mg. She was comatose at that time and was treated with insulin. Due to her age treatment had been difficult, but she is at the present time in excellent condition and is rapidly becoming an outwardly normal child. The value of the splendid co-operation by the child's parents was stressed as an important factor in this child's successful treatment. (Dr. Muffly is to be commended for his care of this case because his home is in Turbotville, a small farming community, with no facilities for the customary laboratory procedures.)

H. D. Lees, of Philadelphia, discussed the control and diagnosis of tuberculosis in schools, citing the example of the University of Pennsylvania, where all students have a tuberculin test yearly, with roentgenograms of the reactors. The medical students because of the unusual amount of tuberculosis developing among them are all subjected to an annual roentgen-ray examination.

The children of tuberculous parents are now considered to have more resistance to the disease than the children of nontuberculous parents. There is a gradual subsidence of infantile type of tuberculosis. Treatment as well as prevention has been aided by the adoption of contagiousness and epidemiologic principles in the care of tuberculosis.

William Devitt, of Allenwood, opened the discussion of Dr. Lees' presentation with the statement, "Gentlemen, become tuberculosis minded!" He stressed that only through early diagnosis can we now assure the patient of recovery with minimal loss of time and maximal completeness of cure. Early diagnosis and adequate care constitute the one goal of all physicians who are cognizant of their duty toward their patients.

The afternoon meeting adjourned. The seminar group then met for dinner, and in the evening witnessed an instructive film presented by Dr. Allen showing a complete résumé of clinical endocrinology, with the following glands pictured and their diseases discussed: Pineal, pituitary, thyroid, parathyroids, pancreas, adrenals, and gonads. The evening seminar-session adjourned at 9:45.

EDWARD LYON, JR., Reporter.

MONTOUR

Feb. 21, 1936

The meeting was held at the Geisinger Memorial Hospital, Danville, President Francis W. Davison presiding.

The scientific program was a medical symposium with presentation of case histories and papers by the

intern staff of the Geisinger Hospital under the arrangement of William H. Dearing, Jr., associate medical director.

"Retropharyngeal Abscess" was presented by George G. Sale, who called attention to the 2 varieties of retropharyngeal abscess, both of which may show few definite signs, causing the disease to be frequently overlooked. The first type is an acute retropharyngeal abscess originating in the prevertebral lymphatic glands; the second type, a chronic retropharyngeal abscess, results from tuberculosis of the deep cervical lymph nodes or of the cervical vertebra.

Retropharyngeal abscess is most common during the first year of life due to the presence in infancy of prevertebral lymph nodes which are located in a potential space, the space of Gillette, situated between the prevertebral fascia and posterior wall of the pharynx on either side of the midline where these structures are closely adherent.

Unlike adults, children seldom complain of sore throat, and symptoms in general may not be sufficient to attract attention until the abscess has so increased in size as to interfere with breathing or swallowing. The larynx, situated at a higher level in the child than in the adult, becomes partly obstructed at an early stage by swelling or edema. A croupy cough may sometimes be present before dyspnea sets in. Stiffness of the neck with the head inclined toward the healthy side is considered an important sign. There has been noted a characteristic throaty cry resembling the quack of a duck. When the lesion is at so high a level as to affect the posterior wall of the nasopharynx the symptoms suggest adenoids; therefore, this error should be avoided. The swelling of the posterior pharyngeal wall behind the tonsil and to one side of the midline is readily apparent on inspection. If the abscess extends upward it may cause the soft palate to project forward. In examining, care must be taken to avoid turning the head to one side, because in this position the transverse process of the axis vertebra causes bulging in the posterior pharyngeal wall of the normal throat. The presence of fluctuation may be detected by palpation.

With establishment of the diagnosis, the abscess should be opened through the mouth by a vertical incision with a blunt instrument. The speaker recommends no anesthesia in the severe cases in order to prevent rapid release of large quantities of pus. The abscess may rupture or extend down the neck into the throat. Suffocation may occur from edema or swelling, and in rupture the contents may be discharged into the air passages to produce sudden death or pneumonia.

Fatal hemorrhage may be caused by erosion of a blood vessel. This was demonstrated in the recital of a case history of a child, age 11, who was admitted into the hospital in severe shock following a rupture of the abscess with sudden gush of blood and pus from the mouth. There was a history of chills and sore throat for 9 days previously. A swelling on the left side of his neck led to a diagnosis of mumps and treatment consisted of hot applications to the neck. An eroded area extending into the left side of the pharynx was seen. A 500 c.c. blood transfusion was given but was followed by a second hemorrhage from the eroded area which was effectively controlled with hemostats. A second transfusion 2 days later with removal of clamps was followed by progressive improvement until the tenth day when a third and fatal hemorrhage developed. A clamp placed in the pharyngeal erosion at

necropsy showed the base to be the white glistening lining of the carotid artery. Simple examination of the pharynx would have altered the course of events.

A second case history recorded the admission of a child, age 2, with intermittent fever, swelling of the neck, coughing of 2 months' duration with expectoration of pus. A large diffuse swelling was seen in the posterior pharynx, and an incision on the left side of the neck, without the use of anesthesia to prevent asphyxia, drained a large cavity of pus and recovery occurred.

The third case described was that of a child, age 5, who presented a history of mucous diarrhea, lassitude, and fever of 4 or 5 months' duration several months after the development of pneumonia and empyema that was drained by a rib resection. Examination revealed a bulging of the posterior pharyngeal wall behind the left tonsil and a small fistula covered with yellow exudate. Insertion of the tip of a clamp with wide spreading disclosed a retropharyngeal abscess. The temperature dropped to normal, and the patient was discharged 16 days later.

A fourth case, a child, age 7, developed swelling of glands in right side of neck several weeks following a mild attack of scarlet fever. Recovery was induced by incision of the bulging area in the right lateral pharyngeal wall and the evacuation of pus.

A similar picture was demonstrated in the fifth case in which the history elicited was that of sore throat, stiff neck, and intermittent pain in the ears. Bulging in the right lateral pharyngeal wall was noted and incised with restoration of health. Dr. Sale stressed the vagueness of the symptoms in the early stages of the development of the abscess, the need of close inspection, and the ease with which recovery is attained by simple treatment.

John F. Conway presented "A Review of Some of the Experimental Work Relative to the Treatment of Anemia." He briefly described the experimental work accomplished in regard to pigment physiology and liver function by G. H. Whipple and explained the manner in which the effect of various dietary factors on hemoglobin production was measured. A unique type of anemia can be produced experimentally in animals existing in an excellent state of nutrition. The influence of iron and liver and its various fractions is a very important one in the treatment of anemia. Iron was considered valuable in subcutaneous injections in the treatment of pulmonary tuberculosis 25 years ago. The intramuscular use of iron was assured to be beneficial by the work of Castle, Heath, and Strauss. The most recent use of iron in intravenous form was instituted in Whipple's laboratory. He used a colloidal iron product that is only very slightly toxic in contrast to the iron compounds used previously. Such methods are being given clinical trial in the treatment of selected cases of anemia at the Geisinger Hospital.

"Head Injuries" was presented by Robert F. Dickey and the need stressed for more thorough understanding of the pathologic physiology, diagnostic points, and therapeutic measures in head injuries, particularly in view of the rapid increase of such cases corresponding to rapid automobile travel and industrial accidents. Foremost consideration in the treatment of head injuries is to combat shock although constant appreciation must be maintained of the importance of individualization in the care of these head injury cases. Both from the diagnostic and therapeutic standpoints, the chief factors are the actual brain and intracranial vas-

cular injuries as opposed to the minimum importance attached to skull fractures.

Such a conception demands a policy of gentle and minimal handling of these patients and excludes all unnecessary examinations and tests until the patient is completely out of danger. The use of morphine was condemned for 3 reasons, namely, it masks the all-important sign of restlessness; it nullifies the pupillary signs especially the homolateral dilated pupil pathognomonic of epidural hemorrhage; it depresses the respiratory centers which may already or soon will be embarrassed by edema or hemorrhage. Sodium luminal, chloral, or codeine will suffice and adequately control the patient. Have the patient flat on his back in a quiet, semidark room, and carefully observe the blood pressure, pulse, temperature, and respiration every half hour. Plot curves of pulse pressure and pulse can be used as a reliable means to detect when the stage of compensation is about to break. Important likewise are the fluid intake and output charts with observation of pupillary changes, muscle twitchings, or convulsions. The use of hypertonic glucose should be instituted when there are signs of beginning increase in intracranial pressure and repeated as often as is necessary to control cerebral edema. If dehydration management fails, lumbar punctures are usually restored to. About 500 c.c. of a 50 per cent balanced hypertonic glucose solution is used in conjunction with magnesium sulphate saturated solution orally or rectally. Fluid intake is restricted to 750 c.c. per day and should include liquid fluid providing patient with 1200 to 1800 calories daily. Osteoplastic flap operations are indicated early in cases of localized epidural and subdural hemorrhages. Operative procedures are necessary in cases of depressed and compound fractures of the skull. Subtemporal decompression operations are being used less frequently and as a last resort to combat increasing intracranial pressure. Rest in bed should be prolonged in all head injury cases until entirely free of sequelae; return to work should be permitted after a brief ambulatory convalescence in order to prevent posttraumatic neuroses.

William S. Wallace reviewed the "Recent Cases of Pneumonia at the Geisinger Hospital." In the 7 months, from July, 1935, to and including January, 1936, there have been 26 clinically diagnosed cases of pneumonia. Of these, 2 were cases of lobar pneumonia of type 4, which are not amenable to serotherapy. The remaining cases were divided as follows: Primary bronchopneumonia, 13; bronchopneumonia secondary to medical diseases of grave severity, 4; and bronchopneumonia secondary to grave surgical disease, 7. General mortality has been slightly less than 50 per cent explained on the basis of the severe primary condition in many of the secondary cases. Oxygen therapy was employed in 16 cases. The most radical departure from accepted therapeutic technic was the use of foreign protein therapy in the form of intramuscular injection of sterilized skim milk. As a result no fatalities occurred in 7 primary bronchopneumonia cases receiving such treatment despite the progressive decline noted prior to the inception of nonspecific therapy. It was suggested that further observations be permitted to evaluate definitely the benefits of nonspecific therapy.

"Eclampsia" was presented by Julian F. Fertita. He outlined the renal changes that develop in eclampsia and emphasized the need for further study into the relation of the existing alteration of renal structure and function to the symptomatology presented. Basic principles involved in the treatment were described and declared to consist in the removal of toxic products by means of venesection, diaphoresis, and catharsis although atten-

tion should not be diverted from the need of maintaining diminished nervous sensibility by the use of sedative treatment. Recital of case histories illustrated the extent of kidney damage that prevails.

In discussion, Francis W. Davison stressed the importance of careful examination in retropharyngeal abscess and the ease of recovery under proper diagnosis and treatment. The majority of the cases used for illustration presented a history of previous tonsillectomy, but this was contrary to fact in the large run of cases. Carl E. Ervin referred to the exhaustive studies in progress relative to the use of colloidal iron intravenously in the treatment of anemia. Harold L. Foss summarized the views of various authorities in reference to treatment of head injuries and urged conservative management of all such cases. Sydney J. Hawley particularly decried the needless and harmful demands for immediate roentgen-ray examinations of the skull in head injuries. The treatment of shock should receive first consideration. As the patient improves, roentgen-ray examination is indicated not only for diagnostic purposes but more important for its medicolegal aspects.

VINCENT J. CASSONE, *Reporter*.

NORTHAMPTON

Mar. 20, 1936

The regular monthly meeting was held at the Easton Hospital. William J. Happel presided.

Harvey O. Rohrbach advised that state-furnished toxoid was at hand and available for those who wished to use it. He then asked for authority to select an interested member of the society to fill the vacancy that exists on the Milk Commission, of which he is chairman. This authority was granted.

Herbert J. Schnoyer reported that the Lehigh County Society wants this society to co-operate with it in providing for the Allentown State Hospital a portrait of Dr. Klopp, its present director. A motion was passed that a committee be appointed to confer with the Lehigh County Society on this matter.

Donald C. Richards stated that the radio broadcasting station at Easton has offered this society the privilege of using 15 minutes for a broadcasting time each week for talks on health problems. The program committee was empowered to provide speakers for this purpose.

C. P. Segard of the Wisconsin Alumni Research Foundation spoke on "Nutrition and the Problem of Irradiated Milk." He said that it was significant that medical men in general are becoming more interested in diet after the subject had been for so long neglected by them. He reviewed the main features of the various types of avitaminosis. Vitamin D is found in egg yolk and to a much less extent in milk. Birds get their vitamin D from their preening glands. Fur-bearing animals get theirs from licking their fur which has been irradiated by the sun. The main source of vitamin D for humans has been the areas of their skin which have been exposed to the sun. The action of the sun changes ergosterol into vitamin D.

Cow's milk contains ergosterol which can be changed into vitamin D by the action of ultraviolet light. Machinery to produce this change has been devised. It is set to produce 135 USP units of vitamin D per quart of milk. Three glasses of this milk will provide for a normal child's daily vitamin D needs.

Lantern slides were shown.

FREDERICK J. PEARSON, *Reporter*.

PHILADELPHIA

Mar. 11, 1936

SYMPOSIUM ON CANCER

"Pathology" was discussed by Stanley P. Reimann. The recognition that the cells of certain tumors reach the stage of chemical differentiation is a part of oncologic knowledge. Chemical differentiation is that sum of changes taking place within a cell which renders it able to take its place and function as a member of an adult organism. In cancer cellular differentiation is imperfect, hence the relationship between cancer and normal cell physiology. Every cell in the body carries on certain basic chemical functions such as the exchange of oxygen and carbon dioxide.

But as cells mature they take on in addition specific chemical activities such as the formation of thyroxin by the thyroid cells, of saliva by the salivary cells, and so on. This is chemical differentiation. When it is of such nature that substances are produced having specific effects on distant parts, many interesting possibilities are developed. Thus the adenomas of the anterior pituitary produce acromegaly. Arrhenoblastomas of the ovary produce hirsutism, masculinity, and change of psyche. Granulosa cell tumors and certain adrenal tumors produce precocious puberty, or when they develop after the menopause, a return of menses, and even benign tumors of the breast. Many malignant testicular tumors produce specific chemical substances and their presence can be diagnosed from the finding of these substances in the urine. The natural inquiry arises as to whether the presence of such tumors can be diagnosed from the symptoms produced by the products of the chemical differentiation of their cells. This has been known to be true for a long while in the case of acromegaly. Also the presence of one tumor can form the basis for the successful diagnosis of another.

As a result of this knowledge the pathologist is on the lookout for tumors whose cells reach a stage of chemical differentiation whereby they produce specific products. The cells of other malignancies may produce products which can be identified by chemical or biologic means. The potency problem of cells (that is, the possibilities of development both quantitative and qualitative which cells possess) is important.

The possibilities of cells or protoplasm are greatly underestimated. The 3 germ layers can be considered no longer as sacred, for transplantation experiments have shown that under certain conditions connective tissue has potency to produce epithelium and vice versa. Also, not one, but as many as 8 viable perfect animals can develop from one single fertilized regulatory ovum. Cells can turn into all sorts of surprising end results in transplantation and other experiments. The basal layer of cells of the trachea can turn into either the normal tall cylindrical or into squamous epithelium. In other situations immature cells can mature in more than one direction. The potency of cells is multiple and which one is exercised is determined to a large extent by the environment. The fixed specific derivations for tumors are not important.

Many conditions considered as tumors are no longer regarded as such but may be merely a localized hypertrophy and hyperplasia. The appreciation of this distinction is important. Cell multiplication by mitosis is the essence of our new understanding of cell physiology and pathology. All cells which are not completely differentiated can multiply. All cells which are still capable of dividing are immature and still contain potencies

which can be expressed and frequently more than they will ever express. When a cornifying squamous cell carcinoma appears in the gallbladder, it requires no embryonal cell rests for its origin but can develop from the undifferentiated cells which are perfectly normal for the basal layers of the gallbladder mucosa. This understanding gives a rational explanation of why malignancies with highly differentiated cells grow more slowly than those with poorly differentiated cells. If fully differentiated cells can no longer divide, it can mean only that differentiation is the natural inhibitor of proliferation. Mitosis tends to be rhythmic. The process is not haphazard and occurs in recurring cycles in more or less localized areas. It starts with a few cells, reaches a certain stage, then slows down, only to recur. This calls for the study of additional specimens at frequent intervals. It is thus possible to work out the mitotic rhythm in certain tumors and guide the treatment accordingly. The paper closed with emphasis upon the necessity for further study.

"Roentgen Ray in Cancer" was discussed by George E. Pfahler. His remarks opened with the broad statement that he knew of no location of cancer anywhere in the body in which the roentgen rays were not valuable either in diagnosis or treatment. The destruction of cancer by roentgen rays depends primarily upon the effect of the rays on the malignant cell, which is generally more sensitive to irradiation than the normal tissues. This radiosensitivity, however, is very variable with regard to different types of tumors and even with regard to the different cells in any particular type of tumor.

Treatment must be sufficient to destroy resistant cancer. The attacks on cancer tissue demand a type of technic that is especially adapted to the more resistant cells. In general, if the cancer can be treated very thoroughly while it is still a local disease and small in area, the radiologist is permitted to utilize much larger doses and accomplish better results. An illustration of the technic was cited. He emphasized the point that by destroying all cells during the process of division, the entire cancer can be destroyed. This has led to the "saturation method" of treatment or the prolonged fractional dose method, which requires a period of 3 months of less continuous treatment. Each cancer, however, is a law unto itself and the individual features of each case guide the treatment.

Dr. Pfahler reviewed the results of roentgen-ray treatment in various parts of the body.

"The Skin in Relation to Cancer" was presented by Frank C. Knowles. This had largely to do with the development of cancer from the condition known as senile keratosis or "old age skin" and was illustrated by lantern slides showing various phases of the cancerous development as well as the response to adequate treatment. Other precancerous as well as cancerous conditions were shown. The essayist concluded with the statement that cancerous growths on the face while destructive do not as a rule give rise to metastasis.

"The Mouth and Its Malignant Conditions" was read by George M. Dorrance. Such growths are usually well advanced when seen by the surgeon. Early appreciation by the physicians of the advances made in irradiation and surgery would go far towards lessening the mortality of mouth cancer. Malignancy in the mouth is best treated by a combination of irradiation and surgery—not by either alone. Slides were shown to illustrate the value of this combination.

J. Stewart Rodman was scheduled to discuss "The

Breast" but was unable to be present. E. J. Klopp substituted for this speaker. He mentioned the fact that 80 to 90 per cent of women suffering from cancer of the breast have found it first for themselves. This leads to the inquiry as to how they should be taught to determine this condition and, having discovered it, to seek expert advice. The presence of a lump in the breast should direct the patient to a competent physician, who should decide the character of the lump. He particularly stressed the importance of the examination made by the physician. He described the technic of such an examination and gave points of differential diagnosis. As to treatment, he stated that the surgeon, the roentgenologist, and the pathologist should confer on a given case before a plan of treatment was instituted. He also stressed the thoroughness of operation when surgery was selected. Irradiation should be combined with surgery.

"The Chest" was presented by George P. Müller. Carcinoma of the lung constitutes about 7 per cent of all carcinomas and about 50 per cent are recognized during life but usually in an advanced form, too advanced for extirpation.

A description of the histologic characteristics of lung cancer was given. The direction of metastasis was described. The importance of diagnosis was stressed and the signs and symptoms recited. The value of bronchoscopy was outlined. The roentgen ray is of importance also. The surgical treatment of carcinomas of the lung at present is simply that of surgical removal of the entire lung. Exceptional cases do well with removal of the involved lobe. Widely disseminated cases offer little encouragement to surgery. Irradiation has no value at the present time.

"The Gastro-Intestinal Tract" was discussed by Damon B. Pfeiffer. About one-half of the cases of cancer reported involve some part of the mucous membrane of the gastro-intestinal tract. The predominance of the condition in the stomach, colon, and rectum, and the infrequency in the small intestine were noted. The speaker gave considerable attention to gastric cancer, stressing its early diagnosis. Cancer of the colon was likewise given in detail. The prospect of cure in early cases was emphasized.

"The Genito-Urinary Tract" was discussed by Leon Herman. The value of the modern treatment of carcinoma of the prostate was detailed. Much can be done by transurethral resection and radiotherapy. In tumors of the bladder resection of the growth followed by implantation of radium seeds is employed with benefit. The essayist gave considerable attention to tumors of the kidney in this paper, stressing the diagnostic importance of hematuria. Fifty per cent of gross hematurias are tumors of the bladder. Hematuria has a serious significance.

"The Rectum in Relation to Cancer" was discussed by Collier F. Martin. Early diagnosis is seldom made. The early symptoms and early signs were mentioned. Age is unimportant from the standpoint of diagnosis. A benign process in the rectum may become malignant. Solitary mucous polyps of childhood rarely become malignant. On the contrary, multiple polyps may. Methods of diagnosis were described. The roentgen ray is of value in this connection. He advised radical surgery in the presence of a positive diagnosis. The speaker referred to lymphogranuloma inguinale as a cause of rectal stricture.

Mar. 25, 1936

DISEASES OF THE THYROID

"The Incidence and Diagnosis of Thyroid Disease" was presented by William J. Fetter, of Mercy Hospital, Pittsburgh. The writer used the term "hyperthyroidism" to designate the syndrome of exophthalmic goiter as well as adenomatous goiter with hyperthyroidism. This syndrome is not limited to the inhabitants of certain so-called goiter areas but is seen in all localities in the young, the middle-aged, and elderly persons of both sexes.

The recent advances in the field of endocrinology have conclusively demonstrated the production of a thyrotropic hormone by the anterior lobe of the pituitary body. This hormone is capable of producing changes in the thyroid gland of experimental animals, like those seen in the hyperplasia of hyperthyroidism, can raise the basal metabolism and can cause loss of weight in these animals. Certain atypical cases of hyperthyroidism have supposedly responded to gonadotropic therapy, but these cases showed a definitely positive or slightly positive Aschheim-Zondek or Friedman reaction. In the writer's experience the onset of the symptoms of hyperthyroidism appears at the menopause in 10 per cent of the cases. The classic picture of the syndrome includes an abnormal increase in the appetite, loss of weight with a normal or increased caloric intake, and an increased tolerance for cold, nervousness, loss of strength, the stare or exophthalmos, persistent tachycardia, hair changes, alterations in the nails, and variations in the character of the penmanship. A recognition of the unusual symptoms of hyperthyroidism is necessary for diagnosis. These include cases in which there is marked loss of weight, with weakness associated with asthenia or prostration rather than nervous stimulation; the exophthalmos may be absent, the basal metabolic rate may be only slightly elevated, and the heart rate virtually normal; there may be no gland without gland enlargement.

The physician is advised to consider hyperthyroidism as a possible factor in each case where failing health is not explained by some other clinical entity. It is also essential that he so sensitize himself to the manifestations of hyperthyroidism that the persistently mild and atypical cases and those obscured by complicating diseases will be readily recognized. The diagnosis of hyperthyroidism should be arrived at only by elimination. Individual symptoms subjective or objective are not conclusive. Frequent determinations of the metabolic rate are essential. Hyperthyroidism may be associated with other organic or functional disease and the symptomatology proportionately confused. It does not produce localized symptoms. The abnormal physiologic reaction produced by fear may be mistaken for hyperthyroidism. A careful history is essential in such cases. Neurocirculatory asthenia must be distinguished from psychoneurosis. The duration is important in diagnosis. The so-called "choking sensation" is conspicuously absent in uncomplicated hyperthyroidism. The essayist briefly revised the individual symptoms of hyperthyroidism giving to each its appropriate status in diagnosis and differential diagnosis.

In discussion, Frederick J. Kaltefleiter placed emphasis upon the differential diagnosis, referring especially to such aids as cardio-ocular reflex, plasma protein, and the rise in basal metabolic rate.

"Cardiac Manifestations of the Thyroid" was discussed by William L. Mullins, of Mercy Hospital, Pittsburgh. These are such an integral part of thyroid

disease that their occurrence is noted in the earliest descriptions of the disease. He also mentioned persistent tachycardia as one of the cardinal but earliest symptoms and few cases fail to show it. It is readily developed and exaggerated by exercise and emotion. Various paroxysms centering about the heart often accompany this tachycardia. Emotional or other stress frequently precipitate a thyroid explosion. The tachycardia does not respond to the usual measures of rest, sedatives, and digitalis. This is an important diagnostic point. Hyperthyroidism also has to be considered as one of the common causative factors in auricular fibrillation.

Edward Rose, in discussing this paper, emphasized the frequency of the adventitious "scratching" sound often heard over the pulmonary area in the hyperthyroid patient, which is probably an extra-cardiac sound due to the violent overactivity of the artery or to a slight rotation of the base of the heart, and also the presence of a faint or distinct diastolic murmur due to aortic regurgitation. Masked hyperthyroidism is a possible cause of heart failure. The abnormal electrocardiogram in the hyperthyroid patient does not necessarily mean persistent heart disease.

"Surgical Treatment of Thyrotoxicosis" was considered by John P. Griffith, Mercy Hospital, Pittsburgh. In the preparation of cases of hyperthyroidism for operation the efficient virtue of iodine can be accepted, preferably in the form of Lugol's solution, as the most important preliminary step toward accomplishing a safe patient for surgical treatment. It is unfortunate, however, that so many patients have been "Lugolized" numerous times before operation, to the disadvantage of the patient. A 10 days' to 2 weeks' preliminary treatment, including Lugol's solution in doses of 15 to 20 minims 3 times daily, sometimes larger, rest in bed, and freedom from all forms of worry and excitement, is essential to satisfactory surgery. In the case of adenomas he recommended that all should be removed as early as possible to prevent the tendency to toxicity and malignant changes in later life, occurrences which are responsible for a considerable percentage of the fatalities. The estimate of the degree of involution centers around rather fixed phenomena. Thus a marked reduction in the basal metabolic rate and a corresponding subsidence in tachycardia and general improvement in all the well-known symptoms and signs of hyperthyroidism should be the equivalent of a marked involution of the gland, whereas an unsatisfactory involution is to be expected if the improvement mentioned is lacking. The essayist showed a series of slides illustrating the types of goiter and the effects of iodine and the various surgical procedures. He discussed thoroughly the merits of subtotal and complete thyroidectomy. His statistics of his own surgical experience are quite impressive, especially the low mortality. The technic employed by him in subtotal thyroidectomy was described.

SAMUEL HORTON BROWN, *Reporter*.

TIOGA

Feb. 21, 1936

The monthly meeting was held at the Little Tavern, Mansfield, preceded by dinner.

Mark Bodine, Williamsport, gave a discourse on "Carcinoma of the Stomach." He said in part: Forty per cent of all cancer deaths are due to carcinoma of the stomach. Two per cent occur under age 30. It is never seen in Egypt. It is more common on the continent

than in England. The incidence is much higher in the middle and upper classes of society.

Often the earliest symptom is slight indigestion, which is frequently relieved by home remedies; then it becomes worse and the physician is consulted. His advice to have roentgen ray and other studies made is not taken, and the patient is apt to make the rounds of "herb" and "hex" doctors; but failing to obtain relief he returns to the physician for study, and by this time an inoperable cancer is found. The symptoms that finally send him to the physician are weakness, loss of weight, vomiting of blood, mass in the abdomen, and remission of the symptoms of indigestion which have gradually become worse. At the present time only about 20 to 25 per cent of the cases of cancer of the stomach are operable.

There are no early pathognomonic symptoms of cancer of the stomach, but the patient who is stomach conscious, has indigestion, and progressive weakness should arouse the physician to diagnostic activity. These patients can almost always give an actual date of onset. They are not co-operative because of lack of symptoms and financial condition. The majority of textbooks are at fault in not stressing the early symptoms of cancer of the stomach.

Anemia is an early symptom, which is more profound than in any other type of cancer. Nausea and progressive loss of appetite occur early.

Later signs are melena, vomiting, hemorrhage, and mass in the abdomen. At this stage of the disease resection is unsatisfactory, but an exploratory operation should be done to give the patient the benefit of doubt if diagnosis is wrong.

Roentgen ray is the best means of diagnosis and in skilled hands is nearly 95 per cent correct, but the earlier the lesion the less correct the diagnosis. It is often very difficult to differentiate between malignant and benign tumors.

Other laboratory procedures are of little help. Gastric analysis shows that only about 50 per cent of the cases have an achlorhydria. The presence of lactic acid depends on the amount of obstruction at the pylorus.

Gastric and duodenal ulcer are most commonly confused with early diagnosis of gastric carcinoma. If the distress occurs after 9 p. m., the condition is more likely to be carcinoma. Nausea before breakfast is a sign of early carcinoma. Cholecystic disease should be carefully studied. Gumma may be confused because of a negative Wassermann reaction.

The important findings in middle age are progressive weakness, progressive loss of appetite, and an indescribable something that is wrong with the stomach.

Lloyd G. Cole stated that many cases of inoperable gastric carcinoma were seen at the Blossburg State Hospital. All dyspepsias should be studied thoroughly. He stressed the point of secondary anemia.

ROBERT D. LEONARD, *Reporter*.

WARREN

Mar. 16, 1936

Twenty-six members were present.

The guest speaker was L. Maxwell Lockie, of the University of Buffalo School of Medicine, who gave an address on "The Management of Arthritis." He placed particular emphasis on various forms of diet, advising a low carbohydrate diet in the atrophic variety but sufficient to keep up average weight. He described the blood sedimentation rate as a test for infection. In the

treatment of gout a low fat and high carbohydrate diet is advisable. Gout is much more frequent in men, and tincture of colchicum in 1 dram doses 3 times daily is of value to reduce pain and as a diagnostic agent.

Fever therapy has been found of value in gonorrheal arthritis if used in the first 6 weeks, and sometimes of value in atrophic arthritis if in the early stages.

He described the pathology about the cartilage in the atrophic and hypertrophic forms.

Insulin has been used to stimulate appetite in connection with a low carbohydrate diet.

It has been found that, when jaundice occurs concurrently, the joint pains in some forms of arthritis lessen.

Not much reliance can be placed on drugs or vaccines. Iron in the form of Blaud's mass, 30 grains 3 times daily, is of value in the atrophic type. Mental and bodily rest are indicated.

MICHAEL V. BALL, *Reporter.*

WESTMORELAND

Mar. 12, 1936

The monthly meeting was held at Mountain View Hotel near Greensburg, William H. Robinson presiding. Robert C. Johnson, of New Kensington, read a paper on "Pneumococcic Peritonitis." A summary of his remarks follows: This disease occurs most commonly in female children under age 10. A fatal termination results in 90 per cent of the cases. He advised early surgical intervention before abscesses, adhesions, and thick pus or diffused infection occurred in the abdomen. After diffused pus occurs, the patients die very quickly following surgical intervention. If upon opening the abdomen the intestines are found floating in a nonpurulent serum without any adhesions between the various coils of intestine, suspect pneumococcic peritonitis. Before operation a careful history, especially regarding respiratory infection, should be taken. Great care should be taken to differentiate pneumococcic peritonitis from the various types of appendicitis, typhoid fever, and intestinal obstruction.

The diagnosis of pneumococcic peritonitis is based on the acute meteorism; the soft, enlarged, doughy abdomen; the presence of diarrhea; the vomiting for a long time of greenish matter free of feces; marked leukocytosis; an unusually rapid pulse; and the more abrupt onset. In this disease excessive vomiting occurs early. The facial expression in the early stages is normal; later the Hippocratic countenance appears. Palpate the abdomen gently with warm hands and always make a rectal examination.

The essayist discussed a series of 5 cases from his own practice all terminating fatally.

Case 1.—Helen A., age 9, had severe pain in lower abdomen and slight diarrhea with extreme meteorism. In a few hours the pain became very severe and the abdominal distention very marked. One thousand c.c. of clear fluid was vomited. Hyperemia developed in the nose and throat. Vomiting continued at various intervals and acute embarrassment of respiration soon occurred. There was a marked dullness in the lower abdomen. Urologic examination was negative. A diagnosis was made of acute intestinal obstruction. Under local anesthesia a 2-inch incision was made in the left lower quadrant and a turbid fluid gushed forth. Drainage was inserted and the patient given the usual postoperative treatment. Her condition grew worse. Schilling's hemogram swung sharply to the left. Examina-

tion of the abdominal fluid revealed the pneumococcus. The patient soon died.

Case 2.—Mary M., age 6, had generalized abdominal pain. She went to school, but the pain grew more intense and she was sent to the hospital for treatment. No prodromal symptoms could be found. Later the face became flushed; the temperature rose to 102° F.; the abdomen was tense, doughy, thickened, with marked meteorism. The pain was most intense over McBurney's point. There was albumen, casts and pus cells in the urine. The white count was 16,850. A diagnosis was made of ruptured appendix. At operation the intestines floated up in a semipurulent fluid. A normal appendix was found and removed. Death occurred on the fourth day. There was no history of respiratory disease. Examination of the abdominal fluid revealed the pneumococcus.

In these cases hot stupes and duodenal drainage are imperative; however, the results of early surgery are not good.

Case 3.—Helen R., age 4, became ill with high fever and had 2 convulsions the first day. Enemas were given to relieve the abdominal distention and high fever. The abdominal distention continued unabated and later became more acute. On the second day drainage was instituted, but the condition of the patient grew steadily worse and she died 10 days later. Leukocytosis in this case varied from 12,000 to 14,000.

Case 4.—A physician's wife, age 33, was complaining of rather severe pain in the abdomen. She had suffered for several days from a mild cold. The pain in the abdomen became more acute. Temperature on the second day was 101° F., pulse 130, respirations 22, white count 30,000; the abdomen had a doughy feel; there was superficial tenderness and a dull tympanitic note. There was no diarrhea. Due to the symptoms of an acute condition within the abdomen operation was accepted. A semipurulent fluid escaped; the bowels floated up in the fluid; there were no adhesions between the various coils of the intestines. The appendix appeared normal. A diverticulum was found and a culture taken. The culture was positive for the pneumococcus type 1. A blood transfusion was done, glucose and saline administered, and all supportive treatment given, but the patient died one week later.

Case 5.—Thomas C., age 53, the only male patient in the series was operated upon for vesical calculus under local anesthesia through a suprapubic incision. A subtotal anuria for 36 hours occurred. This was relieved by the usual treatment and he progressed very well for 12 days, when signs and symptoms of lobar pneumonia occurred. On the thirteenth day the abdomen became distended, tender, and doughy. He was operated upon at 3 p.m. The next day the temperature rose to 106° F. Malignant meteorism occurred, which soon became most distressing. Rectal examination showed a mass in the pelvic cavity. Respiration was greatly embarrassed, and the patient died at 8 p.m. the second postoperative day.

In discussion, Charles C. Crouse said that he was amazed at the paucity of the literature on pneumococcic peritonitis. It was described 100 years ago by the French, but there was no literature on this disease in America until 1930. These patients have an abdomen which is doughy and comparatively soft in contrast to the board-like abdomen generally seen in acute pelvic infections. The pain is not so severe. Since the mortality by surgery is 90 per cent, it is advisable to wait

7 to 10 days before operating because better results are obtained after some localization occurs.

Nathan A. Kopelman, speaking from the medical point of view, said since pneumonia is a self-limited disease that this too no doubt in many cases is self-limited and that it would be better to avoid operating at all if possible. The infection probably reaches the abdomen by way of the genital tract; however, it could be traced through the blood and lymphatic systems. It is more common in Europe, where there is one case of pneumococcic peritonitis to every 2 cases of appendicitis.

Walter Bortz considers that a positive culture is the

only way of making a diagnosis and that often post-mortem microscopic sections of the fallopian tubes are positive for the pneumococcus.

Ward Eicher, Esq., assistant district attorney of Westmoreland County, addressed the society on the legal aspect of the practice of medicine. He was formerly of the opinion that when doctors appeared as witnesses in court they used technical and scientific terms just to show off before the judge and jury, but he now fully realizes that this is not the case and that medical men speak a language entirely unknown to him.

SPURGEON S. DEVAUX, *Reporter.*

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

When our last letter was sent out, we took occasion to commend those hardy souls who, despite the rigors of an unusually hard winter, maintained the sequence of their auxiliary programs. Little did we know that an unthinkable catastrophe would place a monumental burden on these same women.

Our own duties led us to Pittsburgh, from which as a center we planned to visit surrounding counties to meet with their auxiliaries. On the second day the flood broke with its attendant disaster and horror. The story of that you have read elsewhere, but the devotion of the physicians and their families, true to the traditions of medicine, makes a chapter which is yet to be written fully. How men whose homes and offices were devastated gave first thought to the stricken and how their women folk with facile energy turned, as only women can, to deeds of tenderness, gives us a picture we cannot and will not forget.

Our hearts have been touched by the daily messages telling of the loss of property and suffering that have visited our members.

Your president, seeking some means of extending a helping hand to these, sought the counsel of responsible officers of the State Medical Society. She has been assured that our offers of assistance were deeply appreciated, but that the parent body will assume this obligation and that we should confine our benevolence to its usual channel.

A tribute here to Dr. and Mrs. Laurie D. Sargent, who not only safely housed the presi-

dent but also made it possible for her to visit, as planned, Fayette, Somerset, and Washington counties; and to Dr. and Mrs. Augustus S. Kech for a stay in their home until trains were running farther east.

A story, your president could tell, of open doors in physicians' homes throughout the State and of our loyal women answering emergency calls, laboring side by side with the Red Cross, carries a moral lesson to all, that "service through sacrifice" might be a fitting motto for auxiliary women and, too, that they have proven worthy of our accolade.

Home again safe to find much work to do and many heartening messages, notably that several counties are staging their premier health institutes and the prospect of a trip to the national meeting at Kansas City, where we hope to greet many of you. MRS. W. BURRILL ODENATT.

MEETING THE CHALLENGE

Whether or not we are actually members of the Public Relations Committee of our auxiliary, we nevertheless should feel a measure of responsibility in promoting its objectives. No committee, regardless of the number or efficiency of its members, can accomplish the task alone, but each physician's wife with her individual contacts and in her own way can further the work. To do our best, we must have first a knowledge of the objectives of the committee in order to find our place in the program as a whole. Briefly the important objectives are closer co-operation between the medical profession and the laity, health education for the public,

and certainly an increase of friendship and understanding in the profession itself.

These are big aims rather generally expressed and somewhat intangible in character. We cannot hope to attain them within a year, but must keep working continually toward a lofty and challenging goal. There are, however, some very simple and specific methods of approach in the task we are trying to do, and the preparation for effective results must begin with ourselves. We cannot educate others until we become educated. As a background for study, may I suggest such books as *The Doctor in History* by Haggard, *Behind the Doctor* by Clendening, Loebel's book entitled *Medicine, A Voyage of Discovery*, or *The Life of Louis Pasteur*. If we want to be educated pleasantly we can turn to fiction and read such enjoyable books as Joseph C. Lincoln's *Dr. Nye of West Ostable*, Faith Baldwin's *American Family*, or *Arches of the Years* by Sutherland. This reading gives us background, helps us hold fast to the traditions of the profession, and tells us what others think of our physicians. We should read of the auxiliary work as given in the PENNSYLVANIA MEDICAL JOURNAL and the *Bulletin of the American Medical Association* and use every means of acquainting ourselves with health conditions generally in our own county.

Let us then, as physicians' wives, be willing to take our places of leadership in other groups, and in a tactful and dignified manner do all possible to guide their health efforts in the right channels, suggest literature approved by the Medical Society for use by these groups, and in every possible way increase their co-operation with the medical profession.

We can further aid by promoting our 3 major projects. The first, the General Health Program Conference arranged by the Public Relations Committee of the Auxiliary, aims to assist various groups with their health programs that effort may be made along one or two needed lines of health, rather than each group having any type of health program they may choose. "In unity there is strength." By concentrated effort to meet a present outstanding need as felt by our Medical Society, much good can result. The general membership can assist in this project by gaining a knowledge of the procedure, seeing that representatives of groups in which they are interested attend, and by contributing to the valuable discussion which is always a part of the meetings. Program material approved by the Medical Society is always displayed, and other materials for program use are suggested. Interest in this conference is growing and each year more groups are represented.

The second project is the Health Institute, which our state president, Mrs. W. Burrill Odenatt, is making her outstanding project for the year. Her slogan is: "A health institute in every county." This is the reciprocity program to which we invite representatives of lay organizations as guests of the auxiliary to enjoy the program and understand the purpose of the work and the desire to co-operate with them in their health activities. In other words, it is our "Good Will Meeting." It affords an opportunity to meet the leaders of various parent-teacher and club organizations, to discuss with them their health work in their community, and, perhaps, their problems.

The Summer Round-Up project is most important. This is the particular health program of the parent-teacher groups. Every child expecting to enter school in the fall is examined in May, the date being designated by each parent-teacher unit. In this examination the defects are noted on a report sheet, and the parents are urged to have these defects corrected during the summer months so that the child may enter school unhandicapped in the fall, ready to go on with the school work without having to be taken out to have tonsils removed or eyes examined. The former procedure was to gather all children in a community together, usually at the school, and have one or two doctors and a dentist examine one child after another. This method has proven most unsatisfactory as children were often examined by a doctor who never saw them before, knew nothing of the family history, and of necessity did the work in a very rushed manner. You, as an auxiliary member, can in a tactful and kindly manner become acquainted with your parent-teacher leader and urge examination in the physicians' offices by the family physician of each child. Physicians should be paid for this work, and the amount of the charge should be decided upon by the local physicians. Encourage this work which means so much both in the benefit to the child and the community, and use this opportunity to suggest the distribution of helpful literature approved by the Medical Society.

The public as a whole looks up to the physician chiefly because most of the members of the profession through sacrifice, sympathetic understanding, and continued toil for humanity, much without reward financially, have justly earned this high esteem. They are, and should continue to be, regarded as leaders in their respective communities. Any wife can be proud to have her physician husband so regarded, but with this pride should also come a feeling of deep responsibility and a desire to fit herself to

take her rightful place as helpmate to her husband. This means self-improvement and the acquiring of knowledge of such a nature as to make us more understanding, tactful, and tolerant.

As our national chairman of Public Relations, Mrs. David S. Long, says, "Study, study, and then study. We believe that the trained educated physician's wife is the proper person to guide the health activities of lay organizations, as she has the intelligence and background to meet the problems with wisdom and with judgment." This challenge I leave with you.

(MRS. D. N.) AGNES M. BULFORD,
Chairman, Committee on Public Relations.

COUNTY AUXILIARY REPORTS

Center.—The auxiliary held its regular meeting at the home of Mrs. John V. Foster at State College on Feb. 20 at 1 p.m. Mrs. Augustus S. Kech of Altoona, guest speaker, gave a talk on legislation and its effects on the medical profession. The question of changing the fiscal year was discussed, the year to end in May. Eleven members and 5 guests were present. A buffet luncheon was served.

Chester.—On March 18, the Public Relations Program sponsored by the auxiliary was held at the Chester County Hospital with 17 guests present representing women's clubs, parent-teachers' associations, federated and library clubs from all over the county. Mrs. Howard Mellor, president, presided; the meeting was preceded by a luncheon.

The Husband's Party was held on Jan. 29; there were 39 present, the guests being Dr. and Mrs. W. Burrill Odenatt and Dr. and Mrs. Wilmer Krusen, all of Philadelphia.

The speaker for the afternoon was Dr. Oscar J. Klevan, representing the Committee on Maternal Welfare of the County Medical Society. His subject was "Maternal Health," which anticipated the launching of other such programs to be sponsored by the clubs represented and others throughout the county.

Delaware.—The meeting of the auxiliary was held Mar. 12. Mrs. Robert Coates, editor of the *Woman's Page* of the *Chester Times*, was the speaker.

The monthly meeting of the Executive Board was held at the home of Mrs. Edward H. Bedrossian, of Drexel Hill, who entertained the Board at luncheon prior to the meeting. The Board voted to send \$10 to the Red Cross for medical supplies to be used for the flood sufferers. Members undertook to collect clothing and food to send to the stricken areas. Plans were discussed for another card party to raise more money for the Medical Benevolence Fund. It was decided to revise the by-laws and incorporate the several amendments which have been adopted. Mrs. Whitney, Mrs. Landry, and Mrs. Orr were appointed to serve on this committee.

Elk-Cameron.—The meeting of the auxiliary was held Jan. 25 at the Hyde House, Ridgway. Mrs. Lewis L. Hobbs was hostess at the luncheon. It was approved to contribute \$15 to the Medical Benevolence Fund, and

also to donate a year's subscription to *Hygeia* to all schools in Elk and Cameron counties, and the hospitals in St. Mary's and Ridgway.

A meeting of the auxiliary was held Mar. 14 at the Hotel Mullendean; Mrs. Leo Z. Hayes, of Force, was hostess at luncheon.

Indiana.—The Historical Meeting of the auxiliary was held at the home of Mrs. William F. Weitzel at 8 p.m., Mar. 12. Mrs. Fred S. Shaulis, chairman of the Archives Committee, gave a history of the important events of the auxiliary since its beginning. Mrs. H. DeV. Hotham, our historian, also gave a history of the auxiliary. Mrs. Shaulis read the "Tribute to Doctors" given over the radio, Feb. 14, by Florence Fisher Parry. A musical program was presented. Twenty-five articles of personal belongings of deceased physicians of Indiana County were on exhibit. These memoirs will be sent to Pittsburgh to be placed in the archives. Mrs. Milton M. Auslander, of Ernest, was welcomed as a new member. Refreshments were served.

The Public Health and Public Relations Meeting was held at the home of Mrs. Edward L. Fleming, Apr. 9, at 8 p.m. There was instrumental music. Mrs. Lindsay, of Heilwood, president of the Parent-Teachers' Association, gave a talk on "The Relationship our Auxiliary Might Have with the Parent-Teachers' Association."

Miss Goodell, in charge of tuberculosis work in Indiana County, gave a résumé of the health conditions in Indiana County and an outline as to what the auxiliary could do to help her.

The Executive Board voted to give \$10 to the American Red Cross for the flood disaster victims. There was vocal music, and a buffet luncheon was served.

Lebanon.—On Mar. 9, the auxiliary met at the home of Mrs. J. DeWitt Kerr; 25 attended. Mrs. W. Burrill Odenatt, State Auxiliary president, and Mrs. Charles J. Swalm, of Philadelphia, were the guests of honor. Mrs. Odenatt gave a talk on activities to be accomplished by the auxiliary. Mrs. Swalm gave a brief outline of the philanthropic work they have done in Philadelphia County, and also read the radio program of the American Medical Association scheduled for March in co-operation with the National Broadcasting Company each Tuesday at 5 p.m., the subjects being presented by Drs. Bauer and Fishbein. Some of the members suggested that we have a Reciprocity Day again some time in May.

The auxiliary has purchased the portrait of Dr. William M. Guilford taken on his 103rd birthday anniversary and presented it to the headquarters of the State Medical Society at Harrisburg.

Lehigh.—Physicians' wives, daughters, and mothers affiliated with the auxiliary brought their hobbies to the March meeting for display in a most unique program. Tables were arranged around the room and on them were displayed objects representing the hobbies of the members that ran the gamut from sports to ceramic art, from needlework to rare cameos, from Chinese art to contract bridge, and from gardening to writing poetry and music. A new feature was a book review. The annual charity card party was announced for Apr. 18. Refreshments were served.

Mercer.—On Jan. 8, 29 members of the auxiliary met at the home of the president, Mrs. Harvey E. Massey, in Sharon. One subscription to *Hygeia* was donated to a Sharpsville school by the American Legion Auxiliary

Unit No. 162, Sharpsville. Miss Magoffin, Welfare Committee Chairman, reported that 50 underprivileged children had received glasses. As a result the teachers in the rural schools noticed a marked improvement in the grade standing of these children. The treasurer was instructed to send \$30 to the State Medical Benevolence Fund. Games were played and refreshments were served.

The auxiliary met on Feb. 12 at the home of Dr. and Mrs. Clifford C. Marshall in Sharon; 40 members were present. There was a musical program, and Mrs. Andrew J. Mitchell read a paper on "The Advancement of Medicine." The promotion of *Hygeia* was discussed, and it was decided that each member conceive some method of bringing *Hygeia* before the laity, the ideas to be expressed at the next meeting. An invitation was extended to the auxiliary by the Venango County Auxiliary to attend a luncheon to be held at the Club House in Oil City, Feb. 20. Mrs. Augustus S. Kech will deliver an address. The physicians who are conducting a graduate course at the Buhl Hospital joined the auxiliary at the Marshall home and about 85 were served dinner.

Montgomery.—The auxiliary met at the Abington Hospital, Apr. 1. Mrs. Joseph E. Beideman presided. A report was submitted that the proceeds from a recent motion picture benefit would enable the auxiliary to place *Hygeia* in 40 county schools. Dr. Merrill Miller gave a talk on "Wheezers and Sneezers." The physicians joined the auxiliary for tea.

Schuylkill.—The meeting of the auxiliary was held Mar. 10 at the Necho-Allan Hotel with 24 members present and 6 new members. Mrs. Ivor D. Fenton, president, presided. Plans were made for a Health Institute on Apr. 14, and also to make scrap books for the sick children at the various hospitals in the county on Christmas.

Warren.—The March meeting of the auxiliary was held at Warren, with luncheon at the home of Mrs. H. A. Ross. Miss Rebecca Schofield gave a review of *Romance in the History of Pennsylvania*.

Westmoreland.—The auxiliary held its regular meeting, Mar. 3, at the American Legion Home in Greensburg; 33 were at the luncheon. Miss Helen Kech spoke of the work done in this county by the Emergency Child Welfare Committee. Mrs. Howard A. Power, a member of the State Board and a counselor, gave an informal talk. Mrs. Daniel N. Bulford, chairman of the State Committee on Public Relations, spoke of the educational side of the work. Concerning the Medical Benevolence Fund, it was approved that each member donate one dollar to take care of this fund.

The auxiliary has been invited to a luncheon to be held in Uniontown in honor of the State Auxiliary president on Mar. 16.

York.—The monthly meeting of the auxiliary was held in the Professional Building, York, Apr. 2; Mrs. Pius A. Noll, the president, presided. Plans were made for the Health Institute which will be held Apr. 28. The distribution of the *Hygeia* magazine was discussed at some length, as the members of the auxiliary do not care to sponsor *Hygeia* as one of their projects. It was decided finally that they will not sponsor this magazine.

It was approved that the auxiliary have a "traveling basket" to be circulated among the members in order to raise funds for the Medical Benevolence Fund. One member starts the basket by donating something and

sending the basket to another member. The second member takes out the gift, and places the value of the gift to her in the bank. Then this member donates something and sends it to another member, and so on.

The regular collection was taken for the Welfare Committee for toys, etc., for the patients in the children's ward at the York Hospital.

Prizes were awarded and refreshments were served.

Medical News

Births

TO DR. AND MRS. GEO. A. F. MOYER, of Klingerstown, a son, George Alfred, Mar. 8.

TO DR. AND MRS. JACOB M. GORDON, of Philadelphia, a daughter, Doris Lee, Mar. 22.

Engagements

MISS MARGARET J. KUHN and Dr. Ralph W. Hoerner, both of Elkins Park, Pa.

MISS MADELEINE E. BAUGHMAN, of Narberth, and Dr. John Robert Vastine, son of Dr. and Mrs. John H. Vastine, of Shamokin.

MISS REGINA MARIE MANNING, daughter of Dr. and Mrs. Valentine R. Manning, and Mr. Theodore Hart M'Calla, 3d, all of Philadelphia.

Marriages

MISS HARRIET SCHINDLER to Dr. Edwin R. Anderson, of Warren, in February.

DR. RUBY LEHMAN, of Middletown, to Dr. Peter Zemo, of Harrisburg, Mar. 29.

MISS ELIZABETH FLOCK, of Williamsport, to Dr. Walter Austin Bacon, of Pottsville, Feb. 8.

Deaths

WILLIAM LOUIS ABBOTT, Philadelphia; University of Pennsylvania School of Medicine; aged 76; died at his farm at Northeast, Md., Apr. 2, of heart disease. Dr. Abbott was a son of the late Redman and Susan F. Abbott. He was a world traveler and big game hunter and was one of the largest individual contributors to the National Museum in Washington. He was long associated with the Academy of Natural Sciences of Philadelphia, and until his resignation a few days previous to his death was a director of the Philadelphia Zoological Gardens. He was a graduate of the Department of Liberal Arts and Sciences, University of Pennsylvania. His globe-trotting took him into many foreign countries, and in these strange lands he spent many years accompanying various expeditions and undertaking many of his own.

DR. ROBERT BARANY, of Upsala, Sweden, winner of the 1914 Nobel prize for medicine, died Apr. 8, aged 60. He was born Apr. 22, 1876, in Vienna, and attained fame throughout the scientific world by his research work, particularly as applied to ear, nose, and throat diseases.

MRS. ELIZABETH FORBES CORSON, wife of Dr. Percy H. Corson, of Plymouth Meeting, Montgomery County, died Apr. 24. She is survived by her husband, one son, and 2 daughters.

JOSEPH A. CRAMP, Philadelphia; Medico-Chirurgical College of Philadelphia, 1891; aged 70; died Mar. 29, at the Germantown Hospital after an illness of 3 weeks. Dr. Cramp was born in Philadelphia, Nov. 21, 1865, and began practicing there, subsequently devoting his time to ophthalmology. He served on the staffs of the Medico-Chirurgical Hospital and the Wills Eye Hospital. He was a member of his county and State medical

societies and a Fellow of the A. M. A. He is survived by 2 daughters.

THOMAS C. DETWILER, Lancaster; University of Pennsylvania School of Medicine, 1881; aged 76; died Apr. 15, at St. Joseph's Hospital, Lancaster. Dr. Detwiler retired from active practice in 1910. He established the surgical department of the Lancaster General Hospital, Lancaster, and was a former trustee of the Pennhurst State School and Lancaster County Medical Society.

WILLIAM MILTON DILL, Erie; University of Pennsylvania School of Medicine, 1909; aged 56; died Jan. 18, of carcinoma of the seminal vesicle and prostate.

CHARLES KLINE FERER, Meadville; Medico-Chirurgical College of Philadelphia, 1904; aged 55; died Jan. 15, of coronary occlusion. Dr. Ferer served during the World War, and was on the courtesy staff of the Meadville City Hospital. He was a member of his county and State medical societies and a Fellow of the A. M. A.

DENNIS E. FISHER, Needmore; Baltimore Medical College, Maryland, 1883; aged 82; died recently. Dr. Fisher was a member of his county and State medical societies and a Fellow of the A. M. A.

JOHN WILLIAM FOX, Edinburg; Maryland Medical College, Baltimore, 1911; aged 57; died Feb. 8, of pneumonia.

HERMAN C. GALSTER, Erie; Cleveland Homeopathic Medical College, 1892; aged 74; died in March. He was a member of his county and State medical societies and the A. M. A.

SAMUEL E. HIBBS, Uniontown; University of Pittsburgh School of Medicine, 1904; aged 62; died Apr. 1. Dr. Hibbs was a member of his county and State medical societies and the A. M. A.

CRAWFORD T. KELLY, of McKeesport, the 18-year-old son of Dr. and Mrs. John C. Kelly, was the victim of an airplane crash near Uniontown, Pa., Apr. 7. Mr. Kelly was a first-year student at the Valley Forge Military Academy, and was en route home for his Easter vacation by airplane.

CHARLES HENRY LEFCOE, Philadelphia; Jefferson Medical College, 1897; aged 61; died Apr. 4. Dr. Lefcoe was a graduate of the Boys' Central High School, Philadelphia, 1894. He was a member of the staff of the Children's Hospital and at one time was on the pediatric staff of the Jefferson Hospital.

SIDNEY W. RIVENBERG, Clifford; Baltimore (Md.) Medical College, 1894; aged 79; died at his home, Mar. 25, after several months' illness. Dr. Rivenberg was a native of Clifford, Pa., and for 40 years was a Baptist missionary at Assam, India. He was graduated from the Keystone Academy and from Brown University, the latter institution conferring upon him the degree of A. B. and subsequently the degree of A. M. After 10 years in the missionary field in India he realized that he could be of greater usefulness as a medical missionary. He therefore returned to the United States and matriculated at the Baltimore Medical College. Upon graduation from that institution he returned to India where as a medical missionary he rendered very valiant service for 30 years.

In 1923 Dr. Rivenberg returned to Clifford and established a general practice. He is survived by his wife, 3 daughters, and a son.

He was a member of his county and State medical societies and a Fellow of the A. M. A.

GUY HUFFMAN ROTHFUSS, Williamsport; New York University and Bellevue Hospital Medical College, 1933; aged 31; was killed Jan. 30, in a railroad accident in Sunbury.

JOHN JOSEPH STANTON, Philadelphia; Jefferson Medical College, 1903; aged 57; died Apr. 15. Dr. Stan-

ton was a graduate of the Northeast High School; served his internship at St. Joseph's Hospital, Philadelphia, and was on the staffs of the Lankenau, St. Joseph's, and National Stomach Hospitals. He was a member of his county and State medical societies and a Fellow of the A. M. A., the Northern Medical Association, and the Medical Club of Philadelphia. He is survived by his wife, 3 daughters, and 3 sons, one of whom is a junior student in the Jefferson Medical College.

EDWARD W. STEEVES, Brownsville; College of Physicians and Surgeons of Baltimore, Md., 1898; aged 69; died Mar. 24. He was a member of his county and State medical societies and the A. M. A.

RALPH M. TIDD, Clark; Rush Medical College, University of Chicago, 1902; aged 59; died Mar. 11. He was a member of his county and State medical societies and a Fellow of the A. M. A.

JACOB A. WALTER, Punxsutawney; Hahnemann Medical College and Hospital of Philadelphia, 1887; aged 76; died Mar. 30. He was a member of his county and State medical societies and a Fellow of the A. M. A.

ABIGAIL GRACE WHITE, Bradford; Homeopathic Hospital College, Cleveland, Ohio, 1887; aged 82; died Jan. 13, of chronic myocarditis.

HENRY STRAUSS WIEDER, Philadelphia; University of Pennsylvania School of Medicine, 1902; aged 54; died Apr. 22. Dr. Wieder devoted his practice to otorhinolaryngology. He was a member of his county and State medical societies and a Fellow of the A. M. A. He was a member of the American Board of Otolaryngology and was associate professor of otology at the Graduate School of the University of Pennsylvania. He is survived by his widow, a daughter, and a son.

LAWRENCE J. WINDER, Andalusia; Jefferson Medical College, 1893; aged 69; died Apr. 22. Dr. Winder was born in Langhorne, Pa., and attended the Friends' Schools in Philadelphia. During the Spanish-American War he served with the Medical Corps of the United States Army. On account of ill health he retired from the practice of medicine 2 years ago. He is survived by his widow and 4 children.

GEORGE E. YEOMANS, Mansfield; Jefferson Medical College, 1894; aged 68; died in May, 1935. He was a member of his county and State medical societies and the A. M. A.

HENRY A. ZIMMERMAN, Hollsopple; Medical College of Ohio, Cincinnati, 1905; aged 54; died Mar. 16. He was a member of his county and State medical societies and the A. M. A.

Miscellaneous

DR. FRANK M. BUCKINGHAM, of Tidioute, Warren County, has recovered from a recent operation.

MISS CLARA JUSTICE, R.N., is acting superintendent at the Warren (Pa.) General Hospital.

DR. WILMER KRUSEN, Philadelphia, was re-elected president of the Philadelphia College of Pharmacy and Science, Mar. 31.

GOVERNOR EARLE, on Apr. 9, announced the appointment of Mr. John D. Pennington as Secretary of Welfare to succeed Dr. J. Evans Scheehle, resigned.

THE AMERICAN NEISSERIAN MEDICAL SOCIETY will hold its second annual meeting on May 18, in the Hotel Statler, Boston. All who are interested are cordially invited.

DR. AND MRS. EDGAR M. HEWISH, of Philadelphia, celebrated their fiftieth wedding anniversary, Apr. 15. Dr. Hewish has been practicing medicine for half a century.

DR. IRA A. DARLING, of Warren, has been appointed superintendent of the Springfield State Hospital, Sykes-

ville, Md. Dr. Darling held a similar position at the State Hospital, Warren.

DR. LEWIS C. ROWLES, of Clearfield, has been appointed county medical director of Clearfield County to succeed Dr. Horatio L. Woodside, of Bigler, who resigned last October.

DR. ELMER HIGHBERGER has announced his removal from Pittsburgh to Saranac Lake, N. Y., where he is engaged in the practice of internal medicine with Dr. Lawrason A. Brown.

THE NINETEENTH ANNIVERSARY of the Northern Medical Society of Philadelphia was celebrated on Mar. 17 by a banquet. The guest of honor was Dr. David Riesman; Dr. Arthur C. Morgan was toastmaster.

AT THE RECEPTION of the Medical Club of Philadelphia held Apr. 17 at the Bellevue-Stratford Hotel, the guest of honor was the Honorable Sanford Bates, Director, Bureau of Prisons, Department of Justice.

DR. ROBERT L. HAYES, senior assistant physician at Pennhurst State School, Phoenixville, has resigned to become assistant superintendent of the Blair County Home and Hospital at Hollidaysburg, Pa.

DR. LEROY M. A. MAEDER, Philadelphia, announces his resignation as medical director of the Pennsylvania Mental Hygiene Committee and the devotion of his full time to the practice of psychoanalysis and psychiatry.

AT THE MEETING of the Philadelphia County Medical Society held Apr. 22, the Dr. I. P. Strittmatter Award was presented to Dr. Seth A. Brumm in recognition of his accomplishments in the activities of organized medicine.

DR. JOSEPH C. DOANE, of Philadelphia, is to give the short course in hospital operation offered this summer at Cornell University in the Summer School of Hotel Administration, June 29 to July 11. It is a "refresher" course for those already engaged in hospital work.

THE PENNSYLVANIA RADIOLOGICAL SOCIETY will hold its next annual meeting at the Lycoming Hotel, Williamsport, Pa., June 5 and 6. A very comprehensive program has been arranged and all radiologists and others interested in this specialty are invited to attend.

TRIPLETS BORN IN FLOOD.—According to the Associated Press, Dr. H. M. Welsh brought to a hospital at New Kensington, Pa., Mar. 28, triplets born to a mother, age 21, in a village 12 miles distant. The babies were prematurely born when the mother returned to her flooded home.

DR. CLARENCE R. PHILLIPS, of Harrisburg, trustee and councilor for the Fifth Councilor District of The Medical Society of the State of Pennsylvania, is convalescing from a heart affliction. He was confined to the Harrisburg Hospital for a few weeks and then returned to his home.

MRS. JEANNE BEHREND KELBERINE, of Philadelphia, daughter of Dr. and Mrs. Moses Behrend, has been awarded the Joseph H. Bearns Prize in Music given through Columbia University, New York. The \$1200 prize was awarded the composer for her composition "Children's Pieces" and music written for 4 songs by Sara Teasdale.

A COMBINED MEETING of the Philadelphia Roentgen Ray Society and the Pathological Society of Philadelphia was held Apr. 2, at the College of Physicians. Professor Lacassagne, assistant director, Radium Institute, University of Paris, Paris, France, read a paper on "A Hormonal Pathogenesis of Adenocarcinoma of the Breast."

THE PHILADELPHIA COLLEGE of Pharmacy and Science held its annual Science Day exhibits on Apr. 17-18. The object of the exhibition is to show the variety of apparatus and equipment used by the college each day for instruction. The laboratories at this time are open

for general inspection by the public and demonstrations are given.

THE AMERICAN PUBLIC HEALTH ASSOCIATION will convene in New Orleans, La., Oct. 20-23, for its 65th annual meeting. Dr. Thomas A. Parran, Jr., Surgeon General of the United States Public Health Service, is president-elect of the Association and will be honored at New Orleans. The national headquarters of the American Public Health Association are 50 West 50th Street, New York City.

THE *Pittsburgh Medical Bulletin*, through Dr. George R. Harris, secretary of the Allegheny County Medical Society, announces that there are clinics in 12 hospitals of the Pittsburgh area which afford to practicing physicians the opportunity of obtaining instruction in the latest urologic diagnosis by clinical methods, microscopy, dark-field, serology, kidney function test, pyelograms and cystoscopy. Anyone interested in obtaining this instruction may be properly advised by writing to Dr. George R. Harris, Jenkins Arcade, Pittsburgh, Pa.

GOVERNOR EARLE on Apr. 10 announced the following appointments on the State Advisory Health Board: Dr. Moses Behrend, Philadelphia, succeeding Dr. Ross V. Patterson, Philadelphia; Dr. Richard J. Behan, Pittsburgh, succeeding Dr. William G. Turnbull, Philadelphia; Dr. Erwin S. Briggs, Warren, succeeding Dr. John M. Beck, Alexandria; Dr. Walter S. Brenholtz, Williamsport, succeeding Dr. Saylor J. McGhee, Lock Haven; and Dr. John A. Meehan, New Castle.

WILL ROGERS FUND.—It was announced as of Mar. 14 that a total of \$1,750,000 has been contributed to the Will Rogers Memorial Fund, which with further contributions expected will render a considerable amount of money available for the altruistic work for which the endeavor is established. The sum includes a gift of a hospital valued in excess of \$1,000,000 located at Saranac, N. Y., which is a gift from the National Variety Artists Fund which includes \$500,000 from 5 motion picture theater circuits for the maintenance of the hospital. The bulk of the money will be used to aid handicapped children.

PHILADELPHIA BOARD OF CITY TRUSTS MAKES AWARDS.—The Board of City Trusts, Philadelphia, has announced the names of the winners of the prize awards. Of the 3 recipients one is a physician, Dr. James Ewing, Memorial Hospital, New York City, for his research in classifying tumors. The award consists of a bronze medal and \$1000. It was provided by a \$4000 bequest in the will of John Scott, Edinburgh chemist, who died in 1816. The original award was \$20, but by 1919 the trust fund had increased to over \$100,000 and the court granted the increase in the amount of the award.

INTERNATIONAL CONGRESS ON HEPATIC INSUFFICIENCY.—The International Congress on Hepatic Insufficiency will take place Sept. 16-18, 1937. The proceedings of the Congress will be divided into 2 sections: Medicine and Biology Section, presided over by Prof. Noël Fiessinger, professor of experimental and comparative pathology at the Faculty of Paris; and Therapy Section, presided over by Prof. Mauriac, dean of the Faculty of Bordeaux. The Congress on Hepatic Insufficiency will be preceded by the International Congress on Gastro-Enterology, which will be held in Paris, Sept. 13-15, 1937.

THE MEDICAL ALUMNI of the University of Pennsylvania this year will join in a luncheon at 12 o'clock noon at the Hotel Pennsylvania, May 16, and will march in a body from there to the Palestra to participate in the Alumni Parade with the General Alumni Society. The limitations of the facilities for adequate entertainment at the dormitories account for the change in the meeting place to the Hotel Pennsylvania, where all the requirements will be efficiently met. Five-year classes are urged to participate in this luncheon rather than to hold isolated luncheons elsewhere on that day.

Casuals will be particularly welcome. Dr. Charles W. Burr, the new president, and other members of the Class of 1886 will attend in a body and head the parade.

ACCORDING TO THE ASSOCIATED PRESS, a 23-year-old slayer who entered a Missouri Penitentiary in 1932 was recently delivered of a baby. The girl accused one of the guards last December as being responsible for her condition. The guard was suspended, but after investigation was reinstated.

We know of a woman in a hospital for the insane who in 10 years was delivered of 3 babies; the source of responsibility for the pregnancy was never determined. Another case is that of a neurologic patient, who required 3 nurses daily to convey her from her bed to a rolling chair, who was delivered in another institution of a baby a little over one year after admission; the only possible sexual approach was from the rear, on account of the legs being ankylosed in a crossed position.

THE UNIVERSITY OF PENNSYLVANIA awarded honorary degrees to 2 distinguished physiologists, Mar. 21, in connection with the opening of a series of scientific lectures which were delivered under the auspices of the Eldridge Reeves Johnson Foundation for Medical Physics at the university. The recipients are Dr. Joseph Erlanger, professor of physiology at Washington University, St. Louis, Mo., and Dr. Herbert Spencer Gasser, director of the laboratories of the Rockefeller Institute for Medical Research. These lectures were open to the scientific public. The course of lectures under the Johnson Foundation are given from time to time to form a medium for the presentation of a review of outstanding research work in the field of the application of physics to medicine.

THE OBSTETRICAL SOCIETY OF PHILADELPHIA was host to the New York Obstetrical Society, the Obstetrical Society of Boston, the Pittsburgh Obstetrical and Gynecological Society, and the Washington Gynecological Society, on Apr. 2. Clinics by the members of the Obstetrical Society of Philadelphia were held at the various hospitals in Philadelphia from 9:30 a.m. to 12:30 p.m., and from 2:30 p.m. to 4:30 p.m. A buffet luncheon was served at the University Club.

At 6:30 p.m. a dinner (informal) was given at the University Club by the members of the Obstetrical Society of Philadelphia for their guests. Dr. William A. Jewett, president of the New York Obstetrical Society, presided and Dr. Robert L. DeNormandie, president of the Boston Society, presented a paper on some phases of their Society's maternal mortality report. This was followed by a report by the various guests on the work observed during the day at the clinics.

THE JOHN BERTON CARNETT MEMORIAL.—One of the most gratifying bits of medical news to come to our desk during the past week has been the action of the Medical Alumni Society of the University of Pennsylvania in taking the first step towards the creating of a fitting memorial to Dr. John Berton Carnett for his outstanding work not only in surgery but in support of the University of Pennsylvania. The Medical Alumni function under a very top-heavy title, being the departmental branch of the General Alumni Society, but they function nevertheless quite actively in spite of this handicap of title. It was through the instrumentality of Dr. Carnett that the University of Pennsylvania received the George L. and Emily McMichael Harrison Memorial Fund for General Surgical Research, which is perhaps the largest single bequest ever received by the University for a definite purpose, although the Louis A. Duhring bequest was far from small. Had Dr. Carnett lived he would have been quite a factor in determining the disbursements of this fund as well as the individuals who were to participate in the 11 scholarships bequeathed to the University under this will. The officers and executive committee of the Medical Alumni Society at a meeting Mar. 23, 1936, passed a

resolution requesting the action of the University Corporation in the matter of creating a fitting memorial to Dr. Carnett and suggesting that this take the form of the publication of a memorial volume comprising not only the biography of Dr. Carnett and his principal medical and surgical contributions but contributions from his confreres bearing upon the same line of medical and surgical work. Necessarily the details of such a publication will admit of some compromise, but the principal thing to be noted at this time is the recognition by the alumni of their responsibility toward outstanding graduates of the medical school.—*Weekly Roster and Medical Digest*, Apr. 4, 1936.

AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The annual meeting of the American Association for the Study of Goiter will be held in Chicago, Ill., June 8, 9, and 10. The tentative program is as follows:

Monday, June 8

MORNING

- Dr. J. B. Collip, Montreal, Canada.
Title to be announced.
- Dr. Willard Owen Thompson, Chicago, Ill.
"Interrelations of Pituitary and Thyroid," or "Recent Observations on the Thyroid Hormone."
- Dr. J. Lerman and Dr. W. T. Salter, Boston Mass.
"The Role of Natural and Artificial Thyroid Proteins."
- Dr. H. J. Perkins, Boston, Mass.
"The Interpretation of the Blood Iodine Level Before and After Subtotal Thyroidectomy for Hyperthyroidism."
- Dr. D. Ray McCullagh, Cleveland, Ohio.
"Quantitative Investigations of the Thyrotropic Hormone."

AFTERNOON

- Dr. John De J. Pemberton, Rochester, Minn.
"Hypert thyroid Reactions."
- Dr. S. Hertz and Dr. J. H. Means, Boston, Mass.
"Profound Weight Loss as a Precipitating Factor of Thyrotoxicosis."
- Dr. Frederic A. Collier, Ann Arbor, Mich.
"Liver Function in Relation to Hyperthyroidism."
- Dr. James H. Hutton, Chicago, Ill.
"The Response of Exophthalmic Goiter or Graves' Disease to Irradiation of the Pituitary and Adrenals."
- Dr. Nathan A. Womack and Dr. Warren H. Cole, St. Louis, Mo.
"The Thyroid Gland in Hypoglycemia."

Tuesday, June 9

AFTERNOON

- Dr. Henry S. Plummer, Rochester, Minn.
"Mortality in Exophthalmic Goiter."
- Dr. James A. Lehman, Philadelphia.
"Hyperthyroidism in Children."
- Dr. Arthur E. Hertzler, Halstead, Kansas.
"End Results of Total Ectomies in Interstitial Goiters, Cardiotoxic States, and Spontaneous Myxedema."

(Concluded on page xiv.)



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GOITER PROGRAM

(Concluded from page 664.)

Dr. T. C. Davidson and Dr. David Henry Poer, Atlanta, Ga.

"Goiter in Georgia: A Statistical Study in 500 Consecutive Cases."

Dr. Charles H. Arnold, Lincoln, Neb.

"Control of Hypoparathyroidism."

Prize Award Essay.

Wednesday, June 10

AFTERNOON

Dr. Frank H. Lahey, Boston, Mass.

"Stage Operations in Severe Hyperthyroidism."

Dr. Frederick S. Wetherell, Syracuse, N. Y.

"An Investigation Into the Use of Iodine as a Treatment in Toxic Goiter."

Dr. Alfred H. Noehren, Buffalo, N. Y.

"The History of the Thyroid Gland."

Dr. George E. Beilby, Albany, N. Y., and Dr. John C. McClintock, Arlington Heights, Ill.

"The Pyramidal Lobe of the Thyroid and Its Significance in Hyperthyroidism."

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

MODERN HOME MEDICAL ADVISER. Your Health and How to Preserve It. Edited by Morris Fishbein, M.D. Price \$9.50. 905 pages with 140 illustrations. New York: Doubleday, Doran and Co., Inc., 1935.

No doubt there is a demand for a home medical adviser authentically written. For this reason the *Modern Home Medical Adviser* will fill a niche in any household. The reputation of the contributors to this book and the fact that it is edited by Dr. Morris Fishbein indicate the authenticity of the publication. It affords the lay public information of such a character as will be most pleasing and acceptable to them.

FAILURE OF THE CIRCULATION. By Tinsley Randolph Harrison, M.D., associate professor of medicine, Vanderbilt University School of Medicine. 369 pages, 22 tables, 60 figures. The Williams and Wilkins Company, Baltimore, Md., 1935.

This book, according to the author, deals with the use of modern methods in the study of circulatory disease in its hemodynamic aspects and the proper interpretation of results. He states that he has tried to combine the physiologic and clinical points of view, his methods having been those of the physiologist and biochemist, whereas his interest in the subject and manner of approach have been entirely those of the clinician.

New terms have been introduced such as "hyperkinetic," "hypokinetic," and "dyskinetic" syndromes. Hyperkinetic syndrome and hyperkinetic circulatory disturbance refer to clinical instances in which the physiologic subjective and objective phenomena of circulatory activity appear in an exaggerated form. The hypokinetic syndrome and hypokinetic circulatory disturbance are used to designate the conditions which have been called primary and secondary shock and collapse. These 2 syndromes are briefly discussed in less than 30 pages. The main portion of the book is devoted to the dyskinetic syndrome, which refers to those disorders which are

(Concluded on page xvi.)

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BOOK REVIEWS

(Concluded from page xiv.)

either associated with congestive heart failure or are likely to lead to it at a later stage of the progress of the malady. There is a brief section on mixed types of circulatory failure and one on failure of the coronary circulation.

The author and his colleagues during the past 10 years have accomplished a great amount of work, which is assembled in the book in appropriate relationships. The work of others, however, is not neglected. The author's knowledge of his subject, his facile, clear style, his original point of view, and definite opinions make this volume very interesting to the reader who has some orientation in the field of discussion.

Although the author's opinions are entitled to respect and careful consideration, it is only fair to point out that he sometimes makes himself the protagonist for one side of a controversial question. He always does this skillfully without falling into the common error of confusing hypothesis with what appears to be fact. However, if past history in the field of circulatory dynamics is a guide for the present and future, it is probable that some of the present factual data of today will prove to be erroneous because of (1) undiscovered faults in the methods on which the supposed facts are based and (2) undiscovered factors concerned in the regulation of the circulation. The author leans fairly heavily on the results of cardiac output methods. Although the best methods are now regarded as reasonably accurate provided the circulation is normal, there are many competent authorities who question their accuracy in the presence of circulatory failure.

The book constitutes a stimulating contribution to the subject of disturbances in the dynamics of the circulation. It is heartily recommended to all who have a background of knowledge and interest in this field of work.

BEWILDERED PATIENT. By Marion Staats Newcomer, M.D. Hale, Cushman and Flint, 857 Boylston Street, Boston. Price, \$1.75.

This volume is written for the lay public. It discusses "the medical fads and fancies of the day" and places them in their proper relation to medicine as a whole. The book is well worth-while.

AMERICAN MARTYRS TO SCIENCE THROUGH THE ROENTGEN RAYS. By Percy Brown, M.D., F.A.C.R.; historian and former president, American Roentgen Ray Society. With a short glossary of the scientific terms used in the text. Charles C. Thomas, Springfield, Ill., and Baltimore, Md. Price, \$3.50 net.

This volume was prepared especially for the reader of medical training, but it merits the attention of the lay reader as well. A simple glossary of scientific terms is appended for the assistance of the casual reader.

The careers of this illustrious group of devoted pioneers in the field of roentgenology are not treated as a series of disjointed obituaries. Rather they are woven together by their common relation to the progress of the medical application of roentgen rays in the service of mankind.

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No. 9

CANCER OF THE PROSTATE*

HENRY G. BUGBEE, M.D., NEW YORK, N. Y.

Concerning no other group of urologic cases is there such a hopeless feeling as arises after reviewing the records of cases of cancer of the prostate treated over a long period of time. This feeling is epitomized in the consciousness that comes to the urologist when (after hearing the story—so often repeated by a man of late middle life—of difficulty of urination, dysuria, and terminal hematuria for possibly only a few weeks) the examining finger in the rectum encounters a hard, nodular, fixed prostate, in which even then a tumor may have penetrated the capsule, involving the seminal vesicles and approaching the lateral pelvic walls.

A critical examination of your own cases, which always stand out most vividly in your mind, as well as a survey of recent urologic literature, can leave but one conclusion, i.e., that we are dealing with an essentially fatal disease, and that occasional enthusiastic reports of results obtained in isolated series of cases are either the immediate results obtained by a certain method of treatment, or they represent a group of cases that would react most favorably to any method of procedure—the type of carcinoma, in fact, that would probably grow slowly even though no specific treatment were employed.

A perusal of the histories of clinical cases observed over a period of 25 years affords little encouragement as regards the results to be expected from any one form of specific treatment; however, with an accumulation of experience, the urologist acquires a breadth of vision, a discrimination in classifying cases, and a clearer conception of prostatic carcinoma as regards individuals. This is of real value in outlining the plan of action to be utilized in each case, and also acts as a balance in tempering the enthusiasm for

newer methods of therapeutics and surgical procedure which appear from time to time.

During the period from 1910 to 1920 there was no uniformity of opinion regarding the management of prostatic carcinoma. The plan of attack consisted in attempts to remove the prostate by suprapubic or perineal prostatectomy; or, if enucleation were impossible, to excise the obstructing portion of the gland with the cautery, rongeur forceps, or by punch operations. If these latter incomplete operations were not feasible, permanent suprapubic drainage was established. Radiation was largely confined to surface applications of radium or its occasional insertion into the prostate by means of needles.

Radiation during this period, being in the experimental stage, was little understood as regards refinements in the technic of its administration, and the use of diathermy and roentgen rays was handicapped through the necessity of employing inefficient machines of low potentiality.

In 1917 the writer reported a series of 78 selected cases of prostatic obstruction, treated during the period from 1911 to 1917, in which an attempt was made to eliminate the obstruction by means of fulguration. Among these cases there were 15 in which the obstruction was due to carcinoma. In these cases a groove was burned through the obstructing median lobe, or through the posterior elevation of the vesical outlet, in an attempt to re-establish bladder function; or, if the latter were not possible, to facilitate catheterization by enlarging the vesical outlet.

One of these individuals lived a very active and important existence in comparative comfort from 1912 to 1918. Although, when first seen, the prostate was very large, hard, nodular, and fixed, giving rise to partial and occasionally com-

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

plete retention, the patient was never obliged to be catheterized regularly, and he finally succumbed to carcinoma of the colon at age 81. A second patient lived under catheter life for 19 years, finally dying of arteriosclerosis; while a third patient, age 68, with complete retention was sufficiently relieved of his obstruction to make his life, under partial catheterization, bearable for 3 years before succumbing to general metastasis. The average length of life in this series was 31 months after the diagnosis was made, death supervening from metastases, pyelonephritis, and intercurrent disease. These cases are especially interesting in retrospect, as the method employed corresponded in theory to our present-day resections. Owing, however, to the inefficient armamentarium of that period, the procedure was necessarily slow and incomplete in accomplishing its limited purpose. It was abandoned for other more radical methods of procedure.

The next few years of the following decade saw an extension in the use of radiation, especially as regards the employment of radium in the form of the element or of emanations.

Under the effect of radium applied to the rectal, urethral, and bladder surfaces of the prostate, inserted into the gland by means of properly screened needles and seeds and used externally in the form of packs, the hard, nodular, fixed prostate often receded, became softer, and hope was entertained that the use of radium might result in cure.

However, coincident with these local changes, the patient also became toxic and emaciated. With retention unrelieved in almost every instance, he faded away and died.

In 1921 the writer read a paper before the American Urological Association (in Montreal) on "Experiences with Radium in Cancer of the Prostate," 17 cases treated over a period of 2 years being reported at that time. In these cases radium was employed as follows: In 5, needles bearing radium element were introduced into the prostate through the perineum and applications made to the rectal, urethral, and vesical surfaces; in 4, needles were inserted into the prostate from above (through a suprapubic cystostomy opening), supplemented by needles introduced through the perineum; in 2, a punch operation was supplemented by radium; and in 2 others, a resection of the bladder and prostate was followed by radiation. During this same period, 4 cases of extensive carcinoma with metastasis had suprapubic drainage only. All of the latter patients succumbed in from 6 weeks to 2 years; all had large, hard, fixed, nodular pros-

tates, involvement of the seminal vesicles, and metastases; and, while relief of the retention diminished the local pain and discomfort associated with efforts to void, and the distress incident to catheterization, nevertheless the constant attention required in combating phosphatic deposititis and in maintaining the caliber of the suprapubic sinus left much to be desired in the comfort of these patients.

The 5 patients treated by needles inserted through the perineum, supplemented by surface applications, presented in 2 instances a single circumscribed stony hard nodule—one in an individual in whom I had done a prostatectomy 2 years previously, the pathologic report at that time being hypertrophy. This latter patient responded to radium, the nodule disappearing, and he lived 12 years to die of coronary thrombosis. The second had a limited growth which was kept under control by radium; the patient, however, became dependent upon catheterization and succumbed to pyelonephritis 8 years later. The remaining 3 of this group had extensive growths which had penetrated the capsule involving the vesicles; they lived 2, 3, and 6 years respectively—years of toxemia in which they were partially dependent upon catheterization—all dying of metastases and pyelonephritis.

The 4 patients having suprapubic drainage, with needles inserted both from the vesical and perineal aspects, supplemented by surface applications of radium, all harbored large growths. Three died in 11, 17, and 22 months respectively. The fourth patient in this group is alive and well 14 years after operation. This patient had complete retention in February, 1921. Little encouragement was given to him as to the possible improvement to be derived from any form of treatment, and no hope of cure. He received radium needles suprapubically, which were inserted into the gland parallel to the urethra, also through the perineum; and, later, surface applications. The cystostomy opening was allowed to close 4 weeks after operation; urination was resumed, and the patient has been under observation to the present time. He now has no frequency, dysuria, or retention. Four years ago he had an epididymitis, which rapidly subsided following gentle massage of the prostate and vesicles. The prostate seems to be largely destroyed, is irregular on the surface, with areas of apparent fibrosis which surround softer areas of necrosis, possibly sharply circumscribed nests of carcinoma. The ejaculatory ducts have not again become occluded, and, when last seen 6 months ago, at age 63, he was in excellent condition.

The 2 patients having a resection of the bladder wall and adjacent prostate, supplemented by radium, lived 16 months and 8 years respectively, the latter having an implant in the scar which disappeared after radiation, death in this case being due to coronary thrombosis.

In the 2 patients having a punch operation and radium, one had a single stony hard nodule in the posterior lobe, which disappeared. When seen 2 years ago, he was well. In the second, a large nodular, fixed gland became smaller and softer after radiation. The residual urine, however, was not reduced below 4 ounces, and after one year he was lost from observation.

The immediate result in these cases, i. e., the shrinkage and softening of the prostate, was encouraging; but the toxemia, always present when large doses were required, and the failure to restore bladder function when radiation only was employed led to a discontinuance of the use of radium except in instances of limited, circumscribed, prostatic growths, or as an adjunct to some type of surgical procedure.

To summarize the follow-up on these 17 cases reported in 1921: All 4 patients having only drainage died within 22 months. The 5 patients in whom radium needles were implanted through the perineum, supplemented by surface applications, lived 2, 3, 6, 8, and 12 years respectively. (In the latter 2 there were circumscribed nodules at the time of operation.) The first 3 died of metastases; the latter 2 of pyelonephritis and cardiac failure. Of the 4 patients having needles suprapubically and perineally, also surface applications, 3 died within 23 months; the fourth is alive after 14 years. The 2 patients having a resection of the bladder and prostate and radium lived 16 months and 8 years respectively, the latter dying of cardiac failure. Of the 2 patients having a punch operation and radium, one lived 11 years and the second was lost from observation.

The patients having radiation for more than an isolated, circumscribed nodule all had a profound toxemia, and those having surface applications suffered from local irritation—in several instances even to the extent of an ulceration of the rectal mucous membrane.

During the past 13 years, 69 additional cases of carcinoma of the prostate have been under observation. A wide variation of pathologic involvement has been presented by these cases, ranging from a single small nodule in an atrophic prostate (discovered at necropsy) to a growth nearly filling the bony pelvis, involving vesicles, bladder, and rectal wall.

The chief condition predisposing to prostatic

cancer is given by Ewing as chronic hypertrophy. Various observers have estimated that early cancerous changes are revealed in about 19 per cent of cases, but a satisfactory elimination of previous hypertrophy (by which means it would be possible to determine their true relation) has never been routinely carried out.

While the average age of incidence is approximately the same as in hypertrophy, carcinoma presents a wider spread, a larger percentage of cases being found in men between ages 50 and 60, than is true in hypertrophy; isolated cases have been reported in boys as young as 17 years. Furthermore, a fair number of patients, when first seen, have a large growth already penetrating the capsule, and yet the urinary symptoms may be of short duration, so that we must conclude that if the hypertrophy was of long standing it did not give rise to symptoms until malignant degeneration had taken place.

The presence of malignant degeneration in the hypertrophied prostate has been demonstrated in microscopic sections of prostates after removal. In the same field hypertrophy may be observed, rarely pure adenoma, and adenocarcinoma. In the early stages, carcinoma may appear in a single or in multiple foci. Although the whole gland is usually enlarged, hard, and fixed, one lobe is frequently the predominating or only seat of the disease.

Arising in an atrophic gland, the prostate may remain small while metastases become general. Carcinoma may also arise in the glands of the prostatic urethra (the glands of Albarran), or entirely apart from associated hyperplasia, in the posterior lobe or lamella, this latter being formerly conceded by many, and emphasized by Geraghty and Young, as the site of the primary focus in a large percentage of cases.

Chronic inflammation seems to be a predisposing factor in many cases of prostatic carcinoma.

The spread of prostatic cancer takes place along the planes of least resistance and by metastasis. The capsule of the prostate resists invasion, but is commonly penetrated first along the seminal vesicles. According to Sappey, the prostate is richly supplied with lymphatics through which carcinoma extends to the pelvic glands or, by the perirectal plexus, to the abdominal glands. Dissemination through the blood stream may be early, distant metastases often being detected before the development of local symptoms. So common are metastases in carcinoma of the prostate (skeletal metastases being found in approximately 70 per cent of

cases) that the diagnosis of prostatic cancer may be made by the roentgenologist.

In the study of these 69 additional cases during the past 13 years, many interesting phases of the disease have been demonstrated. With such wide variations in local pathology as were presented, with the presence or absence of metastases, and with patients of widely varying ages, general physical condition, and environment, the handling of each case has been an individual problem, the only procedure by which it was possible to give relief of symptoms.

Following is a brief report of 35 cases of carcinoma of the prostate treated between June, 1921, and May, 1932. Three cases in the medical wards were diagnosed after the discovery of skeletal or lung metastases. In only one were urinary symptoms at all prominent, and none were given specific treatment. In a fourth case the prostatic cancer was discovered at necropsy.

That a circumscribed lesion may remain inactive for a long period of time was demonstrated by 4 patients, 2 of whom are still alive, having been observed 10 and 8 years respectively. During this time, in one instance, a stony hard nodule in one lateral lobe has not appreciably changed, and urinary symptoms have not increased aside from 2 attacks of retention—one after an operation for ruptured appendix, and the second with a urinary infection following an attack of influenza. In the other case there has been moderate perineal discomfort, which has not increased. The other 2 patients lived 3 and 7 years respectively, both dying of cardiac failure. All 4 of these patients have been more comfortable than they would have been under any form of surgical treatment or radiation. Had they been subjected to any specific treatment and survived for the same period of time, such treatment would undoubtedly have been given a high rating.

On the other hand, 4 patients presenting a similar pathology but in better physical condition were given radium seeds or needles implanted through the perineum into clearly defined nodules, the dose in each being carefully graded. In each instance the nodule receded rapidly, the patients living 3, 5, and 7 years respectively, 2 dying of cardiac disease and one of metastases. The fourth is alive 12 years after treatment. The prostate in the latter case is now small, contracted, fibrous, but not hard, and urination is normal. This patient developed a carcinoma of the left breast 4 years after the prostatic nodule was discovered, and this also disappeared following radiation.

In 3 cases, diathermy was employed to destroy

a bladder growth and adjacent prostate which was involved in the carcinoma. One was under control for 4 years; the second, 3 years; and the third, 7 months. All these patients died of metastases. Another similar patient is alive 8 years after destruction of the prostatic and bladder growth with the electrocautery, followed by radiation in the form of implanted seeds.

Two patients had a cystostomy and punch operation, one living 2 years and succumbing to pneumonia. The second has recently had an endoscopic resection, 5 years after the original operation, and is now receiving deep roentgen-ray therapy for a recurrence. He has no urinary difficulty, his only symptom being occasional hematuria.

A patient having only a transurethral punch operation lived 5 years, dying from intestinal obstruction. Three others had a cystostomy only, one dying of diabetes 5 months later. The second died of metastases in 6 months. The third is alive after 5 years. In another case, after radiation in the form of seeds and needles introduced through the perineum, the bladder was opened suprapubically with the intention of doing a punch operation subsequent to a period of drainage. It was later found that the prostate could be enucleated without difficulty; the growth, however, which seemed at the time to be localized, spread rapidly, the patient dying 4 months later.

The association of cancer with hypertrophy has been well demonstrated in a group of cases in which a prostatectomy was carried out, the diagnosis before operation in each case being benign hypertrophy; carcinoma was reported on microscopic section. In 1929 the writer reported a series of 7 cases, in only 3 of which was the possibility of malignancy suspected before operation. In all but one instance, one or more malignant foci were found in the lateral or median lobes, a scirrhous growth associated with adenomatous areas being present in the remaining case. Of these patients, one died of metastases 2 years postoperatively. The second, at the end of 5 years, died of coronary thrombosis, necropsy showing no evidence of carcinoma. Three of this series have been seen during the past year and are in good health 9, 7, and 6 years, respectively, after operation; 2, however, have had for the past 2 years an area of induration in the region of the posterior lobe, which during this time has not changed in size or character.

One of the most interesting cases of the past decade was a man, age 68, who, one week after a suprapubic cystostomy preliminary to a pros-

tatectomy, sustained a spontaneous fracture of the femur while getting out of bed. Roentgen-ray studies showed metastasis in the bone; and the prostate, when subsequently removed, showed carcinoma. He obtained union in the femur and was alive and well 3 years after operation.

Another patient, 2 years after a prostatectomy, died of diffuse metastatic carcinoma of the lung with no primary focus that could then be discovered. Previous to the prostatectomy a small superficial growth was destroyed by fulguration. This growth seemed to involve only the mucous membrane over the prostate, and the gland, on removal, did not show carcinoma; however, it is fair to assume that the prostate was the primary focus. During the past few weeks, a patient who had a prostatectomy in 1930 developed retention, and sections removed at a recent endoscopic resection showed carcinoma. Two more patients may be added to this list of hypertrophy showing malignant degeneration, one of whom died an accidental death after 4 years, at which time he had a recurrence; the second died of metastases after 19 months. The frequent inability to separate the 2 lesions, i. e., hypertrophy and carcinoma, as demonstrated by these cases, is a strong argument in favor of the complete removal of large prostatic hypertrophies.

During the past 3½ years 41 endoscopic resections have been carried out upon 34 patients for carcinoma of the prostate with no operative mortality and but 4 subsequent mortalities, 3 from general metastasis and one from cardiac disease. All of these patients had residual urine varying from one ounce to complete retention; in all, urinary function was restored. No radium has been employed in these cases, and deep roentgen-ray therapy only to control hemorrhage before operation. In none did the gland recede under roentgen therapy, and in 2 the urinary symptoms were aggravated.

In every case of retention, whether metastases were present or not, resection was carried out and function restored. In the cases of small, hard, nodular, fixed prostates, symptomatically the results obtained over a period up to 3 years have been more satisfactory than from any method of procedure employed up to the present time; the same is true also of large growths involving the capsule, the vesicles, and even the bladder wall. In every case it was possible to pass the resectoscope after sufficient dilatation of the urethra. With the removal of tissue, there is little, if any, tendency for the remaining gland to fall into and occlude the vesical orifice, as the tissue is firm and fixed. If the orifice is

well freed of encroaching growth it remains open, certainly for an appreciable length of time, as to date none of these cases have returned for re-operation. Infection is a complication to be considered, especially in the instance of large growths, many of which cases have a pyelonephritis.

In cases of carcinoma not more than the obstructing portion of the gland can be removed by resection, although the destructive effect extends well beyond the cut surface when a powerful electrocautery current is employed. For this reason the resectoscope is more efficient in these cases than is the punch. The most distressing symptom, retention, is relieved, however, and with the absence of tenesmus and dysuria, local congestion subsides and pain in the perineum and legs diminishes.

Hemorrhage is less pronounced as a complication of resection for carcinoma than in cases of hypertrophy. There seems also to be less shock accompanying the operation.

These patients have been followed since resection, and in no instance has the growth appeared to be stimulated by the operation, nor has an extension locally or by metastasis been accelerated, as has been asserted by certain writers.

In 3 instances an adjacent bladder tumor was resected endoscopically with the prostate. Two of these patients are free of growth in the bladder and have good bladder function a year after the resection. In the third, bladder function is normal, but the hard sessile tumor base remains, and deep roentgen-ray therapy is now being employed. Hemorrhage from the bladder growth is under control and the growth is receding.

I have hesitated to use radium in the cases that have been resected. Barringer has stated that not more than 20 per cent of prostate carcinomata are radiosensitive, and I did not wish to add toxemia (with the slight possibility of eliminating more of the growth) when the patients derived so much comfort from the simple re-establishment of bladder function.

By following these cases of resection over a longer period of time and by constantly adding to the numbers, we shall eventually be able to compare the clinical course with that of cases treated by other means, i. e., radiation and open operation, or by various combinations of treatment.

To summarize the results in these cases: Of the 17 cases reported in 1921, one is living 14 years after suprapubic cystostomy and radiation in the form of radium needles introduced from the bladder and perineal aspects. Of the 35 patients treated from 1921 to 1932, 11 (31.35 per

cent) are living—over a period varying from 4 to 12 years. Those living were treated as follows: No operation or radium, 2; radium needles for limited nodules, 1; cystotomy, cautery, and radium, 1; cystotomy, punch operation, and resection, 1; cystotomy and subsequent resection, 1; prostatectomy, 5. The percentage (42.5 per cent) living after prostatectomy is higher than that following other methods of treatment; in more than half of these cases, however, the predominating pathologic involvement was hypertrophy, the carcinoma being discovered only on microscopic section.

Six of the deaths were due to intercurrent disease, 18 (51.3 per cent) dying from the disease during this period of 11 years.

Of the 34 cases of carcinoma of the prostate resected between May, 1932, and Oct., 1935, 7 required another resection before leaving the hospital. There have been 4 deaths subsequent to resection—3 from metastases and one from cardiac failure. More time must elapse before judgment can be passed upon this method of procedure.

Young has strongly urged radical perineal prostatectomy for cancer and in a recent paper gives a prospect of 75 per cent 3-year cures in cases diagnosed as carcinoma before operation. These cases obviously do not include large growths with extensive periprostatic involvement. It is quite possible that in exactly the same type of cases relief from symptoms may be obtained over an equal period of time by other methods of attack.

As shown by the cases cited, certain types of prostatic carcinoma which are limited and grow slowly may do well after removal, resection, or radiation. In other instances the growth will extend and metastasize rapidly; in such, any method of treatment or operation will produce only temporary results. Seldom are such cases as the latter subjected to surgery; therefore, the cases upon which surgery is employed are the most favorable ones for any form of treatment, whereas radiation is most often employed in the form of radium and deep roentgen-ray therapy in the more advanced cases and only as a palliative measure. These facts must be taken into consideration in comparing the results with those obtained by surgery. All recent cases with retention have been resected, and likewise the results of this form of treatment must be judged accordingly.

Statistics show that carcinoma of the prostate occurs in approximately 20 per cent of all cases presenting vesical neck obstruction; this has also been my experience. Emphasis has repeatedly

been laid upon the necessity of early diagnosis, placing responsibility for early recognition of the disease upon the general practitioner.

Unquestionably a rectal examination should be a part of every physical examination on a male patient, and health examinations are constantly becoming more of a routine by the more intelligent classes, as well as compulsory by insurance companies, many business institutions and corporations. It is quite possible that through such channels an occasional case will be discovered in its incipency; but, on the other hand, the untrained may easily overlook a single hard nodule and mistake an area of hardness for inflammatory induration or a fibrous prostate, and in the light of the slow onset of symptoms little importance may be placed upon it. Furthermore, prostatic calculi may easily be confused with carcinoma, but should be differentiated by the use of roentgen rays.

A patient seen recently had no urinary symptoms whatever nor local pain until one month ago; yet his prostate was stony hard, nodular, fixed, and the growth (grade 3) had extended through the capsule, involving the vesicles and trigone. Urination was difficult; residual urine varied from 4 to 6 ounces. Resection was carried out without difficulty, and function has been restored.

It is possible that in this case the growth might have been discovered on rectal examination one or more years previously, but there were no symptoms to suggest its presence. I have occasionally had patients with advanced carcinoma sent to me by insurance companies, in whom the carcinoma was discovered on routine examination, such patients having no subjective symptoms.

It was formerly believed that carcinoma of the prostate was always primary in the posterior lobe. This has often been disproved; in many cases, as in the 7 cases published by the writer, nodules may be found in the center of hypertrophied lateral lobes.

Encroachment upon the vesical neck occurs as a rule when the disease has become advanced; ulceration through the mucous membrane of the urethra or bladder seldom occurs except late in the course of the disease; the onset of urinary symptoms is often sudden, severe, and of short duration. Hematuria, although more commonly present than in hypertrophy, is not a constant symptom.

The same holds true for metastases, the prostatic growth occasionally being discovered in a search for a primary growth after metastases

have been detected; or metastasis may take place late in the disease. Not only may the pelvis, vertebrae, long bones, ribs, and lungs be the site of metastases, but, as in one of the writer's cases, practically every bone in the body may show involvement. This patient was able to move about until a few days before succumbing to uremia.

Finally, the question arises—what have we to offer these unfortunate patients harboring a prostatic cancer which at the time it is discovered is essentially fatal? Charles H. Mayo has said that, whatever we do for carcinoma of the prostate, it probably will be wrong.

Certainly every case warrants a most careful study entered into without bias and without a preconceived plan of action before analyzing the individual facts. If we estimate possible cures upon a 3 or 5 year basis, in selected cases, i. e., those in which the carcinoma has not invaded

the tissues beyond the reach of radical excision, operation, resection, or radiation, or a combination of these methods may give a fair percentage of success over such a period of time.

The urologist should have an open mind regarding the possible benefits to be derived from each method of treatment and in the light of broadening experience select without prejudice the procedure which gives promise of the best chance of relief to the individual, remembering that certain operations may readily prove to be mutilations, that by such the growth may become activated and generalized, and that in certain instances no treatment may be the most warranted and humane procedure.

Certainly, in resection, a procedure has been added to our possibilities which gives much comfort without extensive surgery. Only time will show how permanent this relief will prove to be.

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THE HEART IN TOXIC GOITER*†

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Great advances have been made in the past few years in thyroid physiology, in the chemistry of thyroxin, and in the interrelationship of the thyroid gland with others of the endocrine system, particularly with the anterior lobe of the pituitary. The chief function of the thyroid gland still remains that of controlling bodily metabolism, heat production, and oxygen consumption. It is an organ capable of wide fluctuations in functional activity and marked changes in weight, size, and histologic appearance, dependent largely on the iodine supply in the soil and the environment of the individual and on his manner of living but especially on the degree of stimulation, normal or otherwise, exerted upon it by specific substances, particularly the thyrotropic hormone of the pituitary.

The iodine store of the thyroid gland varies inversely with the degree of active hyperplasia. The normal thyroid weighs from 20 to 25 gm., and its maximum iodine storage is from 10 to 25 mg., the average being about 12. Although these facts are of importance, the most important single contribution to our knowledge of the physiology of the thyroid was that made by Magnus-Levy, who in 1895 demonstrated that bodily metabolism was abnormally reduced in

myxedema but could be restored by the administration of desiccated thyroid substance. It was Magnus-Levy who demonstrated, also, the excessive secretion of the thyroid hormone in Graves' disease and who first showed that in this condition cellular metabolism was accelerated and, therefore, an increased load placed upon the heart.

The heart is markedly susceptible to the effects of oversecretion of the active principle of the thyroid. The recent experiments of Lewis and McEachern showed that the tachycardia of thyroxin-treated rabbits continues for hours even after the heart has been transferred to Ringer's or Locke's solution. Experimental animals treated with thyroxin over a considerable period of time exhibit all the cardinal symptoms of hyperthyroidism, other than exophthalmos, presenting loss of weight, tachycardia, nervousness, and elevated basal metabolism. It has also been shown by Lewis that the hearts and auricles of thyroid-treated animals continue to beat at a much faster rate than those obtained from normal animals, which seems to indicate a persistence of thyroid effect on isolated cardiac tissue.

The most significant contribution yet made to the subject of the interrelationship of the thyroid and pituitary is that by Smith and Allan, who devised methods of excising the pituitary in tadpoles and who demonstrated that the an-

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terior lobe was truly the controlling influence in the functional state of many organs, particularly the thyroid, sex glands, and adrenals. Although there are substances in the anterior lobe of the pituitary which particularly affect body growth, the gonads, the adrenal cortex, and probably many other organs, its stimulating effect on the thyroid is now distinctly understood. Sufficient work has appeared to prove conclusively that the thyroid may be stimulated by this agent and probably only by it. It is probable, therefore, that an increased activity of this factor accounts for hyperthyroidism, and its decrease or exhaustion is the cause of thyroid disintegration and the production of myxedema.

The classical demonstration of Allan and Smith, that the removal of the anterior hypophysis causes rapid shrinking in all elements of the thyroid and that these atrophic glands can be restored to normal and even made hyperplastic by the parenteral administration of the anterior lobe of the hypophysis, constitutes one of the most significant recent contributions to our knowledge of the thyroid physiology.

Next to the thyroid, the pituitary and ovary contain larger amounts of iodine per gram of

weight than any other organ in the body. It is obvious, therefore, that there is a close interrelationship, chemically as well as physiologically, between the gonads, pituitary, and thyroid. Total removal of the sex glands in the experimental animal produces involution of the thyroid with decrease in metabolism, whereas accelerated thyroid activity increases the irritability of the sympathetic nervous system, which probably accounts in a large measure for the characteristic cardiac manifestations seen in practically all cases of toxic goiter.

It is obvious that exophthalmic goiter is not a primary thyroid disease. As Marine has pointed out, we are justified in believing that the condition is not caused by any specific virus or toxin or the presence of any specific substance. Simple endemic goiter is a compensatory hypertrophy instituted by the thyrotropic hormone of the anterior pituitary in response to demands, normal or abnormal, of the body for thyroid secretion. Goiter, therefore, is a deficiency disease due primarily to an insufficient supply of iodine.

In hyperthyroidism the heart, because of increased bodily metabolism and need for oxygen,



Fig. 1

Advanced exophthalmic goiter with great emaciation, anemia, auricular fibrillation, congestive failure, edema of legs, ascites, pleural effusion, and dementia.

Preoperative preparation followed by ligation of superior thyroid arteries in 2 stages; marked improvement in 8 weeks with weight gain of 16 pounds. Bilateral resection of thyroid gland then performed.

The same patient one year later. Complete restoration to health; normal basal metabolic rate; normal cardiovascular and renal functions; normal electrocardiogram. Total weight gain of 42 pounds.



Fig. 2

Young woman with rapidly developing exophthalmic goiter. Cadaveric emaciation. Auricular fibrillation and congestive failure.

The same patient 6 years later. Complete and permanent recovery following 2-stage thyroidectomy. Normal cardiovascular system, electrocardiogram, basal metabolism, etc. Total weight gain of 18 pounds.

is abnormally overtaxed. In the individual patient this is most strikingly evidenced by tachycardia being present at all times, even when the patient is sleeping. The physiologic changes which occur in the disease when cardiac symptoms predominate result from the greatly increased bodily metabolism following an abnormal supply of thyroxin thrown into the blood stream from the hyperactive gland. To supply the increased oxygen requirements of the tissues the pulse rate is increased, the blood pressure raised, the minute volume of the flow of the heart accelerated.

The specific effect upon the heart in thyrotoxicosis is well known. Even the perfused heart of the experimental animal shows evidence of stimulation when it is subjected to thyroxin poisoning. Isolated segments of muscles from such hearts will, in vitro, react with increased activity when they are stimulated by thyroxin. Although poisoning by thyroxin affects the heart through its action upon the organ's intrinsic nerve mechanism, such experiments also demonstrate that the muscle itself is influenced by the hormone. While these facts have become firmly established, necropsy studies of patients dying of thyroid crisis fail to show definite changes in the heart muscle which can be attributed purely to a specific intoxication. Structural changes other than those of hypertrophy are rarely observed in the human dying from Graves' disease, the same being true of the hearts of the

experimental animal poisoned by thyroxin. The chief pathologic effect of the hyperactive thyroid on the heart itself is chiefly to produce a work hypertrophy.

While no definite histopathologic changes are found in the myocardium, it has been definitely established that hypertrophy as a definite entity may result primarily from hyperthyroidism and not be dependent on a pre-existing cardiac lesion. Examination of patients dying from thyrotoxicosis reveals that there is definite increase in the size of the heart, even though histologic studies of the myocardium fail to show changes which are characteristic.

The chief cardiac symptoms associated with increased metabolism resulting from thyroid overactivity are increased blood pressure, tachycardia, dyspnea, orthopnea, and the various disturbances of rhythm, particularly auricular fibrillation and sometimes flutter and even heart block, all the result of direct action of thyroxin on the heart's muscular system itself and upon its sympathetic nerve supply.

Patients with normal hearts who develop hyperthyroidism which is properly treated rarely experience serious cardiovascular embarrassment. The majority of thyrocardiacs are individuals who, previous to the onset of thyroid disturbance, suffered from organic disease of one type or another, or who, possessing normal hearts primarily, become neglected or misman-

aged cases of severe and advancing hyperthyroidism.

With patients of the pronounced cardiac type it is not unusual for a diagnosis of mitral stenosis to be made even when no valvular disease exists, the signs on which the diagnosis is based being purely the result of the organism's increased demand for circulating oxygen. Such signs and associated symptoms promptly disappear as a rule following resection of the gland with the consequent reduction of the hyperthyroidism. Patients suffering from thyrotoxicosis, particularly if there has been no past history of tonsillitis, rheumatic fever, chorea, *etc.*, will more often than not be found to have no organic endocarditis even though apical murmurs may be heard.

An important group of thyroid patients in whom a correct diagnosis is frequently not made, or with whom a diagnosis of organic cardiac disease is arrived at without the true nature of the cause of the symptoms being understood and proper treatment instituted, is that group usually past middle life and not presenting exophthalmos. These patients often have nodular goiters of many years' standing and suffer from so-called apathetic or masked hyperthyroidism. Examination

usually reveals but slight indication of Graves' disease, but evidences of cardiac involvement are often pronounced, even to the point of presenting the signs of congestive failure. Such patients are too frequently treated as cases of simple myocarditis with but little or no attention paid to the thyroid as the chief cause of the trouble. Consequently they become permanently invalidated and remain so because the rôle being played by an existing goiter is not recognized. Experience has shown that with such cases any form of treatment other than that aimed at relieving the hyperthyroidism is completely futile. Although digitalis, rest, and the other forms of treatment commonly utilized in the care of approaching decompensation are helpful, nevertheless they ultimately fail unless the thyrotoxicosis is relieved by a partial thyroidectomy. While sinus arrhythmias may be temporarily controlled by the use of quinidine and the heart's action improved by the administration of digitalis, the relief is usually but temporary and is never complete until a decrease of thyroid hyperactivity is brought about by surgical resection of the gland.

It is generally accepted that hyperthyroidism of itself can produce hypertrophy and dilatation of the heart, which may be difficult to reveal by



Fig. 3

Acute exophthalmic goiter with early cardiovascular symptoms, tachycardia, and beginning fibrillation.

The patient, 3 years later, completely restored with normal basal metabolism and cardiovascular system. Total weight gain of 13 pounds.



Fig. 4

Advanced exophthalmic goiter with auricular fibrillation and generalized anasarca. Superior pole ligation in 2 stages, followed in 2 months by bilateral resection of thyroid gland in 2 stages.

The same patient several years later. Complete relief of former cardiovascular and thyroid symptoms.

palpation and percussion but which can usually be demonstrated on the 7-foot roentgenogram.

The importance of careful preoperative preparation of all thyrocardiacs and the skillful selection of the time and type of operation (whether unilateral lobectomy or bilateral resection or even ligation), the amount of tissue to remove, and—what is more important—the amount to leave are all matters that must be considered by the surgeon. Every case of toxic goiter with complicating cardiovascular involvement is a law unto itself and must be treated accordingly.

Adequate care of these patients demands the closest co-operation between the cardiologist and the surgeon, between the internist and the operator skilled in the surgical treatment of goiter. Careful preoperative preparation under their direction followed by an accurately planned and properly executed subtotal thyroidectomy will produce immediate improvement with subsidence of the evidences of thyroid toxemia and its associated cardiac symptoms. Rest, the administration of digitalis and the use of quinidine after the operation if auricular fibrillation exists, the free administration of fluids, the giving of carbohydrates and the administration of Lugol's solution,

and mild sedation if necessary are all important details in the patient's care.

The improvement which follows appropriately planned preoperative treatment, the striking change in the patient's condition, the rapidly decreasing metabolic rate, decreasing nervousness, and improvement in the cardiac function—particularly following the use of iodine—must not be permitted to give a false sense of security. Continuation of the use of iodine with the expectation that cure will result from its prolonged use without surgical intervention is one of the common practices of the time and one most futile and even dangerous. Ten to 20 days' administration of iodine is generally sufficient to put the average patient in a satisfactory condition for operation. However, patients who are especially grave cardiac risks frequently require a longer course of treatment. With such patients it is best to perform a superior pole ligation as a test of the patient's ability to stand the shock of a thyroid operation, or at least to proceed with the resection of but one lobe at a time. The mistake must never be made of continuing the iodine treatment indefinitely without supervision, because this procedure produces an iodine-fixed or iodine-

tolerant gland. Thyroids so saturated again become hyperactive with a rapid reappearance of all the symptoms incident to an increased secretion of thyroxin, and the condition is uncontrollable by further iodine administration.

Multi-stage operations are particularly indicated in the serious risk thyrocardiac with whom great care must be taken in the selection not only of the type of operation but especially of the time for its performance. With care, however, even the most seriously ill can be tided along step by step until the entire gland is ultimately resected and the patient's health restored.

Patients suffering from cardiac disease associated with exophthalmic goiter may be grouped as follows: Those with acute hyperthyroidism and primarily normal hearts; those with hyperthyroidism with a preceding history of rheumatic fever and secondary heart involvement; and those with hyperthyroidism associated with arteriosclerosis, permanent cardiovascular changes, and hypertensive heart disease. In all types, however, hyperthyroidism is the chief factor in producing the symptoms or accentuating those already existing. The keystone of the plan of treatment, therefore, consists of prompt control

of the thyrotoxicosis, which is most promptly achieved by adequate preoperative treatment followed by subtotal thyroidectomy.

Patients with cardiac symptoms will include not only those with toxic goiter who have associated heart trouble but also those with established auricular fibrillation or with congestive failure. Seventy per cent of patients with auricular fibrillation can be cured and the auricle returned to normal rhythm following removal of the goiter.

The murmurs found in cardiac disease associated with hyperthyroidism are usually systolic in origin, are heard at the apex, and are often the result of a relative mitral insufficiency. Such murmurs are frequently interpreted as resulting from primary valvular disease, the most common error being the making of a diagnosis of mitral stenosis. All too frequently physicians treat patients for mitral endocarditis without recognizing an underlying and obscure Graves' disease. Auricular fibrillation is the commonest alteration in cardiac rhythm. If it is present, particularly in patients past middle life, hyperthyroidism should always be suspected and definitely ruled in or out.

Eighty per cent of patients with congestive



Fig. 5

Long-standing multiple adenomatous goiter of small size. Total goiter weight but slightly greater than that of normal thyroid. Recent evidence of hyperthyroidism with edema and approaching decompensation.

The same patient 8 months later following bilateral resection of the thyroid gland. Normal cardiovascular function at present. Total weight gain of 20 pounds.



Fig. 6

Exophthalmic goiter with markedly elevated basal metabolic rate, great weight loss, auricular fibrillation, and congestive failure.

The same patient 9 months later following bilateral resection of the thyroid. Total weight gain of 37 pounds.

heart failure associated with hyperthyroidism develop fibrillation. It was formerly believed that congestive failure could result from exophthalmic goiter only when there had been pre-existing organic disease of the heart, but it is now definitely known that severe hyperthyroidism can produce all the symptoms and signs of congestive failure solely as the result of overtaxing a formerly normal organ.

In the preoperative preparation of the advanced cases it is to the two particularly important manifestations of cardiac involvement, auricular fibrillation and congestive failure, that treatment must be especially directed. Although auricular fibrillation is not of grave import, congestive failure requires the most careful management and adequately prescribed treatment consisting chiefly of rest, digitalis, and the administration of Lugol's solution. While these patients will cause the greatest anxiety, in no form of cardiac disease are the results of scientifically directed treatment more brilliant than with the patient suffering from exophthalmic goiter associated with cardiac failure. Although the risk of surgical treatment in uncomplicated hyperthyroidism is slight, the mortality being under 1 per cent, it is tremendously increased when the symptoms are of long standing, especially if congestive failure develops.

Congestive failure, although occasionally occurring with an otherwise normal heart, usually appears only in those past middle age and especially in those patients who have had pre-existing cardiovascular disease. Although other symptoms may disappear under medical treatment, fibrillation and signs of congestive failure and decompensation persist so long as the metabolic rate remains elevated. It is practically impossible to reduce the ventricular rate until thyroid activity is restored to normal. When congestive failure does occur, it is usually preceded by auricular fibrillation which, if untreated and particularly if complete rest is not instituted, is usually followed by signs of congestive failure with dyspnea, cough, enlargement of the liver, edema, anasarca, and pleural effusion.

If auricular fibrillation persists for some time after operation, it can usually be controlled by the oral administration of quinidine sulphate. In patients with postoperative auricular fibrillation, particularly as the rhythm approaches normal, there occurs the possible danger of a thrombotic process being set up in distant parts of the body from particles swept into the blood stream from the left auricle. Such a serious condition may arise quite unexpectedly 1, 2, or even 3 weeks following operation, and sudden death result,

especially following the re-establishment of sinus rhythm in patients with mitral stenosis.

Angina pectoris is rarely associated with hyperthyroidism and probably never results directly from it, yet patients with coronary disease are promptly made worse following the onset of exophthalmic goiter. Although the risk may be great, with proper preoperative care such patients go through the operative phase with surprisingly little shock and in most instances with striking relief from the anginal attacks.

Patients suffering from congestive failure or angina unassociated with thyroid dysfunction, for whom total ablation of the thyroid has been advocated by Blungart and Berlin, and later by Mixter, Cutler, and many others, must not be confused with the individual suffering from cardiac involvement incident to and associated with hyperthyroidism. In the former, cardiac disease is primary, there is no accompanying goiter, and the basal metabolic rate is normal. With the patient under discussion there is definite etiologic relationship between the cardiac symptoms and the thyroid dysfunction, chiefly manifested by elevated metabolism.

Although it is now generally accepted that toxic adenoma and exophthalmic goiter are hardly separable as distinct entities, one being but a phase of the other, it is interesting from an academic standpoint at least to review the findings when the 2 groups are studied separately.

In the accompanying tables 2000 consecutive goiter patients admitted to the Geisinger Memorial Hospital are grouped under 3 headings as follows: With nontoxic adenoma, with toxic adenoma, and with exophthalmic goiter.

The largest group constitutes those with toxic adenoma (42.5%); the next, those with exophthalmic goiter (29%); the last, those with nontoxic adenoma (28.5%).

Fifty-four per cent of the patients with nontoxic adenoma and normal metabolic rates presented cardiac symptoms and signs in one form or another; 89 per cent of the patients with toxic adenoma presented such signs and symptoms; 91 per cent of the patients with exophthalmic goiter presented clearly defined evidences of cardiovascular disease.

The most pronounced relief from cardiac symptoms following operation occurred, as would be expected, with the exophthalmic goiter group although definite improvement in the cardiac picture followed thyroidectomy with the majority of the patients in the other 2 groups.

Although nontoxic adenomatous goiter is rarely accompanied by serious heart disease and although the metabolic rate was normal in these

INCIDENCE OF CARDIAC SYMPTOMS IN A SERIES OF GOITER PATIENTS (TOXIC AND NONTOXIC) ADMITTED TO THE GEISINGER MEMORIAL HOSPITAL

2000 Consecutive Cases (Exclusive of Colloid Goiter, Acute Thyroiditis, and Carcinoma)

	Adenoma nontoxic (28.5%)	Adenoma toxic (42.5%)	Exophthal- mic goiter (29%)
<i>Cardiac symptoms</i>			
Cardiac symptoms present ..	54 %	89 %	91 %
Postoperative relief ...	61 %	47 %	68 %
Some postoperative relief ..	16 %	26 %	13 %
<i>Decompensation</i>			
Decompensation present	19 %	18 %	36 %
Postoperative relief	63 %	57 %	63 %
Some postoperative relief ...	18 %	7 %	14 %
<i>Palpitation</i>			
Palpitation present	53 %	86 %	93 %
Postoperative relief	60 %	53 %	66 %
Some postoperative relief ..	18 %	22 %	13 %
<i>Dyspnea</i>			
Dyspnea present	47 %	80 %	79 %
Postoperative relief	56 %	54 %	70 %
Some postoperative relief ..	18 %	20 %	8 %
<i>Tachycardia</i>			
Tachycardia present	22 %	69 %	85 %
Postoperative relief	54 %	54 %	70 %
Some postoperative relief ..	23 %	22 %	10 %
<i>Edema</i>			
Edema present	41 %	34 %	47 %
Postoperative relief	70 %	62 %	69 %
Some postoperative relief ..	14 %	17 %	9 %
<i>Cardiac murmurs</i>			
Murmurs present	20 %	56 %	57 %
<i>Cardiac hypertrophy (roentgenographic)</i>			
Hypertrophy present	5 %	26 %	23 %
<i>Electrocardiographic findings</i>			
Auricular fibrillation	1.7 %	9.4 %	3.4 %
Sinus arrhythmia	10.5 %	4.7 %	5.1 %
Sinus tachycardia	17.5 %	54.1 %	72.4 %
Auricular flutter	0	0	0
Sinus rhythm	45.6 %	30.5 %	25.8 %
Sinus bradycardia	5.2 %	0	0
Heart block (partial)	5.2 %	2.3 %	1.7 %
Extrasystoles	1.7 %	2.3 %	3.4 %
Negative T wave	3.5 %	2.3 %	3.4 %
<i>Average pulse rate</i>			
Initial average preoperative rate	85.5	102	109
Final average postoperative rate	79	80	80

cases, the majority experienced some evidences of cardiac disease even if only of a functional type. With all groups the most strikingly consistent cardiac symptoms were palpitation, tachycardia, and dyspnea, these being particularly pronounced with the group of patients suffering from frank exophthalmic goiter.

Electrocardiographic findings were less striking with the patients in the nontoxic group and were about equally pronounced in the toxic adenoma and exophthalmic goiter groups, auricular fibrillation being more common with the adenomas and sinus tachycardia more frequently noted with the patients in the exophthalmic group. The average pulse rate was about the same in the 2 toxic groups, being slightly higher with the exophthalmic goiter patients. The postoperative



Fig. 7

Young man with acute thyroiditis following acute infection of tonsils with rapidly developing exophthalmic goiter. Marked cardiovascular changes. Patient extremely ill. Bilateral ligation, followed in 8 weeks by 2-stage thyroidectomy.

Photograph of patient taken within a year of onset of symptoms. Weight gain of 36 pounds with complete restoration to normal health.

pulse rate was the same with both. Evidences of serious cardiac involvement as manifested by decompensation, palpitation, edema, dyspnea, *etc.*, were all more marked with patients suffering from definite exophthalmic goiter.

CONCLUSIONS

1. Ninety per cent of patients with thyrotoxicosis present some evidences of cardiac involvement if only tachycardia.

2. Animal experiments have clearly demonstrated the specific effect of thyroxin on the myocardium.

3. The hyperthyroidism is frequently overlooked and the patient treated as a case of myocarditis, heart failure, or mitral stenosis without recognition of the part being played by the thyroid.

4. Treatment without thyroidectomy, although it may prove helpful, never produces cure. To delay surgical intervention is merely to increase the risk, to add to the patient's period of invalidism, and, if postponed too long, to increase greatly the likelihood of a fatal termination.

5. Patients with persistent tachycardia, especially if sinus arrhythmias are present, should be suspected of having hyperthyroidism.

6. The thyrocardiac requires painstaking care, his treatment being best managed by the cardiologist and surgeon working in close co-operation during the all-important preoperative phase and planning together the type of operation and the time for its performance best suited to the individual case.

7. Appropriate medical and surgical treatment in the case of the patient suffering from cardiac disease incident to and associated with thyrotoxicosis is capable of producing some of the most brilliant results in the entire realm of medicine.

The George F. Geisinger Memorial Hospital.

ABSTRACT OF DISCUSSION

JESSE L. LENKER (Harrisburg): When the thyroid is functioning abnormally, its greatest damage is done to the circulatory system. It is strange that, with marked evidence of heart failure and the usual symptoms of heart disease, seldom is anything found at necropsy. A patient dying of complete congestive failure, the result of thyrotoxicosis or thyroid toxemia, never shows any heart pathology.

The importance of close contact with families known to have a history of thyroid disturbance cannot be emphasized too strongly. These patients should be checked carefully and often to determine any beginning change. An early diagnosis is most essential. Prophylaxis can

be brought about only in these individuals properly cared for during adolescence or puberty, for thyroidectomy, although it may prove helpful, never produces a cure.

Oftimes the heart in individuals suffering from thyroid poisoning does present clinical manifestations simulating organic heart disease, yet a properly obtained history and careful physical examination, including laboratory checkup, should prevent the erroneous diagnosis of mitral stenosis.

Modern methods of diagnosis should eliminate or differentiate the type of heart pathology and determine definitely whether the patient exhibits an absolute thyroid heart. It is sometimes difficult, however, to evaluate how much coronary sclerosis and hypertension can be held responsible for the enlargement of the heart in thyroid disease, particularly in individuals in the arteriosclerotic period of life. Therefore, if individuals in this period of life suffering from thyrotoxicosis are referred for surgical intervention and the cardiac symptoms do not disappear, it is a certainty that the vascular changes (coronary sclerosis) with myocardial degeneration are the underlying pathology.

One of the first signs of failing compensation is disturbance of rhythm, auricular fibrillation, or flutter. Sinus arrhythmia, which is purely functional, needs no consideration; it is never found in thyroid toxemia, because the rate until decompensation or congestive failure shows itself is more or less constant. Cardiac medication, digitalis or quinidine, is indicated in thyrotoxicosis only when evidence of decompensation is present. Then the patient is treated as any other cardiac with decompensation. Digitalis is the drug of choice. Quinidine is like a two-edged sword and is a dangerous drug when used injudiciously. The usual type of sedation advocated for thyrocardiacs in many clinics throughout the country is the use of the barbiturates, especially phenobarbital and luminal. It is my impression that the use of some of the older drugs, bromides and chloral, are safer since they are less likely to produce skin irritation. The real treatment in these cases is rest; the patient should remain in bed and keep absolutely quiet. The use of Lugol's solution or iodine in some form is always indicated.

In these cases closer co-operation between the surgeon and internist is of utmost importance.

WILLIAM M. DONOVAN (Scranton): Speaking from the clinician's standpoint, I agree in general with the thesis of the essayist to the effect that many cases of marked hyperthyroidism are overlooked and treated as simple heart failure. Hyperthyroidism should always be suspected in heart cases of obscure etiology.

On the other hand, unless a cardiac case has some symptoms of hyperthyroidism other than a high basal metabolic rate, it is well to defer a final diagnosis of that condition until he is treated with bed-rest, digitalis, *etc.*, for a reasonable time, since congestive heart failure of itself often produces a high basal metabolic rate. In one of my cases it went as high as plus 56 and less in several attacks of decompensation, only to return to normal each time under rest and digitalis but without iodine.

With regard to quinidine, I am not quite so afraid of embolism, although I still believe it should be considered. It is this type of case which develops embolism without quinidine; hence, the quinidine should not receive all the blame.

DONALD GUTHRIE (Sayre): I am in hearty accord with everything Dr. Foss has said and I want particularly to stress some of the points that he has made.

It is the patient with secondary hyperthyroidism due to toxic adenoma who shows the serious and often in-

capacitating cardiac complications. These patients belong to an older group in whom the symptoms develop insidiously and may go on for a long time unrecognized. Permanent cardiac damage may be present when these patients come for relief of their hyperthyroidism.

In primary hyperthyroidism or true exophthalmic goiter the patient is, as a rule, much younger. The onset is often acute and incapacitating, the patient comes very much earlier for surgical relief, and the cardiac complications are not nearly so troublesome nor are they fraught with the same uncertainty and danger. At the present time the surgeon who co-operates with the cardiologist can accept these patients for operation with much less anxiety than formerly, for he knows from clinical experience how remarkably well most of these cardiac disorders will adjust themselves after thyroidectomy.

Until we have much more clinical evidence that the operation of total ablation of the thyroid gland will benefit patients with congestive heart failure and relieve those having anginal attacks, I cannot subscribe to the recommendations of the Boston school. Great improvement is seen in many of these cardiac patients if hyperthyroidism is present, but I question the advisability of producing a severe state of hypothyroidism for congestive heart failure and angina pectoris by total ablation of a normal thyroid gland. Could not the resultant anoxemia caused by the hypothyroidism act as a two-edged sword and be gravely harmful to the damaged myocardium in its effects?

I should like to ask Dr. Foss to state his position in the treatment of this class of cases.

SAMUEL J. WATERWORTH (Clearfield): The elderly patient who has had hyperthyroidism for a long time and is burnt out may become hypo- instead of hyper-. Perhaps the patient is waterlogged. I have seen them with edema of the lungs. That patient may be a thyroid case with a bad heart, but he may not have hyperthyroidism at the time of the examination. However, if thyroid extract is administered, he will not do well. The thyroid gland should be removed and thyroid extract given afterward.

As to the methods of the Boston school, those patients that have been operated upon have certainly improved because in my judgment they have suffered from thyroid disease which has been overlooked, but I would not operate upon any patient and remove the thyroid gland primarily for heart disease unless it is due to or complicated by thyroid dystrophy, not necessarily of the hyperthyroid type.

DR. FOSS (in closing): I am glad that Dr. Guthrie mentioned the question of total ablation of the thyroid in treatment of the patient with congestive failure or angina, although that type of patient is not under consideration in this paper. It is the patient with cardiac disease associated with a dysfunctioning thyroid that we are especially considering. The patients being treated by total thyroidectomy by Berlin and Blumgart, Mixter, Cutler and many others do not have elevated rates. The thyroid is not involved, the object of its complete removal being to depress the individual's metabolism below normal and thus decrease the load on the damaged heart. Total ablation is performed solely to reduce cellular metabolism to a point well below normal, not, as with the patients under consideration, to reduce to normal the hormonal output of an overactive gland. I have been rather disappointed in our results with total thyroidectomy and am almost ready to give it up unless more definite evidence is forthcoming that the procedure is of definite value. I do believe, however, that in angina total ablation is of decided value, especially if the

patient will tolerate the sudden depression of metabolism which invariably follows. With many of these patients the relief has been startling following total thyroidectomy, especially the relief of the anginal attacks.

Dr. Donovan brought up a most important question. He stated that he sees many patients with congestive failure who, rather than having normal rates, have an elevated metabolism. I think this is the experience of most of us. We rarely see a patient with arteriosclerotic heart disease who does not have an elevated basal metabolic rate. Patients with certain diseases, leukemia, for instance, or tuberculosis, or even a normal person after a hearty dinner, will have elevated rates, and we must be on the alert not to confuse elevated metabolism as revealed in the laboratory in cases of essential hypertension or in the other conditions just mentioned with the elevated rate incident to true thyroid hyperactivity. There are many conditions other than hyperthyroidism which produce elevated metabolism, and in the differen-

tial diagnosis of thyroid disease and heart disease, either associated or occurring separately, we must carefully correlate all the findings—physical as well as those observed in the metabolism laboratory. Basal metabolic rates are about as helpful in the study of the thyroid patient as is the thermometer in the study of pneumonia or typhoid fever and no more. Both are important aids, but neither is essential in the making of the diagnosis.

In this discussion we are interested solely in the patient with heart disease secondary to hyperthyroidism and especially the patient whose thyroid condition is overlooked and who is indefinitely treated as a case of myocarditis, congestive failure, chronic endocarditis, *etc.*, without being cured or relieved, because of an overlooked and untreated goiter.

It should be emphasized again that this type of patient constitutes one of our major problems. The condition is much more common than is generally supposed and one which too frequently remains unrecognized.

THE PHYSICIAN-PATIENT RELATIONSHIP*

EDWARD L. BORTZ, M.D., PHILADELPHIA

The physician-patient relationship is universally accepted as the foundation rock of any satisfactory system of medical care.

Recent proposals for altering the manner in which medical care is now being furnished to the American people have in large measure totally ignored the importance of the bond between physician and patient, and it seems proper that at this time the qualities which make it important should be analyzed and an effort made to determine what factors improve and what factors embarrass this relationship.

At no time in the history of man have the responsibilities of the physician been so great. The fact that the patient may bring his problems to his physician with the confidence that he can speak on intimate details without restraint clothes the physician with a responsibility unequalled in modern society. Many of the problems and the majority of illnesses are inconsequential and only occasionally of major moment. Nevertheless in every contact the patient unburdens his mind to his confessor and friend, the physician.

That this relationship guarantees to the patient the greatest hope of a satisfied mind there can be no doubt. There can also be no question that it demands of the physician tact, interest, poise, refusal to be rushed or to make decisions prematurely. All these are attributes of the good family physician. Certainly they were in the past, but in recent times the science of medicine has far outstripped the art of medicine.

Medical schools have been so engaged in the structural, bacteriologic, chemical, and epidemiologic problems of disease that the human side of medicine has been neglected. The family physician, however, in the rôle of modern health advisor is coming back into his own, and the individual and social problems so important in combating disease are once again being considered.

Not every physician is qualified by nature, personality, or interest to enter medical practice. The vast and uncharted seas of research engage the attention of some. Public health and preventive medicine appeal to others. Problems of administration and organization catch the eye of many. All these, however, important as they are, bear only indirectly on the family health. It is the physician who goes into the home to treat his patients upon whose shoulders rests the sovereign cloak of the family physician.

Patients likewise vary. One type of individual, the professional or business man or woman, desires consultation with his physician and frank, rational discussion of his health problems at frequent intervals. He is wise and recognizes the value of the periodic health examination. Another large group of men and women and all children carry their problems to the doctor and immediately divest themselves of every responsibility in the regaining of their health. Still another group, representing a large number of those who frequent charity clinics, look upon their visits as social calls greatly to be enjoyed and carried to no definite conclusion. These patients have no incentive to recovery.

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

The physician-patient relationship is ideal where both have mutual respect, confidence, and friendship. Certain practices degrade this relationship. The hit-or-miss selection of a family physician, the frequent changing of physician, advertising—particularly promiscuous radio advertising—unqualified and unethical specialism, fee splitting, lack of co-operation between hospital staff and referring physician, and health insurance are most important in this regard.

The selection of a physician is a problem of first importance to any family. Although no one method of selecting a physician has been universally recommended, various practices are followed:

1. A family moving into a new community appeals to a hospital for recommendations concerning a family physician. This obviously automatically rules out many who do not happen to be on hospital staffs.

2. Emergency calls are not infrequently left with telephone operators, but these girls certainly are not trained to select the physician.

3. The most common practice is no doubt to follow suggestions from friends or neighbors, which may or may not be suitable.

It would seem that there is a definite need for a directory which would list all duly registered members of the medical profession by location, type of practice whether general or special, hospital affiliations, any foreign languages spoken, and other pertinent facts. A directory of this kind might carry valuable suggestions regarding individual and public health. It should be published by, or under the immediate supervision of, the county or state medical society. Such a directory should be in every household. It would serve as a valuable bond between the profession and the laity.

Frequent changing of physicians by patients was a practice often condemned by the late John B. Deaver. It was his advice to be exceedingly critical when choosing a physician but after one was decided upon to follow his recommendations with implicit faith. In the long run the number of medical errors are diminished in this manner.

Physicians do not advertise because this medium of catching the public eye is totally untrustworthy and indeed very often untruthful. Agencies such as many of the so-called health bureaus and leagues which encroach on the sphere of the family physician tend to destroy the physician-patient bond.

The late J. Chalmers DaCosta described fee splitting as the crowning infamy of modern practice. It is traffic in human life. The man

who splits a fee is in the same class as the shyster lawyer.

The frequent neglect of physicians on hospital staffs to return patients to the physicians referring them is certainly to be deprecated. The demand of patients for specialists' services when the general practitioner may furnish an equally satisfactory if not superior service adds to the cost of medical care as well as widens the physician-patient interest.

Health insurance is a menace to the public health and an exploitation of a great profession. It accompanies a lower rather than a higher standard of living. It jeopardizes the physician-patient relationship by emphasizing quantity rather than quality of medical care, and in countries where it is firmly established it has placed the physician in a menial position inimical to his professional and cultural growth. Health insurance or, better, health taxation is a tacit admission of society's inability to provide a satisfactory living wage for the working man. It is paternalism in its most enervating form.

A high quality of medical care should be the first requisite. Cheap medical care is the most expensive. Only through quality medicine can be attained the objectives of medical practice. These are individual attention for the ill and maimed, mutual respect of patient and physician, decrease in mortality, diminution of morbidity, shortening disability period, and control of malingering.

Certainly that family is blessed who have a good family doctor and who show their appreciation of his services by reporting to him promptly when disease besets them. It might be added that the doctor appreciates the courtesy of prompt payment of his bills and may even interpret this as a sign of gratitude on the part of the patient. This, though, is not his chief compensation nor his chief interest. When in doubt the good physician is not hesitant; in fact, he promptly insists on consultation. He is free to admit error and prompt to adjust or correct. He has an affectionate solicitude not alone for the physical but for the mental well-being and satisfaction of his charges.

It was of this man that Stevenson wrote his famous lines concerning the classes of men that stand above the common herd, and he found in the true physician generosity, discretion, and tact. When the day's work is done, though he has made mistakes they have been of the head and not of the heart, and he can say with the great physician of modern times, Sir William Osler, "I have loved no darkness, sophisticated no truth, nursed no delusion, allowed no fear."

His day and his life are blessed with a spirit of hopefulness, benevolence, and high courage.

THE HOSPITAL

The family physician is the key man in furnishing medical service to the community, and the hospital is his most important instrument. It is a complex medico-social organization necessary for adequate medical service. The 2 phases of hospital management, the hotel and the medical, should be kept distinct. The business side needs to be conducted as efficiently and economically as that of any other hotel.

The medical service rendered by a hospital also has 2 phases, diagnosis and treatment. The hospital staff is an organized group of specialists obligated to furnish a variety of service required by referring practitioners. Specialism and special departments are essential in modern hospital organization. Successful treatment depends on successful diagnosis.

The average physician can diagnose and treat 8 out of every 10 patients, but the remaining 2 may require special tests, laboratory procedures, and consultation. This complete study is most satisfactorily made in a hospital. Hospital service, by personnel and equipment, should be sufficiently flexible to aid the private practitioner in any problem of diagnosis in any patient, rich or poor, ambulatory or bedfast.

The first responsibility of hospitals is diagnosis; the second, treatment. A diagnostic service should be available to inpatients or outpatients, that is, to either bedridden or ambulatory cases. The traditional arrangement of a hospital proper, to which as an incidental service is added a dispensary for indigents alone, does not completely meet the medical needs of modern community life. As Willard C. Rappleye, professor of medical economics at the Columbia University School of Medicine, has pointed out, the hospital occupies a strategic midposition and has open to it a great opportunity and a corresponding obligation as a co-ordinator of medical activities.

The great opportunity of hospitals today rests in the development of facilities whereby a complete study can be made for any family physician in the community at a price the patient can afford to pay. The sliding scale arrangement for arriving at a fee covering the entire investigation can be readily and fairly administered with a minimum waste of time by a well-trained credit clerk, which automatically removes this unpleasant feature of handling patients from the sphere of the physician. Fees for those participating in the study of each patient can be

determined on a pro rata basis. The physician may see the patient either in his private office or in the hospital, and with the proper supervision there need be no threat of lay domination. A portion of the fee paid would go to the hospital for use of its equipment; the rest would be paid into a physicians' fund.

In his presidential address before the American Medical Association in 1933, Dean Lewis stated that hospitals could render a distinct service by establishing diagnostic clinics to which practitioners might refer patients. Numerous medical men of vision, including Upham, Joslin, Baehr, Holbrook, and others, have seen the usefulness of this setup. Hospital service properly developed around a department of diagnosis, with an inpatient department for bed cases and an ambulatory department for all others, represents the ideal plan of organization, for it stresses the fact that diagnosis is the first essence of treatment and that it is not necessary for a patient to be in the advanced stages of an illness before he is eligible for modern hospital care.

Centralization and the construction of huge plants may offer advantages of administration in industry, but the need for centralization of medical service in a few large hospitals is yet to be demonstrated. In fact just the opposite is indicated. Many small hospitals are better than a few large ones, and the solution to the problem of high cost for medical care may be the development of the small hospital. The *Journal of the Mississippi State Medical Society* calls itself "the champion of the small hospital, the hub around which medical service must be built." These small hospitals wisely and efficiently managed should receive the same consideration in the matter of state appropriation as the large ones, and funds should be allocated in proportion to their just needs.

It has been said that the real problem in medical economics today is represented by those medical services which are provided for by hospitals and are expensive. These institutions require expensive equipment and extensive financial support. One of the glories of American financiers has been their generous, loyal, and sympathetic interest in and support of hospitals. If ever there has been a real share-the-wealth program in the past, it has been manifested in the solicitation shown by the wealthy to the end that all classes of society be given proper medical attention. Yet private philanthropy has been so taxed and harassed in recent years that hospital service has frequently been jeopardized.

Grants of government money should be ex-

tended to every duly qualified hospital in the state in direct proportion to the number of charity patients cared for. Dr. Rappleye has stated that an extension of hospital facilities through outpatient departments is the most practical way to reach this major economic problem through existing agencies without the creation of extensive new organizations and government bureaus. The complete financing of hospital services through taxation and philanthropy, and amplification of the present functions of existing institutions would solve the most urgent problem of medical care.

This is the official view of the Commission on Medical Education, which to date has not received proper emphasis.

MEDICAL SOCIAL SERVICE

Social and environmental influences which oftentimes play a significant and even major rôle in the medical problem of the patient represent the basis on which medical social service has been developed. Study of these factors by trained workers who submit their findings to the physician in charge of the case may furnish him with data without which successful care would be impossible. Social service aims to assist the patient likewise by outlining a plan of treatment satisfactory to the physician and sufficiently broad to re-create a social environment suitable to the welfare of the patient.

Medical social service was originally organized in hospitals where specialization was most completely developed and was used to bring to the physician pertinent facts such as he could obtain from his own patients in private practice but which it was impossible to obtain in the institutions. Physicians were forced to concentrate on physical findings to the exclusion of less tangible and extraneous elements in the patient's situation. Medical social service is based on the principle that disease is never isolated from social and environmental factors, and maintains that these must be taken into account and acted upon for the patient to be wholly understood and the treatment adequately carried out.

In the United States approximately 15 per cent of approved hospitals now have a social service department, and there are more than 2000 medical social workers.

The well-trained worker may secure information of inestimable value regarding home conditions, familial background, financial status, problems of the love life or of religion which the physician in a clinic might never uncover; she may aid in the referring of patients to convalescent homes following illness either in the

hospital or in their homes, in the handling of the chronically diseased patient, in the problems of frustrated ambition and hopes for education and of unmarried maternity. The majority of these would be left undone by the busy physician in clinic practice. Indeed, 2 hospitals for private patients have established medical social service; one in particular, the Baker Memorial unit of the Massachusetts General Hospital, established this adjunct to clinical service at the special request of the physicians.

One of the most faithful and helpful allies a physician can have is the congenial social service worker. One of the joys of clinic work in the Lankenau Hospital is the privilege of associating with the social service department under the expert and efficient guidance of Sister Anna Cressman.

There need be no threat to the physician's authority, and social case studies may be at the discretion of the physician in charge. Most of the criticism directed toward medical social service has been unwarranted. It is true that occasionally too paternalistic an attitude is assumed and patients are carried along and are quite willing to have official agencies do for them what they might be perfectly capable of doing for themselves. It is also true that occasionally there is an overofficial type of woman hospital administrator who is continually dictating to physicians and doing harm to the study of the patient both from the medical and the social angle. It is true that in occasional instances needless expenditure of time and energy is made, adding to the waste and expense of upkeep. These deficiencies are minor and may be adjusted.

It cannot be denied that overzealous workers interested in social service from a political angle and apparently determined to regiment the medical profession and direct its energies and activity have wrought incalculable damage to the public health and greatly embarrassed the otherwise frank and cordial friendly association of social service with the medical profession.

Health surveys and the investigation of community health problems should be undertaken only by members of the profession since obviously they are the only ones qualified to pass on questions of health, sickness, and medical requirements.

THE FOUNDATIONS

For several years the powerful foundations have raised questions regarding the medical service to the public and forced the light of publicity on a profession whose progress in the

last 25 years in the interests of the public welfare has not been matched by any other single group of society. That overenthusiastic individuals temporarily secured control and formulated the policies of several of these foundations is well known.

The change of attitude by the Milbank Fund and its published expression of desire to cooperate with the medical profession should serve as a splendid example to those other founda-

tions which lay claim to an altruistic interest in the public health. The Rockefeller Foundation has nobly served humanity by creating opportunities to aid in man's study and fight against disease. The Carnegie Foundation has established scholarships for worthy students. Let the others follow suit. It is possible for organized medicine to work hand in hand with the philanthropies to the benefit of all.

2021 West Girard Avenue.

RECENT ADVANCES IN THE BRONCHOSCOPY OF CHILDREN *

CHEVALIER JACKSON, M.D., PHILADELPHIA

For the sake of brevity, the word bronchoscopy has come by common consent to be considered as including not only bronchoscopy but direct laryngoscopy, esophagoscopy, and gastros-copy; in other words the examination of the air passages down into the depths of the lung and the food passages to and including the pylorus. All of these procedures are specular examinations in principle, but their execution quickly, safely, and without anesthesia requires special training, special equipment, and at least a small organization. These requirements are in no way as formidable as those of the modern surgical clinics.

The relations of bronchoscopy to the pediatrician are those of an assisting department that supplies the pediatrician with a report on the conditions of the air or the food passages or both, as the case may be, based on specular examination and the removal of material for laboratory studies. If there is obstruction of any kind within the limits mentioned, the obstruction can be relieved by endoscopic methods in most cases.

Asphyxia neonatorum in our experience may be due to traumatic or congenital laryngeal stenosis, to traumatic bilateral recurrent paralysis, or to tracheobronchial obstruction, as well as to the classic cardiac causes. The most common of all causes is recurrent paralysis from forceps pressure or excessive traction in accouchement. The day has passed when it can be considered good obstetrics to slap and beat a baby and dip him into a tub of cold water, then into a tub of hot water and otherwise abuse him to make him start breathing when perhaps his airway is plugged so that he cannot breathe. The first thing to be done in such cases is to examine the larynx with the direct laryngoscope to see if it

has a lumen and to aspirate any obstructing secretions that may be found. If the larynx is clear, an aspirating tube can be inserted into the tracheobronchial tree, secretions aspirated, and oxygen with a percentage of CO₂ admixture insufflated directly into the lower air passages under a gentle flow, not a pressure. Artificial respiratory movements can then be started if desired. It is presumptuous for a bronchoscopist to tell the obstetrician what to do. By way of apology it may be stated that the bronchoscopist sees things narrowly through a small tube metaphorically as well as actually. His viewpoint is that of a plumber who must keep the pipes open. The day has come when a maternity department in a well-equipped hospital should have available the co-operation of a bronchoscopic department. If this is impossible, certain assistants on the obstetric department should be trained to examine the larynx and laryngopharynx of newborn babies and to remove secretions from at least as far down as the upper end of the trachea. At the present time it is not practicable to carry out the foregoing lifesaving measures if accouchement is done at the home of the mother. The future will see improvement in this respect also.

Congenital Atelectasis.—Before any newborn baby is allowed to leave the maternity ward, the obstetrician or pediatrician or both in consultation should be certain that the air is reaching all parts of the baby's lung. In a general way this is supposed to be done, but a good many babies are brought to the bronchoscopic clinic with ample evidence that parts of the lung have never expanded. The trained ear of the pediatrician should by auscultation, and his trained fingers should by percussion, determine that all parts of the lung are functioning. Not being equipped ourselves with the trained ear and trained touch, we would not feel satisfied that

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

all parts of the lung were free from atelectasis without a roentgen-ray examination. No baby should be allowed to be discharged from a maternity ward without having had a roentgen-ray examination. If all parts of the lung are found to be functioning perfectly, the baby may be discharged. If, however, there are one or more areas of atelectasis, the patient should be referred to the pediatrician who should watch the imperfectly aerated region until it becomes aerated. Over and over again children have been brought to the bronchoscopic clinic with an atelectatic lung or lobe. In conferring with the pediatrician, we have had reason to believe that the atelectasis was congenital, and although the lung was usually made to function, this has not always been possible. As a consequence, one lung may remain impaired for life. Every case of atelectasis of one or more lobes, or any considerable part of a lobe, may be considered as an indication for diagnostic bronchoscopy.

Laryngeal Disease.—The day for inferential diagnosis of laryngeal disease is passed. The larynx of any human being from birth to old age can be visually examined. Every child with a croupy cough and no membrane in the fauces should have a direct laryngoscopy. This may be done in a few moments without anesthesia, and at the same time smears and culture specimens may be taken from the larynx.

Congenital Laryngeal Stridor.—Stridorous breathing present at birth or developing soon after may be due to a large variety of causes other than thymic compression. It may be due to a unilateral or bilateral congenitally defective epiglottis, indrawing of the upper laryngeal aperture, congenital web, or other anomalies, to traumatic laryngitis or unilateral or bilateral recurrent laryngeal paralysis, or to forceps pressure or excessive traction during delivery. All but one of our cases of congenital recurrent paralysis have been in infants delivered with forceps, and that one was a case of very difficult and prolonged labor with excessive traction.

Thymic Hypertrophy.—Undoubtedly thymic enlargement is often the cause of stridorous breathing, and perhaps it should be put first among the diagnostic possibilities, but it should never be considered as the only one. Precisely the same kind of symptoms may be produced by many other conditions. The differential diagnosis involves consultation of the pediatrician with the roentgenologist and, if need be, with the bronchoscopist.

Acute Febrile Diseases Associated with Laryngeal Symptoms.—When laryngeal symptoms develop in the course of an acute febrile disease,

the child's larynx should be examined. If he is over age 5 or 6, this can be done with the mirror; for younger children the examination requires the direct laryngoscope. The larynx of any child of any age can be inspected by the method without any general or local anesthetic and without danger. The procedure is no more of an ordeal for the child than palpating the nasopharynx to determine the question of adenoids. Inferential diagnosis of laryngeal disease is usually wrong.

Acute Suppurative Diseases of the Tracheobronchial Tree and Lung.—When the pediatrician has reason to believe there is pus coming up from the lung, he will of course apply all of the methods of diagnosis and treatment in which he is so expert. When, however, the acute stage has subsided and the acute suppurative disease shows indication of drifting on into a chronic suppurative process, the advisability of a diagnostic bronchoscopy should be considered for the following purposes: (1) Inspection of the tracheobronchial tree to determine the pathologic condition present in the particular case; (2) to bring up material for bacteriologic study and for the preparation of vaccines; (3) for the consideration as to the advisability of bronchoscopic aspiration to be repeated a number of times.

Bronchiectatic Septic Tank and the Prophylaxis of Bronchiectasis.—This subject has already been fully presented in previous articles. All that need be said here is that bronchiectasis can be prevented in almost all cases, but it cannot often be cured after it has become well established and bilateral. Unfortunately, in too many instances, the child is allowed to drift on into a chronic suppurative condition without the parents realizing the necessity for consulting the family physician or the pediatrician. Parents should always be warned that a cough means something, and that so long as a child is coughing, whether the cough is productive or not, medical supervision is necessary. Parenthetically it might be added that the cough should never be suppressed by antitussives or sedatives.

The foregoing comments constitute a very brief outline of bronchoscopy in its relations to the work of the medical man who has charge of the health of children. The bronchoscopist is only an assistant, very helpful in certain cases, which perhaps represent only a small part of the work of the pediatrician. Nothing the bronchoscopist can do will lessen the necessity for medical care and management in any case.

Wheezing Respiration in Children.—A wheezing sound heard at the open mouth of a child is a symptom of the utmost importance calling for

thorough study. It may turn out to be laryngeal deformity or paralysis, papilloma, peanuts, webs in larynx or bronchi, compression by adenopathy, subglottic laryngitis, granulomata, abscess, bronchiectasis, cyst, laryngotracheitis, or possibly—though not often—asthma.

CONCLUSIONS

All of the recent advances in direct laryngoscopy and bronchoscopy warrant the following conclusions:

1. Asphyxia neonatorum is, in a certain percentage of cases, due to obstruction of the airway that could have been diagnosed and treated efficaciously by direct laryngoscopic or bronchoscopic methods. It is not infrequently due to bilateral laryngeal paralysis from forceps pressure or excessive traction during labor.

2. A blue baby may have obstruction in his respiratory passages.

3. Partial congenital atelectasis is often overlooked. All babies should have a roentgen-ray examination of the chest before they are discharged from the maternity hospital. If any areas of lung are not expanded, these atelectatic areas should be referred to the watchful care of the pediatrician or the practitioner in consultation with the pediatrician.

4. Residual suppurative disease of the lung lingering after acute pulmonary or bronchial disease should not be allowed to drift into bronchiectasis. Early bronchoscopic aspiration will often turn the tide by restoring the defensive power of the lung.

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ABSTRACT OF DISCUSSION

JAMES K. EVERHART (Pittsburgh): The narrow view—that the interest of the pediatricist lay only in infant nutrition—happily has disappeared. It is now accepted that whatever concerns the child should concern us. Bronchoscopy thus comes to us as an ally in situations in which we alone would be helpless. Every physician who has contacts with children and every pediatric hospital service is likely, sooner or later, to meet bronchoscopic problems. By this token every physician should know just where he can obtain a trained and competent operator. The well-trained man is an ally; the insufficiently trained one a danger. Widening of the bronchoscopic field has extended its usefulness. Its employment at some time or other may be indicated in almost every disease affecting the respiratory tract. With the procedure established and its value unquestioned, how does this affect the physician? Recognition of bronchoscopic problems must be made by the family physician. His is the larger responsibility.

Certain congenital anomalies cannot be determined by external examination alone. Fortunately the roentgen ray is at times of inestimable value, but in many instances bronchoscopic study is necessary to reveal the true situation. We should keep in mind Dr. Jackson's oft-repeated dictum that "all is not asthma that wheezes."

I am glad to hear Dr. Jackson's reference to atelectasis. Failure of lung expansion means that the lung cannot expand, probably because of obstruction somewhere in the respiratory tract. Regardless of our skill, atelectasis is not easy to demonstrate by physical examination alone. Here also, the roentgen ray is valuable. Dr. Jackson touches us upon a tender spot when he hints that possibly the newborn are not always as carefully examined and observed as they should be. His comments should stimulate us. The atelectatic infant is powerless to help himself. Watchful waiting or trying to induce the baby to expand his own lungs usually does not bring the happy ending we would wish. With mechanical obstruction the obvious thing to do is to remove it, and here the bronchoscopist is a help to obstetrician and pediatrician. The bronchoscopist can help us only if we call upon him, and we must keep in mind this fact.

VARICOSE VEINS *

An Evaluation of the Injection Treatment

W. MINSTER KUNKEL, M.D., HARRISBURG, PA.

The injection treatment of varicose veins has followed a course not dissimilar to that of many other therapeutic procedures. It originated in the chance observation of sclerosis following intravenous injections given for other purposes, and its application to the treatment of varicose veins followed.

The original substances injected produced a terrific reaction and were soon discarded as practical agents for this purpose. The search for a less violent but effective substance led to the use of concentrated sugar solutions, later reinforced

by strong solutions of sodium chloride. These were for a time the optimal agents, having the least number of disagreeable side effects. Strong solutions of sodium salicylate were popular with many, as were also quinine solutions. The transient but painful cramps that followed the sugar and salt solutions, and the occasional systemic effect of sodium salicylate and quinine, stimulated experimenters to seek further for an effectual but less disturbing agent. Sodium morrhuate seemed to have these qualifications, and at the present time it is probably the most generally used substance.

Much has been written concerning the patho-

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logic responses that follow the various solutions used, but there is probably no essential qualitative difference in the responses of the intima. Any one is effective if the degree of irritation is sufficient to initiate an ultimate block.

The progressive histologic changes leading to complete organized occlusion have been described by H. O. McPheeters, Nelson J. Howard, C. R. Jackson, Edmund J. Mahon, and others whose work also demonstrates that organization of the thrombus is followed by fibrosis, blood sinuses, and restoration of an intima-lined lumen. This process has been ably demonstrated in animals and humans. The prompt and early relief, both symptomatic and cosmetic, and the vast army of satisfied patients combined to lull any apprehensions as to permanent cure that practitioners may have had in the early years of its use. The final test of the clinical usefulness of the injection treatment, however, was considered to depend upon the subsequent course of this clinical condition, but the accumulated follow-up records of these cases from month to month manifested the inevitable tendency of nature to re-establish the old channels—a pathologic process known for decades and ably described by William Welch in Allbutt's and Rolleston's *System of Medicine*, published in 1909.

The inferences given by the early advocates of this measure have led to many embarrassing situations. Time and again patients have presented themselves for a follow-up examination a year after injection, showing no demonstrable evidence of any previous treatment. Fortunately they were improved subjectively, but the disappearance of the sclerosis pointed suspiciously to a return, in time, of the state for which they had originally presented themselves. Previous conceptions had to be radically revamped. Assurances of cure had to be basically modified. Selection of cases had to be specifically restricted; backing down was in order.

A review of 100 private cases treated by injection alone, before ligation was emphasized, shows the following somewhat discouraging situation: Partial recanalization was noted within 2 to 12 months in all cases; complete disappearance of sclerosis was noted in 6 to 16 months in all cases. This series, however, included no early cases.

These ranges are so dependent on the uncontrollable time factor of the post-treatment examination that they cannot be averaged. This series was injected with one of the following solutions: Sodium morrhuate, glucose and saline, or quinine and urathane. There was no advantage in outcome favoring any one of these drugs over the others. For the past 3 years, however,

I have used sodium morrhuate only because it produces the minimum number of by-effects.

It was soon found that attempts to strip the vein, to occlude segments temporarily by pressure during the injection, or even to elevate the leg after entrance of the needle were handicaps to the maintenance of the needle in the vein, and gave no better results than the simple insertion of needle and injection of the solution as one procedure. Veins which were not accessible in the supine position, however, were injected with the patient standing. My impression was that thrombosis under the latter condition was not quite so prompt and complete as in the supine position.

In this series, edema before injection almost invariably persisted or recurred despite treatment.

Varicose ulcers responded well to supporting bandages and injections in 26 per cent of the cases, but recurred at the same or another location in 68 per cent within 4 years.

Eczema disappeared after injection in 40 per cent of the 30 cases treated; the remainder required radiation for relief of itching.

These disappointing results naturally have stimulated speculation as to the cause of recurrences. What do we know of the etiology of the original condition? The only fairly constant factor in my cases has been a history of the same condition in the immediate forbears; this occurred in 83 per cent. The intrinsic pathology is still a matter of debate. Does valvular failure lead to dilatation, or does dilatation lead to valve failure? A congenital defect in the vein wall or valve is equally presumable. It can be admitted, however, that both conditions mutually produce a progression in each other. This latter point does not necessarily have any bearing on the mechanics of recanalization. The popular explanation of recurrence was that the weight of the column of blood above the sclerosed areas was the prime factor in reopening the closed lumen. But this is certainly not the sole factor, for sclerosed veins in the forearm which follow some intravenous medications are almost invariably re-established as patent veins without any hydrostatic pressure comparable to that in the lower extremities. Can ordinary venous pressure be a factor? When we consider the tremendous variation of venous pressure in localized segments of veins under muscular tension we have a factor common to both the upper and lower extremities.

The preliminary ligation of the long saphena undoubtedly obliterates, in this vein at least, the pressure of the column of blood above provided, however, that the ligation is done above the last

branch. It is at first difficult to conceive of a recanalization in varicose veins after such a ligation with the valves of the communicating veins competent. Yet Nelson J. Howard reported in September, 1934, a 100 per cent recurrence, which raises the question immediately as to the reliability of the test for incompetent veins. It is dependable if properly done and correctly interpreted. I have seen a Trendelenberg double classed as a Trendelenberg positive merely because the sudden and complete filling of the veins upon the release of the tourniquet obscured a partial filling before release. This test should be done carefully to avoid this error.

Yet we do not have to resort to assumed errors in diagnosis to explain recurrences. Venous pressure is present despite competent communicating veins and ligation, and this pressure temporarily increases with each muscular contraction and might conceivably be a factor in eventually re-establishing the lumen.

My own cases of ligation and injection are too recent to be of any value, but the trend of other reports indicates a situation at the present time wherein a disturbingly large per cent of cases recur despite all added precautions.

It is customary to have the pressure bandages worn for 2 to 3 weeks after injection for the purpose of mechanically occluding the treated veins until a firm sclerosis has been established. Sections taken from injected veins at intervals for 8 weeks show the sclerosing and organizing process to be active for that length of time and possibly longer. Why not, therefore, require the bandages during the whole period instead of a small part of it? It has been found from experience in the postoperative treatment of lymphangiectasis following the Kondoleon operation that the pressure bandages are essential for at least a year. Is it not conceivable that the same should obtain after injection of varicose veins?

The reports accumulated to the present time lead to the following tentative conclusions:

1. That injection alone will produce but a temporary occlusion, and that the lumen will be recanalized within 2 to 12 months even though the case has a positive Trendelenberg.

2. That complete cure of varicose veins by ligation and injection under the present mode of treatment can never be assured with confidence.

3. That preliminary ligation delays recanalization by eliminating the hydrostatic pressure of the proximal column of blood; that according to the relatively few reports of others ultimate recurrence takes place in a high per cent of cases; that ligation is an important and valuable supplement both preliminary to injection and in the treatment of recurrences.

4. That edema is relieved by injection but temporarily because of the permanent tissue and lymphatic injury.

5. That ulcers and eczema are but advanced manifestations of this latter condition and therefore subject to the same liability.

The usefulness of this therapeutic measure is narrowed to considerably less proportion than originally implied. The shortened duration of relief in injection alone throws considerable doubt on the propriety of its application except in patients who refuse operation or are satisfied with temporary relief during the hot season to avoid cumbersome bandages, and in cases of ulcer in which injection may hasten healing by supplementing the usual procedures.

The final estimate of the value of preliminary ligation must await complete follow-up reports.

Prolonged use of the supporting bandage should be utilized to lengthen the period of relief.

An evaluation of the benefits to be expected in the injection treatment of varicose veins requires a rather arbitrary but useful classification of types:

Type 1.—Localized early or single varicosities without major symptoms or complications (edema, eczema, ulcer, or other evidence of tissue damage). These not infrequently thrombose, soften, and clinically disappear following injection alone. Treatment recommended: Simple injection; reinjection if recurrence takes place.

Type 2.—Moderately extensive varicosities below knee of one or more years' duration without complications. Treatment recommended: Complete injection; pressure bandages for 3 or more months after last injection. If there is a Trendelenberg double or early recurrence, high ligation of saphenous vein will delay subsequent recurrence.

Type 3.—Varicose veins extending above knee with or without complications. Treatment recommended: Preliminary ligation and injection; bandages for 3 or more months.

Type 4.—Varicose veins with complications (simple pigmentation, induration, eczema, chronic edema, or ulceration). Treatment recommended: Preliminary ligation and complete sclerosis by injection; the use of pressure bandages for 3 or more months.

Whether or not prolonged bandaging will delay recurrence, the future alone can decide.

This classification permits of more accuracy in informing the patients as to the probable outcome and renders statistical reports on results more valuable than if all degrees and stages of varicose veins are referred to en masse.

There is some compensation in the early and

erroneously optimistic reports, for the simplicity of injection attracted thousands of patients and interested thousands of physicians, so that the material for study and improvement in technic has been more than adequate. A tremendous amount of valuable information has been obtained. The loss of caste that this method has experienced will be largely regained, but with a more accurate knowledge of its limitations and with a wider use of the essential supplementary measures.

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ABSTRACT OF DISCUSSION

GILSON COLBY ENGEL (Philadelphia): If there were closer scrutiny of the end results of this treatment, the results would be found to be not half so gratifying as we imagine.

Dr. Kunkel mentioned the different solutions that have been used. My experience at the Lankenau Hospital Clinic, Philadelphia, has been chiefly with saline and glucose, and sodium morrhuate. There has been a higher percentage of recurrence with the former than with the latter. This, however, may be due to the fact that the sodium morrhuate cases have existed for a shorter period of time. In another year the recurrences may equal those of sodium chloride and glucose.

There is a comparatively new preparation—a 5 per cent solution of purified sodium ricinoleate. This was developed by McPheeters. It is composed of sodium ricinoleate (98 per cent) with small quantities of sodium oleate and sodium linoleate in distilled water. The pH of the solution is approximately 8.0 in order to assure a stable chemical compound which may be used with uniformity. According to McPheeters it produces a jelly-like thrombus which is not usually absorbed or resolved. I have just started using this solution. Whether the results will be any better remains to be seen. The fact that new solutions are constantly being brought out by various experimenters proves Dr. Kunkel's statement that the present solutions or methods are not entirely satisfactory.

The methods employed to date are indeed discouraging. Most of the recurrences occurred within one year; however, some of the cases did not show recurrence until after 3 years. This is the longest period to date after which recurrence has occurred. At the present time, therefore, after injection treatment a patient cannot be considered cured. They should be spoken of as

a 3-, 4-, or 5-year cure as is done in carcinoma cases.

The best results have been obtained in those cases in which ligation of the internal saphenous vein at the femoral opening was done along with the injection. Even in these cases there was a small percentage of recurrence. I have recently started using a double ligation with the injection treatment. This has been done in the hope of preventing the recurrence after single ligation. The internal saphenous vein is ligated at the femoral opening, dividing the vein between 2 ligatures. Then the vein is ligated again at the mesial aspect of the knee joint by a similar method, and the portion of the vein in the thigh injected, with subsequent injection of the vein in the lower leg. This should be more likely to destroy permanently the *venae comitantes* and thus prevent the recanalization of the thrombosis.

Often the recurrence seems to occur, not in the vein which was thrombosed, but in the other related veins or branches. Apparently the thrombosing of a portion of the vein places a greater burden upon another portion or its branches, and before long there is the appearance of another varicose vein. A number of our patients coming for injection have had previous operative removal of the veins, either by stripping or dissection; therefore, recurrence takes place with this form of treatment as well as with the injection method. The treatment of these cases is gradually improving; the mortality from injection treatment is lower than that from surgical removal.

An interval of at least 10 days should elapse between injections to give the thrombotic process a chance to begin to organize before the subsequent injection is given. As Dr. Kunkel has said, it is highly advisable for the patient to wear a tight elastic support, either in the form of an elastic bandage or an elastic stocking, during the course of treatment and for 8 weeks after the last injection since it has been demonstrated that the organizing process is active that long. To date, my patients have been wearing supportive bandages for only one month following injections, but I believe if this interval were prolonged the results would be better.

The lack of pelvic examinations is responsible for another group of recurrences. Many times tumors will be present creating intrapelvic pressure. Unless the cause is eliminated, the effect of this cause will recur. Thus, it is important to do a pelvic examination in every case of varicose veins.

I hope that Dr. Kunkel's paper has the same effect on others as it has had on me. It has not discouraged nor depressed me, but has stimulated me to search harder for the ultimate Utopia in the treatment of this class of cases.

THE PATCH TEST IN THE DETERMINATION OF ARSPHENAMINE SENSITIZATION*†

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During the past 15 years syphilologists have been searching for a means of detecting and predicting the true allergic specific element in reactions to the arspenamines. As a result of

numerous investigations at least 4 diagnostic test procedures have been proposed: (1) Intradermal injections of suitable dilute arspenamine solutions (the intradermal test), (2) the application of arspenamine to a superficial skin scratch (the scratch test), (3) the intravenous injection of minute doses of arspenamine solution and observation of the effects (the intravenous test), and (4) the application of a patch

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† From the Department of Dermatology and Syphilology, University of Pennsylvania School of Medicine, Dr. John H. Stokes, Director. Contributions from the Abbott Fellowship for Chemotherapeutic Research.

impregnated with an arsphenamine solution to the intact skin (the patch test of Jadassohn). The intradermal test has yielded such inconstant results that Joseph E. Moore, S. T. Woo, Harry M. Robinson, and L. N. Gay and, more recently, A. Benson Cannon and Marie B. Karelitz have decided that the risks of the test for the patient far outweigh the possible benefits. The scratch test has failed as a reliable means of detecting arsphenamine sensitivity (Joseph V. Klauder, William H. Mook). The intravenous test proposed by Joseph E. Moore has thus far had too little use to be fully evaluated.

The patch test, which theoretically seems to be suited to the purpose for which it is intended, has had a more extended study. Results with this test have led some investigators (Arthur G. Schoch, K. Schreiner, W. Frei and R. L. Mayer, E. Lehner, and E. Rajka) to recommend it not only for diagnosis of arsphenamine dermatitis but also as a guide for further arsenical treatment of a patient who has recovered from this condition. Unfortunately, other students of this problem (O. Glassberg, K. Steiner, Louis Chargin, Marion B. Sulzberger and Daniel F. Crowley, Harry M. Robinson, J. W. Jordan, and Earl D. Osborne) were either unable to depend on the patch test to indicate whether arsphenamine dermatitis is likely to develop or have condemned this procedure because it is lacking in specificity and has no diagnostic value.

During the past 3 years a group of 77 patients have been subjected to the arsphenamine patch test with the object of eliciting information on the following points: (1) The efficacy of the patch test in determining whether a patient's skin was sensitive to arsphenamine before the administration of the drug, and whether the test might serve to forecast the patient's liability to the development of dermatitis; (2) the value of the test in detecting the specific allergic factor in a cutaneous reaction occurring during arsphenamine treatment or combined arsphenamine and bismuth treatment; (3) whether the test can be relied upon as a guide to further arsenical treatment in a patient who has recovered from arsphenamine dermatitis; (4) the possible dangers of the patch test.

MATERIALS AND METHOD OF TESTING

The patients for this study were observed at the Clinic of Cutaneous Medicine of the Hospital of the University of Pennsylvania. Seventy-four of the 77 patients were syphilitic. Fifteen of the syphilitic patients at the time of their first test were free from cutaneous complaints. Two of these later developed arsphenamine dermatitis. Sixteen patients had arsphenamine

dermatitis of the exudative type, and 45 had various cutaneous reactions and symptoms other than typical arsphenamine dermatitis. The 3 nonsyphilitic patients had acute or chronic dermatitis of contact nature. None of these 3 patients had received arsphenamine therapy.

The original plan was to apply patch tests to all patients prior to the inception of their arsenical treatment, but an alarming increase of arsphenamine dermatitis on the service shortly after this plan was put into effect resulted in the limitation of the testing to those patients who presented cutaneous manifestations during their treatment. As many tests as possible were made on each patient. The largest number in any patient was 6 tests.

The technic of carrying out the patch test and the method of reading and interpreting the results were essentially the same as those reported by Arthur G. Schoch in his article entitled "The Patch Test and the Element of Syringe Contamination in Arsphenamine Dermatitis" (*J. A. M. A.* 98:1367, Apr. 16, 1932).

THE PATCH TEST AS AN ADVANCE INDICATOR OF ARSPHENAMINE SENSITIZATION

In order to shed some light upon this phase of the problem 15 syphilitic patients were tested, only 2 of whom had had any previous arsenical treatment. None of the patients at the time of testing manifested any cutaneous phenomena. The results of the tests in all of the patients were negative. All of the 15 patients were placed on arsenical treatment, receiving from 7 to 65 injections each. The drugs were well tolerated in 13 of the patients. In spite of the negative patch tests, 2 of them developed typical arsphenamine dermatitis. In one of these patients the dermatitis was almost fatal; in the other it was mild.

These results are in accord with previous reports which indicate that the patch test is not capable of determining in advance whether or not a dermatitis may develop following the administration of arsphenamine. A negative test does not indicate immunity nor a positive test always mean sensitivity. Louis Chargin and his co-workers attempt to explain the fact that patients who gave positive reactions to arsphenamine with the patch test did not, in any instance, develop a dermatitis on the hypothesis of Jadassohn, namely, that the quantity of the drug applied to a certain area by means of the patch test is much greater than the quantity reaching the skin on intravenous administration of the drug. They were at a loss to explain why their 2 patients who gave negative reactions to the patch test developed eczematous dermatitis. It is be-

lieved that the repeated performance of the test coupled with a prominent dermatophytic factor may have been involved in the development of the dermatitis in our 2 cases.

THE PATCH TEST AS A MEANS OF DETECTING
THE SPECIFIC ALLERGIC FACTOR IN A
CUTANEOUS REACTION OCCURRING
DURING ARSPHENAMINE OR
COMBINED TREATMENT

Aside from the typical exudative arspenamine dermatitis there occurs during treatment with the arsenicals a number of cutaneous reactions which are annoying to the physician because of uncertainty as to the safety of continued arspenamine treatment. In patients with early syphilis the cautious operator may unnecessarily replace an active form of treatment for one less active. Also, in combined treatment or the simultaneous administration of 2 drugs (arsphenamine and bismuth salts) as is now practiced in many centers, it is often difficult to determine on clinical grounds which drug, if any, is producing the undesirable effect. It was hoped that the use of the patch test on every patient who, during the course of his arsenical or combined antisyphilitic treatment, presented a cutaneous complaint would provide a means of detecting the part played by the arsenical.

In 10 patients with pruritus, 11 patch tests performed during or after the appearance of the symptoms were negative. In 2 of the patients, however, the cautious administration of minute doses of the arsenical (intravenous test) caused repeated recurrences of the pruritus. The arspenamine patch tests were all negative when performed on a group of patients who had developed various dermatoses during their antisyphilitic treatment. These dermatoses included 2 cases of dermatitis venenata, 3 with seborrheic dermatitis which had flared up under arsenical treatment, 1 with scabies, 1 with psoriasis, 2 with urticaria definitely related to the arsenical treatments, and 4 with pityriasis rosea-like eruptions. In 7 of these cases the arsenical treatment was resumed without ill effects. In a group of 22 patients with probably nonarsenical, localized, patchy dermatitis (acute and chronic), the patch test gave no reliable clue as to the advisability of continuing or withholding arsenical treatment. Among the 22 patients, 24 tests were performed. Four of the tests were positive during the symptoms, 12 were negative during the symptoms, and 8 were negative after the symptoms. Eleven patients with negative tests took further arsenical treatment uneventfully. Three patients with negative tests had recurrences of

the reaction after more arsenical was given (positive intravenous test). One patient with a strongly positive test, however, tolerated additional injections of the arsenicals. Usually all patients reacted alike to all forms of arsenicals used in the patch test. One patient in this group yielded a positive test to neoarsphenamine but simultaneously yielded a negative test to sulpharsphenamine bismuth (bismarsen). No further arsenical treatment was given to this patient. Harry M. Robinson reported a case in which the tests were positive to neoarsphenamine and drug A and were negative to drug B. The further intravenous administration of drug B was followed by a recurrence of the symptoms in spite of the negative patch test to it.

THE PATCH TEST IN TYPICAL ARSPHENAMINE
DERMATITIS

Arthur G. Schoch tentatively supported the value of the patch test as a means of detecting the specific allergic factor in arspenamine dermatitis and as a means of indicating the persistence of the sensitization. He concluded from his studies that "a positive patch test was an absolute contraindication to further arspenamine therapy, but that a negative patch test permitted further administration of the arspenamines." Harry M. Robinson agreed with Dr. Schoch that the positive patch test was confirmatory evidence of the persistence of sensitization, but he further maintained that the outcome of the test was not sufficiently dependable as a demonstration of arspenamine sensitization for clinical use since it is sometimes positive in normal individuals and often negative in those known to be arspenamine-sensitive. Furthermore, he concluded that the "continuance or interruption of arspenamine therapy in a patient who has suffered from a postarsphenamine dermatitis cannot be predicated on the results of the patch test." This opinion was concurred in by J. W. Jordan and E. D. Osborne and by G. Birnbaum. In order to throw additional light upon the issue, patch test studies were made on 16 patients with clinically typical arspenamine dermatitis, a type which is generally conceded to involve an element of allergic sensitivity to arsenicals. In 2 patients it was possible to perform tests before, during, and after the dermatitis. In the remaining cases the tests were performed during the attack or after it.

Of the 16 cases, 11 yielded strongly positive reactions to the test and 5 were negative. One of the 11 patients with a positive reaction was given further arsenical treatment. There was a recurrence of the dermatitis after one injection

of sulpharsphenamine bismuth (bismarsen). Of the 5 patients with negative reactions, 3 were given further arsenical treatment and tolerated 4 neoarsphenamine injections, 33 and 56 sulpharsphenamine bismuth (bismarsen) injections respectively.

Certain observations suggest that arsphenamine sensitization is only one phase of the complex condition known as arsphenamine dermatitis. John H. Stokes and George V. Kulchar have recently shown that a dermatophytic factor may be involved in this condition. Three cases of exacerbation of a dermatophytic process under arsphenamine treatment only have been observed in the group of typical arsphenamine dermatitis. The first 2 were reported by John H. Stokes and George V. Kulchar, and the third case will be reported by Donald M. Pillsbury. The essential interplay of factors involved in these cases, as observed by John H. Stokes and George V. Kulchar, indicates that an arsphenamine dermatitis may exist without necessarily involving a demonstrable primary allergic sensitization to arsphenamine, hence the possibility of a negative patch test. The arsphenamine may, however, act as a "trigger" mechanism to set a complex interplay of factors into action.

THE POSSIBLE DANGERS OF THE ARSPHENAMINE PATCH TEST

While there have been 2 schools of thought with regard to the dangers of the intradermal test as a means of inducing sensitization to the arsenicals, the trend of opinion has been (Arthur G. Schoch, Harry M. Robinson) that the patch test plays no serious part in inducing sensitization. Although Dr. Schoch observed a generalized erythema lasting 3 days concomitant with the local positive reaction to sulpharsphenamine bismuth (bismarsen), and W. Frei and R. L. Mayer noted a serious relapse of a healing dermatitis following the arsphenamine patch test, the relation of these effects to the test is only circumstantial. Data accumulated during 3 years' experience with the test and from recent literature suggest that there may be some risks involved in its indiscriminate performance.

There is a probability that the test may play a part in inducing arsenical hypersensitivity. In 1933 I presented a patient before the Philadelphia Dermatological Society in whom I thought cutaneous sensitization to arsenicals had been induced by repeated application of the arsphenamine patch test. This condition occurred during a period when routine patch testing seemed to have resulted in an increased incidence of arsphenamine dermatitis. The clinical findings in

this case were comparable to those observed by Dr. Schoch in 1930. At that time he suggested that the generalized process apparently provoked by the test may have been due to absorption of minute quantities of the arsenical through the unbroken skin. Another possibility is that the arsenic may have been fixed at the site. An attempt was made to test these possibilities by using the following procedure in 3 patients. A cantharides plaster and an arsphenamine patch test were applied on the arm of each patient who had previously given a bullous reaction to the arsphenamine patch test. At approximately the same time the patch and the plaster were removed, and after careful prolonged surface cleansing of the two bullae with water, their contents were aspirated by inserting a fine hypodermic needle intradermally a short distance from the test sites. The aspirated contents were tested for arsenic by a competent chemist using a micromethod for arsenic determination. None of the serum aspirated from the patch test bullae showed arsenic, but the serum from the cantharides blister of one patient showed an amount within the limits of error for the method used.

In spite of this negative experimental result, additional facts have been observed which are suggestive of the sensitization proclivities of arsphenamine applied locally. A nurse who complained of a dermatitis venenata of unknown origin presented a patch test with neoarsphenamine which was strongly positive. A month previously this nurse had been engaged in the clinic in cleansing syringes and had assisted in mixing arsphenamine solutions. Similar and more definite examples of possible contact sensitization to arsenicals have been reported recently. (Joseph Klauder's and A. Szarwas's cases of dermatitis and asthma are not comparable since the former occurred after intradermal use of arsphenamine and the latter through painting of arsphenamine solution into fissures on the fingers.) Ante Vuletic recorded dermatitic and asthmatic symptoms in himself and his assistant induced by the daily wetting of the fingers with arsenical solutions incident to the mass treatment of syphilis. Fred Wise and Marion B. Sulzberger, in commenting on Vuletic's report, cite the case of a nurse who developed severe gastro-intestinal attacks, asthmatic symptoms, and dermatitis, the source of which was traced to the preparation of arsphenamine solutions.

Consideration of such facts indicates that caution should be used in recommending the arsphenamine patch test as a foolproof procedure for indiscriminate use. In the hands of the ex-

THE VALUE OF THE PATCH TEST AS AN ADVANCE INDICATOR OF ARSPHENAMINE SENSITIZATION
Results of Tests on Treated and Untreated Syphilitic and Nonsyphilitic Controls and the Effect of Further
Treatment in Producing Dermatitis

Author	Type of cases		Arsenical treatment before test	Results of test		Effect of further treatment with arsenicals
	Syphilitic	Nonsyphilitic		Positive	Negative	
Chargin, Sulzberger, and Crowley (1930)	210	...	None	35 (17%)	175 (83%)	None of cases with positive reactions developed dermatitis.
	...	293	None	60 (21%)	233 (79%)	2 cases with negative reactions developed dermatitis.
Schoch (1930)	50	...	Some	0 (0%)	50 (100%)	No data.
	...	46	None	0 (0%)	46 (100%)	
Glassberg (1930)	112	...	Some	48 (43%)	64 (57%)	6 of 48 cases with positive reactions were later intolerant; 7 of 64 cases with negative reactions were later intolerant.
	38	...	None	0 (0%)	38 (100%)	5 of 38 cases with negative reactions later developed dermatitis.
Robinson (1934)	...	22	None	8 (37%)	14 (63%)	No subsequent treatment.
	54	...	Some	11 (20%)	43 (80%)	1 of 11 cases with positive reactions later developed dermatitis.
	18	...	Some	0 (0%)	18 (100%)	Jaundice cases at time of test.
Jordan and Osborne (1935)	135	...	Some	5 (3.7%)	130 (96.3%)	3 of 5 cases with positive reactions received further arsenicals; 1 of the 3 developed dermatitis.
Beerman	15	...	13 none	.....	.....	2 of 15 cases with negative reactions developed dermatitis.
	...	...	2 some	0 (0%)	15 (100%)	
	...	3	None	1 (33%)	2 (67%)	No further treatment.

perienched it may, under certain circumstances, be safely and profitably employed.

SUMMARY

1. The patch test is not specific enough to be implicitly relied upon as an advance indicator of arspfenamine sensitization. A patient with a negative patch test may develop arspfenamine dermatitis on further administration of arspfenamine. A patient with a positive patch test may tolerate additional arsenical treatment.

2. The patch test has failed as a reliable means of detecting the specific allergic factor in a cutaneous reaction other than typical arspfenamine dermatitis occurring during arspfenamine treatment.

3. The patch test may not be entirely harmless. It may cause an exacerbation of a subsiding dermatitis, and repeated application of the

test may induce cutaneous sensitization to the arspfenamine.

4. In spite of the apparent drawbacks of the test, the data suggest that in the hands of the experienced the arspfenamine patch test might be used as a guide to further treatment after arspfenamine dermatitis.

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ABSTRACT OF DISCUSSION

HARRY M. ROBINSON (Baltimore, Md.): To the physician who treats syphilis there is no more serious problem than the resumption of treatment with arspfenamine in patients in whom treatment has been interrupted because of postarsphenamine dermatitis. With this in view, we have since 1923 been investigating the problem of finding a means of detecting whether or not there continued a state of sensitivity in those patients who had recovered from postarsphenamine dermatitis.

Our results with the intradermal test, performed on

151 subjects, were very unsatisfactory. Although the test never caused or precipitated a sensitization reaction, nevertheless we discontinued its use because it was valueless as an indicator for resuming treatment with arsphenamine. In 1932 we were stimulated to continue the investigation of the patch test by the conclusions of Schoch, who, on the basis of 8 cases, stated, "The patch test with neoarsphenamine may be relied on to permit, if negative, or to interdict, if positive, further arsphenamine therapy in patients who have recovered from arsphenamine dermatitis." Our results were so at variance with this report that we continued the work by trying to prove the results of the patch test with a method which we call intravenous testing. We had already noted that neither the intradermal nor the patch test was of any value in determining potential sensitization to the arsphenamines, that is, in those patients who had not had arsphenamine dermatitis. Further investigation, therefore, was concerned only with those patients who had recovered from arsphenamine dermatitis. A forthcoming paper will report the results in 110 patients, 44 of whom were patch and intravenously tested, and the remaining 66 only intravenously tested. Of the 44 patch test patients, 11 were positive, 3 markedly so (and therefore not intravenously tested), and in one of these 3, the erythema surrounding the test zone covered an area of about 10 cm. in diameter and occurred in the patient listed in a former paper who has been continuously arsphenamine-sensitive for 19 years. The 6 who were strongly positive were also positive to the intravenous test and no further injections were attempted.

Special interest centered in the group of 33 patients in whom the patch test was negative. Twelve of these were also negative to the intravenous test, and there-

fore treatment could be resumed and continued to a logical conclusion. On the other hand, 21 of these who were negative to the patch test gave a positive reaction with itching and a mild dermatitis on receiving the minimal intravenous testing dose. Of these latter 21 patients, 2 were tested with the patch and intravenous test twice, and 2 were tested 3 times. Each time the test was the same, namely, negative with the patch test but positive with the intravenous test. Of the 66 patients who were intravenously tested but not patch tested, 34 developed no untoward symptoms on receiving the intravenous test and were able at last to tolerate routine treatment.

Twenty-nine reacted with moderate-to-marked itching or mild dermatitis, and further therapeutic attempts were temporarily discontinued. Three of these were of the fixed type and continued to react with each intravenous dose; one finally developed a generalized mild erythematous eruption. There were also 11 patients who gave a positive intravenous test one or more times, but on continued testing eventually did not react at all and could resume routine treatment with the arsenicals. This phenomenon is probably one of progressive desensitization.

You will note, therefore, that these conclusions are fully in accord with those of Dr. Beerman. The patch test is considered a reliable indicator only when strongly positive in a patient who has recovered from postarsphenamine dermatitis. A negative patch test is valueless and even dangerous if treatment is to be predicated on its results. In 63.6 per cent of the negative patch test cases with a history of postarsphenamine dermatitis, intravenous testing with the minimal test dose of .020 to .025 gm. of one of the arsphenamines caused a mild but conclusive dermatitis.

LOWER THIRD FOREARM AND LEG FRACTURES*

FREDERICK W. HEYER, M.D., NANTICOKE, PA.

Fractures of the distal portions of the forearm and leg bones are so numerous and of such industrial and economic importance as to command classical consideration of their occurrence and treatment.

In a group of nearly 5600 fractures occurring in a large industrial and thickly populated center, they constitute 26 per cent of all fractures and 40 per cent of extremity fractures including phalanges.

Table I shows the regional occurrence of fractures in numbers and percentages of the entire group.

Middle and upper third fractures of the forearm and leg bones constitute 12 per cent of all fractures and 17 per cent of extremity fractures.

Table II shows the numerical relationship of the lower, middle, and upper third fractures to the two groups.

The anatomic and functional reasons for the frequency of these lower end fractures are ob-

vious but are mentioned because of their rôle in the treatment.

The anatomic construction leaves these bones with very little protective muscle and fat. Firmly attached tendons and ligaments tend to increase, rather than spare, bone fragment displacements after fractures.

The active and protective functional stresses and strains about the wrist and ankle regions are severe, rigorous, and exacting in the daily activities of everyone and especially the workman, the playing child, and the athlete.

Direct violence to the lower leg with its crushing of soft tissues against the resisting bone produces serious vascular damage. Less obvious is the cause of marked swelling and edema which almost invariably follow lower forearm injuries.

A precise history of the accident is most important, and must visualize the manner in which the injury was produced—whether by direct or indirect violence or both, and the direction of the injuring forces. In a case of injury to the region of the wrist, for example, had the patient

* Read before the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

TABLE I

Type of fracture	Number	Per cent
Skull	309	5.5
Face, maxilla, mandible	183	3.3
Vertebrae, C., D., L.	213	3.8
Sacrum and coccyx	38	0.7
Clavicle	286	5.7
Scapula	77	1.4
Ribs	308	5.5
Sternum	11	0.2
Humerus	400	7.1
Radius and ulna	479	8.5
Radius	216	3.7
Ulna	93	1.7
Carpals	17	0.2
Metacarpals	113	2.0
Phalanges, fingers	343	5.7
Pelvis	198	3.9
Femur	462	8.3
Patella	53	1.0
Tibia and fibula	794	14.1
Tibia	303	5.2
Fibula	242	3.8
Tarsals	80	1.3
Metatarsals	255	4.7
Phalanges, toes	149	2.5
Total	5592	100.0

received a blow or had he fallen, and had the hand been flexed or extended in relation to the forearm?

Similarly in ankle region injuries, had a direct blow been incurred by a falling or rolling object, had the foot been caught between rails, had the patient fallen from a stool or ladder or building, or had the force been transmitted through the floor of a motor car colliding with a pole?

Diagnosis is often made with ease if this information is obtainable, if displacement of fragments exists, and if the extremity is seen before swelling develops.

The deformities accompanying such traumatic entities as Colles's, Smith's, Pott's, and Cotton's fractures are diagnostic, and the diagnosis is interestingly substantiated by the history of the injury.

If there is no deformity and a fracture is suspected, diagnosis is aided by applying pressure with the tip of the finger or the rubber end of a pencil along the fracture line and eliciting tenderness.

Comminuted and impacted fractures of the lower radius, the type frequently seen in aged patients, are readily diagnosed by the typical shortening in the radius, broadening of the lower forearm, and fixation, rather than abnormal mobility, of the fragments.

Compression and severely comminuted fractures of the lower tibia and fibula with upward displacement of the astragalus, following falls from a great height in which the patient lands on

the feet, are apt to present more diagnostic difficulties because of rapidly developing hematomas in severely lacerated and distorted soft tissues.

The common lower end fractures should not be subjected to diagnostic roentgen examination unless there is no time lost in making such examination or unless there is no deformity.

Melvin S. Henderson says that writings on the treatment of fractures through many centuries have almost universally insisted on early reduction, but that this must not be practiced at the expense of thoroughness in diagnosis.

The work of Frederic W. Bancroft and others in the microscopic study of the healing of fractures indicates that healing is in direct proportion to the promptness with which fragment ends are approximated.

Thus it is agreed that early diagnosis and treatment are the chief aims.

During the past 20 years much has been done to encourage the immediate treatment of fractures of the long bones and vertebrae. The use of Thomas' leg and arm splints, with traction applied at the scene of the accident by specially trained physicians and first aid corps, has given splendid results. In many instances, correction of displacements is effected by the traction alone. However, this emergency treatment is more applicable to fractures in the humerus, femur, and the middle and upper thirds of the forearm and leg bones. Little has been offered specifically for the lower third fractures. Deformities here are to be vastly more abhorred and disabilities avoided at every expense of effort and devotion to treatment.

TABLE II

Number of extremity fractures	3569
Relation of extremity fractures to all fractures	63.8%
Number of lower third fractures	1441
Relation of lower third fractures to all fractures	26.0%
Relation of lower third fractures to extremity fractures	40.0%
Number of middle and upper third fractures	686
Relation of middle and upper third fractures to all fractures	12.3%
Relation of middle and upper third fractures to extremity fractures	17.3%

The treatment of these lower end fractures, and especially those of the forearm, becomes the lot of the general practitioner, and rightfully. He should see them at the earliest possible moment, and in the absence of extreme shock or co-existing severe injury should manipulate at once if displacement of fragments exists. "The sun should never be permitted to rise or set on a displaced bone fragment or dislocation" nor should manipulation be postponed "until the swelling goes down." Patients with compound

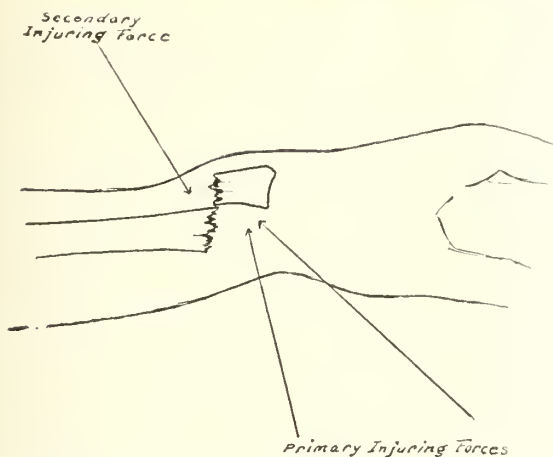


FIG. 1. Shows the direction of the primary and secondary injuring forces in a common type of fracture of the lower radius.

fractures should be hospitalized and treated immediately.

Corrective manipulation is exerted in the direction opposite to that of the producing force and carried slightly beyond the normal position. A mild degree of overcorrection will compensate for the frequent tendency to recurrence of the deformity when retentive dressings are removed. Anesthetics or analgesics are not required in most of these early corrective procedures.

It is usually necessary to retain the correct position of the fragments with splints. Plaster-of-paris splints are the most satisfactory. They are easily made or may be purchased in convenient sizes. A sufficient number may be carried at all times in the emergency bag. They are immersed in cold water, applied, and held in place with a gauze bandage. During the hardening process which requires but a few moments, the operator maintains the correct relations in the adjacent joints. They always fit the parts perfectly and avoid one of the greatest misdeemeanors in the retention of position, i. e., severe

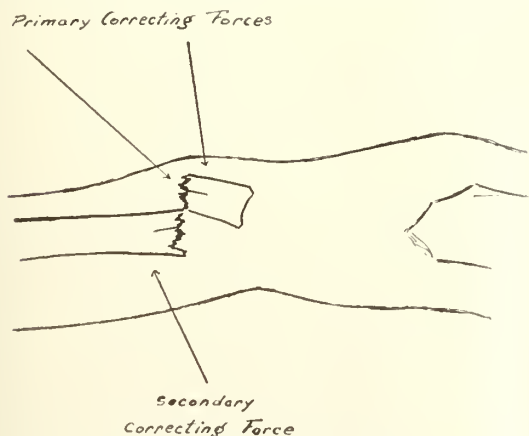


FIG. 2. Shows the correcting forces applied in directions opposite to those of the injuring forces.

localized pressure with its resulting soft tissue injury, ischemia, and scar tissue formation. They are translucent to roentgen rays and permeable to inductothermy. When physiotherapy is commenced, they permit of easy removal and reapplication.

At the earliest feasible time after manipulation and splinting, roentgen-ray films should be made. If further corrective measures be required, or if difficulty is encountered because of interposed muscle or periosteum or floating fragment, manipulation under the fluoroscope may be permitted and results recorded by another roentgenogram. Follow-up roentgen-ray examinations will record the progress of the healing process.

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ABSTRACT OF DISCUSSION

WILLIAM L. ESTES, JR. (Bethlehem): This paper gives us considerable food for thought. One important point is that, in fractures of the lower ends of the extremities, an accurate history is of real value because it helps not only in the diagnosis but also in the treatment of the patient. So often an exact description of how the injury was sustained is of great aid in planning the accurate reposition of the fragments.

For exact diagnosis the radiograph is invaluable. However, if a fracture has occurred in a place or at a time when a roentgen-ray examination cannot be made, no delay in reduction should be permitted just because a roentgenogram is not available. Nevertheless, whether a roentgen-ray apparatus is available for diagnosis or not, there should always be a postreduction radiograph. Preferably, this should be repeated at weekly intervals until union is solid.

There is a well-known case on record in which adequate reduction was confirmed simply by a fluoroscopic examination and no radiograph was made. The patient failed to follow the surgeon's direction and evidently developed a deformity at the point of fracture. The surgeon was sued and lost the case because he had no proper ground for defense since he had no definite evidence of satisfactory reduction of the fracture. It should therefore be emphasized again that there must always be a radiograph taken as part of the permanent record of a case.

Reduction should be done immediately. Immediate reduction is a tremendous asset in the ease in which these fractures can be reduced. Failure to reduce these fractures at once can be considered in the line of malpractice. If a fracture is seen late in the evening and reduction is delayed until the following morning for the convenience of the operator, or if considerable swelling is present when the fracture is presented for treatment and reduction is delayed until the swelling has subsided, these practices can no longer be defended because the injury of the accident to muscle and adjacent tissue is increased when the fragments remain out of position with laceration and hemorrhage into the soft parts. Delay in reduction interferes very definitely with recovery of the patient; hence, reposition as soon as possible after the accident cannot be overstressed.

A few of these fractures can be reduced without an anesthetic. However, local anesthesia is a very useful asset in this type of fracture, particularly when an anesthesiologist may not be available. Moulded plaster splints are certainly to be recommended in the treatment

of these fractures, not only because of the ease with which they can be applied but also because they permit proper after-treatment so readily.

Likewise, it must be remembered that the treatment of any fracture consists of 2 almost equally important parts: (1) The accurate and proper primary reduction, and (2) the conduct of after-treatment so that there is as nearly as possible complete return of function in the part. The responsibility of the surgeon lasts over this entire period—until the patient is completely well.

Two phases of after-treatment should be stressed. The first is early active motion. This is not a blanket formula and should be used according to the indications in each individual case, but in many instances it can be inaugurated early and in all cases it should be used as soon as possible. Even the movement of the fingers and toes while the splints are still in place will assist in obtaining early return of function in the muscles of the injured parts. However, the most important feature is to have the patient understand that it is his job actually to regain function in the injured extremity and that the doctor and his assistants can but help him to help himself. An early proper psychologic attitude toward the injury is one of the patient's greatest assets in regaining active normal use of the extremity.

The second important phase of after-treatment was brought out by the recent report of the Committee on the Treatment of Fractures of the British Medical Association. In this report it is shown that one of the causes of the prolongation of disability following fracture in England has been the lack of "unity of control." Similar conditions undoubtedly exist in the United States, i. e., prolonged disability results following fracture due to the fact that the surgeon who made the primary reduction did not follow the patient to the final stage of complete recovery, but passed over the after-care to an assistant who—though conscious of the various means for obtaining recovery of function—did not know the particular details of the fracture that should guide the after-care in this particular instance. Obviously, it is not necessary for the surgeon actually to apply the physical therapy, *etc.*, in every detail, but it is important that he should maintain supervision of the patient until he is back at work and has the best obtainable function in the injured extremity.

Since we so often find it convenient to leave certain stages of the after-care of this type of fracture to the family physician (and it is perfectly fitting and proper that the family physician be associated in the after-treatment of these cases), there should be, for the best

interest of the patient, proper co-operation and consultation between the surgeon who makes the primary reduction and the physician who undertakes the after-care of the patient so that there may be prompt and speedy recovery of the patient.

DAVID E. HOFF (Harrisburg): In the case of an oblique fracture of the tibia with marked displacement, especially if it is associated with a fracture of the fibula, put a pin below and above the seat of the fracture and place the leg in a special armanentarium. With the use of the fluoroscope and proper traction the fragments can be placed in good position. Incorporate the pins in the plaster-of-paris cast, after which the special appliance is removed. With this method there is a much better result and less deformity.

With children it is different. To age 16 the epiphyses are not ossified; consequently, the bone is still growing and nature generally corrects the deformity. Therefore adhesive straps may be used, and if the approximation is not so accurate good results generally follow.

I wish to speak about a very peculiar fracture of the wrist. A man was sent to me with a rather trivial fracture that occurred about 6 weeks previously. This was a linear fracture of the radius which extended into the wrist joint. When this man was a boy about age 8, he developed an osteomyelitis of both the ulna and the radius which also entered the wrist joint. He had quite a deformity as a result of this disease. The hand was in marked abduction with some ankylosis of the wrist joint, but he was able to earn a livelihood until the time of this fracture. It was impossible for him to work because of stiffness and pain in the joint, especially on the radial side. The operation consisted of an incision on the dorsal aspect of the hand, extending up the forearm about 3 inches. Quite a portion of the scaphoid and semilunar bones was removed, but articulation of the radius was not disturbed. Almost half of the scaphoid and semilunar bones were removed in order to make the hand straight. A piece of fat from the thigh was inserted between the articulating surface of the wrist joint. The hand and wrist were retained in a cast for 3 weeks, when the cast was removed and baking and massage begun. A splint was applied to the under surface of the forearm, and at the palm of the hand a cock-up piece was put on the splint to hold the hand in hyperextension. At the end of 3 months the patient had good function and a straight hand. I use fascia from the thigh more frequently than fat to establish function of a stiff joint.

URINARY HEMORRHAGE—A SYMPTOM, NOT A DISEASE*

With Particular Reference to the Importance of Early Diagnosis of Bladder Tumors

ELMER HESS, M.D., ERIE, PA.

Hematuria, or blood in the urine, as a symptom has been brought to your attention so often in the past that there remains little to be said concerning this subjective and objective indication of urinary disease.

Unfortunately urinary hemorrhage has not been given, so far, a sufficiently important place

in the minds of medical men generally, to say nothing about the laity; yet there is no more important or significant single warning diagnostic signal in the entire realm of medicine.

Blood may come from any portion of the urinary tract, and the lesion may be accurately located by simple uroscopy. The art of uroscopy was a development of the middle ages, and physicians in those days depended entirely upon their

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

observations of the voided specimens of urine to make a diagnosis. There is no way of ascertaining how accurate these diagnoses were. Perhaps it is well that uroscopy is a lost art, for there is no doubt that a "urine gazer" would be considered a quack in this day of scientific medicine; yet to the careful observer there is no question but that much may be learned in urinary hemorrhage from carefully observing various voided samples of urine.

For the benefit of the average general practitioner, a brief consideration of urinary bleeding is pertinent. Given a patient who has noticed blood in the urine, it is essential first to get some idea, if possible, concerning the source of the bleeding. There are a few points with which the general physician should be acquainted.

Blood appearing at the meatus or at the beginning of the act of micturition is usually from a lesion anterior to the triangular ligament in the male, or from some part of the urethra or vagina in the female. The urine will usually be clear after this first spurt of blood or blood clot, because the accumulated blood, clotted or not, is usually washed out of the urethra ahead of the main volume of urine. This type of bleeding is seldom excessive and, if so, may be noticed continually regardless of the voiding period.

Blood from the posterior urethra or bladder neck in the male is usually seen only on the termination of the act of voiding. This bleeding is seldom excessive, often consisting of a normal, or fairly normal looking, urine with a few bright terminal drops of blood. Bleeding from lesions at the bladder neck in the female may take on the same characteristics. In both sexes excessive bleeding from any portion of the bladder wall will usually give a bloody urine at one voiding with a clear urine at the next unless large clots happen to form in the bladder. Uroscopy, however, will show that the urine usually separates rapidly into a bloody lower layer and a clear upper one with irregular sized clots. If the bladder is filled with old clots, bleeding virtually having ceased, the urine may be stained various shades of red with occasionally black disintegrated blood clots.

Bleeding from the kidney pelvis or ureters may be suspected when the entire urine is bloody and does not separate into layers, and when there are long bloody casts of the ureter. It must not be forgotten also that, if a clot occludes a ureter with a normal kidney on the opposite side, there will often be periods on the same day even when blood will appear at one voiding and clear urine at the next. A careful history of the case and a careful observation of the appearances of the urine in 1, 2, or 3 glasses may indicate the exact location of the lesion causing the hemorrhage fairly

accurately. The "may" however, should be emphasized. If the history and uroscopy are to be relied upon by the physician as his only means of locating the source of the bleeding in the urologic tract, the errors will be as great in the majority of cases as the diagnosis will be correct.

Given a patient who has urinary bleeding of any kind, type, or description, there is one and only one method that will positively assure the patient and the physician that the location of the lesion can be found and diagnosed. It is in bleeding from the urinary tract that the cystoscope is so valuable. As a matter of fact, every patient who has voided bloody urine should be immediately cystoscoped. To fail to make a complete urologic survey, or to fail to have one made by a competent cystoscopist, is to make the wrong diagnosis in the vast majority of cases and to sentence to death many patients who otherwise might have had their lives prolonged by treatment and in many cases might have been cured.

In a recent article, Haines discusses completely the various diseases which may cause blood in the urine. His classification is simple and complete. The first group consists of those cases in which hematuria is a complication of systemic disease. He calls this medical hematuria. The second group consists of those which are caused by disease of the adjacent organs extending into the urinary tract. The third group consists of lesions primarily localized in the urinary tract (surgical hematuria).

A diagnosis of essential hematuria is like a diagnosis of neurasthenia. It is a simple confession that the attending urologist has been unable to locate the source of the bleeding or its causes. To my mind there is no such diagnosis as essential hematuria. There must be a lesion or there must be abnormal physiology if not actual pathologic involvement. Two cases illustrate this point.

A young man in his late twenties consulted me with a history of intermittent periodic urinary bleeding over a period of years. He had been examined carefully by 3 prominent urologists. The diagnosis was essential hematuria. I examined him 3 times and always was able to obtain bloody urine from the right kidney. The function of this kidney was normal; the pyelo-ureterogram was normal; there was no infection present. But there was always blood-tinged urine. This blood-tinged urine was always aggravated after pyelography. I decided to remove the kidney because it was difficult to believe that this patient could have so much hemorrhage without a definite, active pathologic lesion. The pathologist reported a carcinoma of the papillae of the superior calyx of the kidney that had not extended sufficiently into the pelvis to cause distortion of the pyelogram.

The other case was that of a woman in her early thirties whose examination never revealed anything but bleeding from the right kidney. Again, all cystoscopic

and roentgen-ray examinations were negative. The removed kidney showed several large, bleeding, acutely inflamed papillae which dripped blood constantly and for which there is no treatment other than nephrectomy. Both patients are alive and well today.

Bleeding from the urinary tract may come from trauma or congestion, particularly renal parenchymal congestion, and very often it is difficult to find the active cause.

A patient, a sister in her early thirties, came to me with hematuria. The roentgen ray disclosed a large shadow in the region of the left kidney which was thought to be a stone. The pyelogram obliterated the shadow of the stone. It was difficult to believe that a kidney could have such normal function, as to the quantity of urine and as to the dye test, with such a large stone completely filling the pelvis. While this patient was in the hospital under observation she passed a fecalith with a hole through it and through which the feces had been passing. The shadow disappeared and the hemorrhage from the kidney ceased. The only explanation is that this huge fecalith located in the large bowel pressed against the renal pedicle, obstructing the venous return without obstructing the arterial inflow. As soon as this pressure was removed, the congested, bleeding kidney returned to normal.

There is no doubt that in certain types of nephritis the hemorrhage will be sufficiently large to camouflage the infectious process in the kidney.

Recently a boy, age 14, was referred to me because of anemia induced by urinary bleeding. All of the urine was constantly blood-tinged. The albumin in the urine was considered to be due to the presence of the blood. Careful urologic diagnosis revealed that the boy was suffering from an acute staphylococcal pyelonephritis. As the infection in the urinary tract was eliminated, the bleeding gradually ceased. In this particular case, while in the beginning no cause could be found for the bleeding, it existed as an acute parenchymal infection.

These few cases are cited merely to show that it is impossible very often to make a diagnosis of the actual pathologic lesion present even after the most careful and thorough urologic survey has been made and sometimes even after it has been made several times. We can be assured, however, that a thorough urologic survey will localize the bleeding in a definite place in the urologic tract. Further interpretation of the findings will render a workable diagnosis and, with a workable diagnosis, logical therapy may be instituted.

The most important single clinical symptom to emphasize is the profuse, painless hematuria which may occur once, disappear, and not recur for months, but which may occur at irregular intervals over any given period of time. It is the type of hematuria that frightens the patient. He notices that he voids almost pure blood and, at the next voiding, anxiously looks for blood again and does not find it. He may never experience bleeding again for a long time, and because this hematuria is usually painless the experience may be forgotten after the first fright. These patients

do not consult a physician unless they again see blood, or if they have consulted a physician, they may be given some pills and told to watch carefully and see if there is a repetition of the bleeding, and to report back when they have the next hemorrhage. Both of these procedures are wrong. The vast majority of bladder-tumor cases come to our attention after the second or third hemorrhage, seldom after the first. They do not receive proper care after the first hemorrhage because of lay ignorance or medical procrastination.

It is often difficult for a family physician to insist upon a complete, thorough, expensive urologic survey when a friend or an old patient comes to him with a history of a single, profuse, painless hematuria which has occurred once and is no longer present. If pain were associated with the condition or if the bleeding continued, both the physician and the patient would be driven into the proper consulting hands for a diagnosis. If the average general practitioner and the average layman only knew how many patients died or had enormous medical and hospital expenses, to say nothing of uncomfortably long convalescent periods as a result of waiting for that second hemorrhage, they would immediately see that a diagnosis was made.

There is only one way to make a proper diagnosis, and that is by cystoscopic examination at the first sign of a profuse, painless hematuria or a hematuria of any character. As specialists we will not make much progress in the treatment of tumors of the bladder until this information is spread thoroughly among the laity and until we, as medical men, are willing to recognize the necessity for a complete urologic survey, whether or not the hematuria be painless.

My own records indicate that only one patient was referred to me or consulted me immediately following the first hemorrhage. Approximately 80 per cent of all my cases of bladder tumor had as a primary symptom a massive, painless hematuria. In one case there were repeated hematurias for 14 years before any effort was made to have a cystoscopic diagnosis.

A woman, in her sixties, who had had profuse bleeding intermittently for 5 years was under the observation and supervision of several medical men during that entire period. Not once was the necessity for a cystoscopic examination suggested to her. During the fifth year of the disease she was referred to me; there was a tumor in her bladder of enormous dimensions, almost completely filling the viscus. The remarkable feature of this case is that the tumor has been cured by radium and deep roentgen-ray therapy even after that delay. The tumor, although malignant, was only mildly so, being a Grade I Broders'. The chances for recurrence and metastases naturally still remain.

These bladder tumors must be seen earlier if favorable progress in mortality and morbidity results is to be made. True, it is often impossible to cure tumors even though they are seen early after the first hemorrhage, but the chances of cure depend upon early diagnosis.

Cystoscopic observation, although not a perfect method for estimating the degree of malignancy, can be relied upon in the hands of an experienced cystoscopist. It is seldom that, after a cystoscopic examination, we are not able by studying the size, shape, location, and appearance of the tumor to make a diagnosis of Grade I, II, III, or IV Broders'. The diagnosis in virtually all cases in which we are able to get sections agrees with the cystoscopic opinion. I do not deliberately attempt to get sections for diagnosis, believing that the important thing clinically is to treat the tumor, not to grade it. If pieces of tumor are washed out in the cystoscopic management of the case, they are sent to the laboratory. If during fulguration a large piece of the tumor breaks off and is washed out, it is sent to the laboratory; or if we perform an open operation and cut the tumor off with a cutting loop, all pieces of the tumor are sent to the laboratory.

The vast majority of tumors can be treated by the cystoscopic approach; they should be treated by fulguration, radium, and deep roentgen-ray therapy. The only cases not so treated are those which, due to location, are difficult to handle; these, regretfully, are approached by the suprapubic method. The tumor is resected by the radio-knife, the base fulgurated, and radium planted in the bladder wall surrounding the area. Many of these cases are likewise given deep roentgen-ray therapy.

In inoperable malignancies of the bladder, I am a firm believer in the value of deep roentgen-ray therapy. Although many of these cases are incurable, some can be so reduced in size by deep roentgen-ray therapy that they may be approached and the remaining tumor destroyed cystoscopically.

There are a few cases in which total cystectomy is indicated with transplantation of the ureters. These are few and far between. The operation is extremely hazardous to life, and usually at the time when the operation would do the most good with the best chances for survival of the patient, cystoscopic treatment seems to be the procedure of choice.

CONCLUSION

1. Bleeding from any part of the urinary tract calls for immediate complete urologic survey.

2. Uroscopy is of no definite value as a diagnostic process.

3. Sudden, painless, massive hematuria with or without recurrence, in the vast majority of cases, means tumor in the urinary bladder. Occasionally it is indicative of ureteral or renal tumor.

4. Essential hematuria as a diagnosis should be dropped from the nomenclature.

5. Treatment:

(a) The vast majority of bladder tumors may be treated through the cystoscope by fulguration and the implantation of radium. This should be the method of choice.

(b) Fulguration, radiation, and deep roentgen-ray therapy.

(c) Suprapubic operation, because of location, with fulguration, radium, and deep roentgen-ray therapy. Very few bladder tumors will require this method of treatment; it should not be used routinely.

(d) In inoperable carcinomas, deep roentgen-ray therapy followed by fulguration and radium if possible.

(e) Transplantation of the ureters with total cystectomy may be tried in certain carefully selected cases if all other methods of treatment seem to be contraindicated. The indication for this procedure is very seldom seen and is followed by a very high mortality and a very high morbidity.

6. Lay and medical education, with a definite program of propaganda supervised by the State Medical Society so that both family physician and patient will demand a complete urologic survey following the first sign of bleeding, is the only way to obtain results better than those now possible in the majority of cases of genito-urinary malignancy which occur in this state.

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ABSTRACT OF DISCUSSION

THEODORE R. FETTER (Philadelphia): One of the outstanding features of this paper is the title. Urinary hemorrhage is certainly more expressive than hematuria. Unfortunately blood in the urine is still not dramatic to many physicians. It is, however, quite dramatic in the life of the patient who consults the physician. Cystoscopy need not be feared; it is not a barbarous diagnostic procedure, but one that can and should be performed skillfully and with a minimum amount of discomfort. The essence of this paper cannot be appreciated unless urologists dispel the onus that surrounds simple cystoscopy.

The art of uroscopy as presented by Dr. Hess should be appreciated. The glass test, as it is familiarly called, still holds sway in the treatment of specific gonorrheal urethritis. It is a part of the art of practice; unscientific it may be, nevertheless it should be presented to

students in medicine in an orderly, concise, didactic fashion.

Apparently essential hematuria is as distasteful to the urologist as essential hypertension is to the internist.

A patient complained of gross hematuria intermittently for 2 years. His first attack of hematuria occurred in 1921, with recurrent attacks in 1924 while playing football and in 1927 while playing baseball. Strenuous exercise seemingly caused the hematuria to reappear. Repeated studies during these years were negative. He was admitted to the Jefferson Hospital on May 27, 1935; a nephrectomy was done on June 10, and he was discharged on June 25 apparently well. The pathologic report was hemorrhage in the tubules of the kidney. This case is presented merely to emphasize the point made by Dr. Hess that very often clinical experience must be the deciding factor for surgical interference or noninterference.

The need of repeated complete urologic studies in these cases of bleeding without any apparent cause cannot be stressed too much. A complete medical history is absolutely paramount in importance. Multiple examinations of the urine bacteriologically should never be omitted. Tuberculosis should always be borne in mind,

no matter how many factors are seemingly against such a probable diagnosis. Those thoroughly acquainted with urinary pathology are often chagrined to find the most minute lesions, which present no abnormal pyelographic findings, produce marked urinary hemorrhage.

Dr. Hess rightly emphasizes the single clinical symptom of profuse painless hematuria. At the present time, Dr. Farrell and I are analyzing a series of cases of bladder tumors which have received therapy in Jefferson Hospital. The outstanding feature in this study is the variable time factor between the onset of urinary bleeding and the instituting of proper treatment. This undoubtedly holds true in carcinoma of the kidney.

What the essayist says relative to bladder carcinoma is essentially the same as our experience in Jefferson Hospital. Transurethral approach in the treatment of bladder tumors together with high-voltage roentgen ray and radium implantation is to be preferred rather than suprapubic approach.

If we, as practicing urologists, popularize the term "urinary hemorrhage" in our colleges, medical societies, and associations among both physicians and lay friends, the end results of bladder tumor or any urinary complication will be different in the future.

DIABETES AND PREGNANCY*†

A Survey of 665 Cases

DAVID W. KRAMER, M.D., PHILADELPHIA

In a previous publication the problems of diabetes and pregnancy were discussed. An attempt was made to answer some of the controversial questions such as the effect of pregnancy upon the diabetes, the influence of diabetes upon the pregnancy, the effect upon the mother and the child, and what advice to give a diabetic who contemplates motherhood. The conclusions were based on a preliminary report of 238 collected cases.

Because of the importance of the subject and because of the diverse views upon the behavior of the diabetes during pregnancy, a survey was decided upon in order to arrive at more satisfactory conclusions if possible. This survey consisted of distributing questionnaires to the larger hospitals throughout Pennsylvania and the United States. Information was requested concerning the number of cases of this combination in the past 10 years, which includes the era of insulin administration. A total of 519 questionnaires were mailed with letters soliciting the desired information. There were 188 replies, of which 75 reported no cases in the past 10 years and 113 others generously offered their case records for study. Some were unable to give any information because of the inability to locate their records. A few others were planning to review their

cases with the thought of reporting them subsequently.

From these responses 427 case reports in 345 patients were collected, to which may be added the 238 cases mentioned, giving a total of 665 cases of pregnancy and diabetes in 530 patients. Although a much larger number of cases would be more desirable for statistical purposes, we are warranted in offering conclusions from these totals because the records were from various parts of the country and were not limited to any one group in which the chances for a successful termination might have been enhanced because of better equipment and organization. Furthermore, the incidence of the combination of pregnancy and diabetes is not a common occurrence. The significance of this fact is emphasized by such reports as: "We have had no cases in 5 or 10 years," or, "We have had one case in 10 years out of 13,419 deliveries." Another reported 1 case in 10 years out of 5000 deliveries. One report showed 1 case in 20 years.

Although it is impossible to give accurate figures of the total number of deliveries from the reports received, it may be assumed that the 427 case reports are gathered probably from 400,000 to 500,000 deliveries in the various institutions, indicating that the probable incidence is about 1 case in 1000 pregnancies. These figures are pure conjecture and may have to be altered with changing conditions.

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

† From the Medical Department, Jefferson Medical College.

It was noticed that each year there has been practically a steady increase in the number of cases, as shown in Chart 1. From 3 cases in 1923

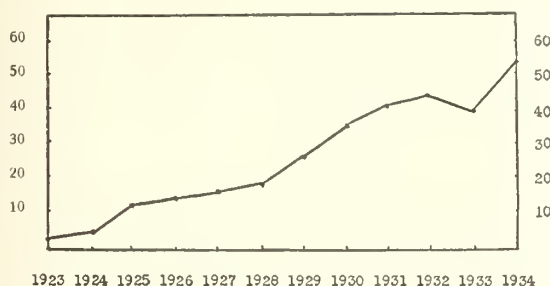


Chart 1. Showing the gradual increase in the number of cases of pregnancy and diabetes.

it reached the forties in 1931 and the peak of 53 cases in 1934. This increase is caused by (1) the increased incidence of the disease, (2) an increased number of diabetics who are of the child-bearing age, and (3) probably some stimulating influence of insulin upon the reproductive organs.

The information obtained from an analysis of these case records was tabulated and will be discussed under the various headings. For convenience the series of the 427 cases obtained from questionnaires will be labeled Group I; the 238 pregnancies previously collected, Group II.

EFFECT OF PREGNANCY ON DIABETES

Opinions vary upon the behavior of the diabetes during the pregnancy. Some insist that there is improvement of the disease and others that the diabetic condition is aggravated.

The final solution of this problem is difficult because this question is raised: Should the state of the diabetes at term be compared with that of the early months of pregnancy, or should it be compared with the diabetic condition before gestation?

The former method does not seem advisable, because the carbohydrate mechanism may be part of a general disturbance in the early months of pregnancy. This fact should deter us from interpreting any improvement at term as a probable beneficial effect of the pregnancy. A more desirable method would be to compare the state of the diabetes after pregnancy with the status before conception. Unfortunately this information is not available in many cases.

The results of the study are given in Table I. In Group I the percentage of cases which were improved and the percentage which became worse (22.7 per cent and 21.5 per cent respectively) are practically the same. The highest percentage was 32.8, in which the condition was un-

changed. The total figures show that 22.4 per cent were improved, 18.6 per cent were worse, and 25.0 per cent were uninfluenced by the pregnancy.

Some have intimated that the diabetes is more likely to improve in the latter months of pregnancy because of the activity of the fetal pancreas, thereby contributing an added supply of insulin. This never has been proved despite some records of experiments on animals. The more accepted view of the reason for this improvement is that it is probably due to better management of the case and co-operation of the patient plus the fact that the fetus is using up some of the carbohydrates.

In Table II the data of the behavior of the diabetes during pregnancy are arranged to show whether or not the severity of the diabetes had any influence upon the ultimate results. This table shows that in the improved column the highest percentage (28.9) was among the moderately severe, and the lowest (14.0) in the severe. Conversely, the severe cases showed the highest percentage (28.0) which became worse, and the mild group the lowest (20.6). In the unchanged column the percentages were similar in all forms of diabetes.

The inconsistency of the percentages in the improved column and their striking similarity in the unchanged column seem to indicate that the pregnancy, although there may be some dis-

TABLE I
COURSE OF DIABETES DURING PREGNANCY

Status	Group I		Group II		Total	
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent
Improved	97	22.7	52	21.0	149	22.4
Worse	92	21.5	32	14.0	124	18.6
Same	140	32.8	26	11.0	166	25.0
Not mentioned ..	98	23.0	128	54.0	226	34.0
Total	427	....	238	....	665	....

turbance of the carbohydrate metabolism in the early months, has little or no influence upon the diabetes. That so many of the cases become worse demands some explanation. This unfavorable change may be due to the pregnancy or to a progressiveness of the disease. The fact that the percentages of the worse column are in proportion to the severity of the diabetes places the suspicion upon the disease rather than the pregnancy.

EFFECT OF DIABETES ON PREGNANCY

This will be considered under 2 headings: (1) Complications, and (2) effect upon gestation itself.

TABLE II
EFFECT OF PREGNANCY ON DIABETES ACCORDING TO SEVERITY OF THE DISEASE (GROUP I)

Severity of Diabetes	Improved		Worse		Unchanged		Not mentioned		Total
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	
Mild	34	22.7	31	20.6	51	34.0	34	22.7	150
Moderately severe	24	28.9	35	22.1	54	33.9	24	15.1	159
Severe	13	14.0	26	28.0	32	34.4	22	23.6	93
Not mentioned .....	..	....	..	....	..	....	25	....	25

Complications. Coma was the most common; hydramnios was next highest. In 86 cases other complications were mentioned, including acidosis, toxemia, and various other conditions which the recorder thought worth mentioning. Some of them may have been attributable to the diabetes; others were incidental.

Coma is outstanding among the complications. It usually makes its appearance in the later months of pregnancy and may come on suddenly with little warning. In Group I it was found in 48 cases. There were 13 cases in Group II, giving a total of 61 cases with coma (9.1 per cent).

Hydramnios is another complication mentioned in the pregnant diabetic. It was seen in 18 cases (4.2 per cent), which is a comparatively low figure. It is quite possible that its presence is accepted and was sometimes not recorded among the list of complications. E. Skipper found it present in 11 per cent of his cases since the insulin era.

Acidosis was mentioned in 6 cases (1.4 per cent). This figure seems to be an underestimation of the actual presence of this condition. Such a low percentage is probably due to the fact that it was associated with coma and listed as such. Another explanation may be the failure to recognize its presence. It may exist without symptoms or signs and in some cases can only be detected by urinalysis and blood-chemistry determination.

Toxemia was recorded in 12 cases, including

6 with convulsions or eclampsia (1.4 per cent). In Joslin's series of 105 pregnancies in 93 mothers during the insulin era, eclampsia occurred in 4 per cent in contrast to a nondiabetic incidence of 0.3 per cent.

Other complications were also found; Phlebitis, 3 cases; pyelitis, 3; cellulitis, 2; and 1 case each of furunculosis, breast abscess, ulcers, and osteomyelitis. Besides the infections there was one case of traumatic gangrene of the finger. There were also 2 cases of appendicitis, 2 cases of psychosis, and 1 each of chorea, pulmonary tuberculosis, and pneumonia. There were other obstetric complications such as 2 cases of placenta praevia, 3 cases of postpartum hemorrhage, and 2 cases of extensive lacerations.

Besides the commonly accepted conditions such as acidosis and coma, hydramnios, and possibly toxemia, it is doubtful whether diabetes exerted much influence upon the development of complications.

Gestation.—This problem is presented in Table III. It may be noticed that 233 cases went to term. There were 49 abortions, 37 therapeutic abortions, and 46 premature births. The latter 3 groups totalled 132 cases (30.9 per cent) which failed to go to term.

Further analysis reveals that in the milder cases the pregnancy was more apt to reach its normal termination. Out of 150 mild cases, 100 (66.6 per cent) went to term. The more severe the case, the lower the percentage becomes (50

TABLE III
EFFECT OF DIABETES UPON THE COURSE OF PREGNANCY (GROUP I)

Severity of diabetes	Term		Aborted		Therapeutic abortion		Premature		Induction of labor	Cesarean	Not mentioned
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent			
Mild (150 cases)	100	66.6	11	7.3	5	3.3	12	8.0	4 (1)*	1 (8)*	17
Moderately severe (159 cases)	80	50.0	19	12.0	16	10.0	20	12.5	12 (6)*	3 (11)*	9
Severe (93 cases)	39	42.0	16	17.2	14	15.0	11	11.8	3 (2)*	7 (9)*	3
Not mentioned (25 cases) ..	14	....	3	....	2	....	3	....	0 (2)*	0 (2)*	3
									19 (11)*	11 (30)*	
Total (427 cases)	233	(54.5)	49	(11.4)	37	(8.6)	46	(10.7)	30	41	32

* Included in other tabulations.

per cent in the moderately severe group and 42 per cent in the severe group).

On the other hand, the percentage of abortions is increased almost in direct proportion to the severity of the diabetes (7.3 per cent in the mild, 12.0 per cent in the moderately severe, and 17.2 per cent in the severe). In the therapeutic abortion column the increase in these percentages likewise varies according to the degree of the disease.

A study of these percentages seems to indicate

This indicates that it is becoming much safer for diabetics to undergo pregnancy. However, we must not lose sight of the fact that a comparison of mortality rates indicates liability of the diabetic is still $6\frac{1}{2}$ to 7 times greater than the nondiabetic mother.

If the 17 additional deaths, which occurred up to a year (some of them shortly after delivery) are included, the total is increased to 45 deaths, giving a percentage of 6.7, which makes the lia-

TABLE IV

MATERNAL DEATHS IN 665 DIABETIC PREGNANCIES AND COMPARATIVE DEATH RATES FROM ALL CAUSES (PER 1000 BIRTHS) IN PENNSYLVANIA AND CONTINENTAL UNITED STATES

Time of death	Diabetics							All causes	
	Group I, 427 pregnancies		Group II, 238 pregnancies		Total Diabetics, 665 pregnancies			Pennsylvania, 1929-1933	Continental United States
	Number	Per cent	Number	Per cent	Number	Per cent	Rate per 1000	Rate per 1000 births	
During pregnancy	20	4.7	8	3.4	28	4.2	42	5.7 (5.5—1934)	6.5 (6.2—1933)
To 1 year	10	2.3	7	2.9	17	2.5	25	.....	.....
1 to 3 years	4	0.9	19	7.9	23	3.6	36	.....	.....
Not mentioned	1	0.2	..	....	..	....	..	.....	.....

that the severity of the diabetes has some influence upon the termination of pregnancy. The more severe the diabetes, the more liable it is to interfere with the normal termination of the pregnancy.

EFFECT UPON THE MOTHER

Aside from the possibility of complications and the influence of pregnancy upon the diabetes, our interest is chiefly with the mortality rate. An analysis of Group I and Group II is given in Table IV. There were 28 deaths occurring during pregnancy (4.2 per cent). This percentage practically coincides with Joslin's figures of 5 per cent. These are lower than statistics from others. Skipper's figure was 9.3 per cent during pregnancy and 12.7 per cent if those who died within 2 years were included. The death rates were much higher before the insulin period.

TABLE V

FETAL LIABILITY IN 665 DIABETIC PATIENTS COMPARED WITH MORTALITY RATES IN PENNSYLVANIA AND CONTINENTAL UNITED STATES IN 1934

	Diabetic		Nondiabetic	
	Num- ber	Per cent	Pennsyl- vania	Conti- nental United States
Survived	286	43.0	94.6%	94.1%
Stillbirths	164	24.7	3.88%	3.6%
Died within 3 days	39	5.8	.....	.....

bility of the diabetic 10 times greater than that of the nondiabetic.

EFFECT UPON THE CHILD

Table V outlines the ultimate outcome of the pregnancy with particular reference to the mortality rate. A total of 286 children survived; there were 164 stillbirths, and 39 died within 3 days. Comparing this with the statistics for nondiabetics in Pennsylvania and the Continental United States indicates that the chance of the so-called diabetic fetus surviving is less than one-half of that of a nondiabetic child, and that the percentage of stillbirths is about 6 to $6\frac{1}{2}$ times higher than that of nondiabetic groups.

Table VI shows the results of another study made to determine, if possible, what influence the severity of the disease had upon the child. This table indicates that the mild diabetics are more likely to have a viable child, but too much emphasis should not be placed upon this because a fairly large proportion of stillbirths and abortions may also be found among this group. This fact may be attributed to the tendency of those with mild cases of diabetes to neglect themselves. In some cases the unfavorable terminations are not so easily explained. They may occur despite good management and proper care.

SUMMARY AND CONCLUSIONS

In a survey of 665 cases of pregnancy in 530 diabetic patients, 149 (22.4 per cent) are re-

TABLE VI

ANALYSIS OF GROUP I (427 CASES) SHOWING RESULTS OF PREGNANCY FROM THE STANDPOINT OF THE FETUS AND PERCENTAGES OF THE COMBINED GROUPS (665 CASES)

	Survived		Died											
	Num- ber	Per cent	Stillbirths		Abortion		Therapeutic abortion		Mis- car- riage	Time of death		In- duced	Prema- ture	Not men- tioned
			Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent		Within 3 days	Within 1 year			
Group I:														
Mild	76	44.1	33	29.1	10	28.6	5	14.7	..	5	2	1	2	16
Moderately se- vere	60	34.8	47	41.6	12	34.3	16	47.0	1	11	..	..	1	11
Severe	28	16.2	25	22.1	11	31.4	11	32.3	..	9	3	..	3	3
Not mentioned.	8	....	8	....	2	....	2	....	..	..	2	..	..	3
Total	172	40.2	113	26.4	35	8.2	34	7.9	1	25	7	1	6	33
			183 (42.8)											
Group II	114	47.0	51	21.0	..	....	..	....	..	14	..	..	..	..
	286	43.0	164	24.7	..	....	..	....	..	39	(5.8)	..	..	..

corded as improved, but this improvement can not be attributed to the pregnancy.

The status of the diabetes is not influenced to any marked degree by the pregnancy. The mild cases have a tendency to remain unchanged or to improve, due probably to more rigid management and treatment. The same applies to the moderately severe types. The severe types showed a higher percentage of those which became worse, but this may be due to the progressiveness of the disease rather than to the influence of the pregnancy.

There were 48 cases (11.2 per cent) of coma in Group I (427 cases), 18 cases (4.2 per cent) of hydramnios, and 12 cases of toxemia, with and without convulsions, 6 of them being eclampsia (1.4 per cent). This is a somewhat higher percentage than seen in nondiabetics. The incidence of other complications was not striking and evidently could not be directly attributed to the diabetes.

The severity of the disease has some influence upon the termination of the pregnancy. The more severe the diabetes, the greater likelihood of it interfering with the normal termination of the pregnancy as evidenced by the higher percentage of abortions in the severe diabetics. The highest percentage going to term was found in the mild type.

The maternal mortality rate in diabetics is 4.2 per cent during pregnancy, a liability of $6\frac{1}{2}$ to 7 times greater than in nondiabetics; if deaths up to the first year are included, the percentage is increased to 6.7.

Fetal statistics show that 286 infants of the 665 pregnancies survived, the mild diabetics with

a percentage of 44.1 having the best chance of coming to term with a live child.

There were 164 stillbirths in the collected cases (24.7 per cent). The mild group was not far behind the more severe forms in these percentages. This fact emphasizes what we have learned clinically by experience—that even in a mild diabetic the child may die in the last 2 or 3 weeks of the pregnancy.

CONCLUSION

There is an increased liability assumed by the mother in undertaking the pregnancy; there is a strong probability of the pregnancy's not going to term; the chances of having a live child cannot be assured; in order to obtain the best results the patient must faithfully carry out the treatment outlined; there should be a thorough understanding and co-operation between the obstetrician and the internist.

[NOTE: The author wishes to express his grateful acknowledgment to the medical directors of the institutions who were kind enough to offer their material for this investigation.]

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ABSTRACT OF DISCUSSION

BERNARD B. WORMSER (Scranton): The management of diabetes complicating pregnancy demands the most skilled obstetric care in conjunction with a competent internist on account of the many complications that may arise, such as abortions, hydramnios, oversized child, death of the child in utero before term, hyperglycemia, hypoglycemia, coma, acidosis, etc. To carry such a patient successfully to term requires the closest co-operation on the part of the patient, and the most rigid supervision on the part of the obstetrician and internist. Great danger existed before the discovery of insulin. Since the advent of this valuable drug, combined with repeated examination of the urine, examination of blood sugar if doubt exists, hospitalization 1 or 2 weeks before term, and from then on repeated ex-

amination of urine and more frequent blood-sugar examinations, and proper diet, we have been able to lessen or even eradicate many of the complications in the majority of cases.

As every obstetric case is a surgical one, and since the indications for operation have been widely extended in general surgery on diabetic patients, so too obstetric operative procedures are much safer.

Conservatism should always be the paramount issue with interference only on obstetric indications consistent with the patient's condition. Local or spinal are the ideal anesthetics. In regard to sterilization after cesarean section, this is an individual problem both as to operator and to patient, because the life of any child is problematical, especially if borne by a diabetic mother. There is also the feeling of the mother who may have the fear of being childless, and religious views. I want to reiterate and emphasize that it is imperative that the closest co-operation of the patient and the most rigid supervision and scrutiny by the internist and obstetrician should be practiced in order to remove or lessen any complications or decrease mortality. The practitioner who undertakes the care of a pregnant diabetic patient must know his limitations and temporarily discard his pride to call in counsel, unless he is thoroughly acquainted with the technic in the use of insulin, can recognize complications, and can administer the proper diet. Ignorance in the management of these cases always means disaster.

I cannot refrain from mentioning the great importance of antenatal care, not only in pregnant diabetic cases but for every obstetric case. It is the only means at

our disposal for the early detection of abnormalities and the greatest defense against morbidity and mortality (maternal and fetal).

JOSIAH R. EISAMAN (Pittsburgh): These patients do not become pregnant very readily. We have had comparatively few, nothing like the number reported here this morning, but we find that as a rule these cases do go to term. The stillbirth rate is not as high as that associated with chronic nephritis. These babies are generally large, probably due to hyperglycemia in the mother. There is also a tendency for the infant to suffer an intra-uterine death unless the pregnancy is terminated at the proper time. Otherwise they are likely to be carried overdue and die.

DR. KRAMER (in closing): Diabetics have a tendency to amenorrhea and sterility. However, there have been some reports in the literature of patients who had amenorrhea for 1 to 2 years with subsequent re-establishment of the menses as a result of insulin. That was mentioned in the presentation as one of the probable explanations for the increased incidence of pregnancy in diabetics. Duncan quotes, "There was not a single instance of diabetes in 27,567 consecutive patients confined in the City of London Maternity Hospital." It is difficult to explain why some see these cases and some do not. Some obstetricians have not had a case in 15 years, and others had 5 or 6 in the past 5 years. From the information gathered in the survey, we decided that there may be 1 case in 1000 pregnancies. I doubt whether it is as rare as the figures show. If proper inquiries were made, I am certain many more cases of diabetes and pregnancy could be added to the literature.

PEDIATRIC THERAPEUTICS

H. HARRIS PERLMAN, M.D., PHAR.D., PHILADELPHIA

A study of the drugs official in the United States Pharmacopœia discloses the fact that approximately 60 per cent of the chemical and medicinal preparations are of pediatric importance. The young child is not a miniature adult but characterized by growing tissue response that is entirely unlike the mature adult. There are differences in recuperative powers, nervous system, brain development, skin reactions, growth and weight, emotional temperament, and muscular and digestive systems. As a result of these variations, pediatric therapeutics is rendered more difficult. The utmost consideration is required when prescribing remedies for the young child. In a general sense it is true that drugs employed in adult therapeutics are applicable to children. Special thought must be given to modification of unpleasantly tasting remedies, tolerance, idiosyncrasy, and posologic variation according to age and weight. Many a useful remedy has been thrown into disrepute because of the physician's failure to consider palatability and proper dosage when prescribing for children.

What is the pediatrician's attitude toward official remedies, i. e., drugs and medicinal agents of the United States Pharmacopœia and National Formulary? The overwhelmingly favorable response from pediatricians and pediatric societies to a questionnaire sent out by the Philadelphia Pediatric Society inquiring as to the advisability of representation on the revision of the United States Pharmacopœia and National Formulary indicates that pediatricians desire the benefit of pediatric counsel on both revision committees. Some pediatricians have gone so far as to suggest the possibility of a separate United States Pharmacopœia and National Formulary adapted to the needs of children.

There can be no doubt that pediatric representation would be of great help in improving both publications and would add to the practical value of both texts. It is a fact that much of the medication for infants and children is not only poorly chosen but unwisely administered.

One of the weakest points in the National Formulary is the minimum number of elixirs with small alcoholic content, of which compound

elixir of vanillin is such a splendid example. Most of the elixirs of the National Formulary are so high in alcoholic content that they are not well taken by young children and, furthermore, offer some danger as to habit formation. The same argument might be advanced in regard to many of the syrups contained in the United States Pharmacopœia. They are too heavy in sugar content, unsuited for routine use as vehicles in young children, and therefore require some modification before they can be prescribed.

There are many popular and useful preparations in the therapeutic armamentarium of pediatrics which, for one reason or another, have failed to merit recognition and have not found their way into either text. The following are typical examples: 6 per cent crude coal tar ointment—popular in the treatment of infantile eczema, 3 per cent iodine crystals in a hydrous wool fat base for tinea tonsurans, gentian violet (aniline violet) for impetigo, and parathyroid extract for conditions characterized by a poor calcium metabolism.

There should be pediatric advice with regard to the acceptance or deletion of many of the biologic products that are of interest to pediatricians from a prophylactic and therapeutic standpoint. Questions such as the use of a reliable bismuth compound for the treatment of prenatal syphilis in infants and children and the present status of scarlet fever antitoxin and the convalescent serum for measles could be decided by pediatricians who have had clinical experience in these fields.

In addition to representation on the United States Pharmacopœia and National Formulary there are problems which confront the pediatric profession. These problems can be handled best by the committee appointed by the American Academy of Pediatrics, under the able leadership of Dr. Isaac A. Abt.

1. Therapeutic instruction should be a part of the pediatric curriculum of medical schools. Until comparatively recently pediatrics has been regarded not unlike a step-child to the mother science—internal medicine. The average graduate knows far too little therapeutics and practically little or nothing about therapeutics of children. The result is this: Members of the profession, particularly younger practitioners, frequently become the cheap prey for exploitation by many of the unscrupulous manufacturing houses.

One well-known pediatrician expressed himself succinctly on this question when he said: "A special course in pediatric therapeutics would

solve the problem of the men in practice who have emphasized the field of diagnosis and neglected therapeutics. A patient is given a nice diagnosis with which to die, but we are unable to alleviate his suffering while alive. Instead, a few more needles are stuck into the vein for some useless diagnostic procedure. There are 10 tests for one disease, but not one remedy. This is the sad truth when young physicians enter practice, and how bewildered they become when they cannot prescribe some soothing agent to relieve a case of intertrigo or some remedy to clear a blocked nose. Those in practice for a time appreciate this failing and would like to get this information but are at a loss as to how to acquire it. They ask the corner druggist to help them prescribe, and what does he think of the physicians' ignorance?"

It seems timely to suggest a survey along this line in order to determine the extent of teaching of pediatric therapeutics in the medical schools. A proposed didactic course in pediatric therapeutics would be a valuable addition to the teaching program in pediatrics and would be welcomed by the student body.

For the third consecutive year, Dr. Ralph M. Tyson, professor of pediatrics, Temple University Medical School, has included a series of didactic lectures in pediatric therapeutics as part of the course. These lectures are given to the junior class.

2. Another problem confronting the pediatric profession is the tendency to undermine official remedies and replace them with proprietary products. High-pressure, clever salesmanship, advertising, and exploitation have been used to win over the good will of the younger practitioner. It has been estimated that approximately less than one per cent of practitioners possess a copy of the Pharmacopœia. It might be argued that the United States Pharmacopœia and National Formulary are not essential to the practicing pediatrician. The fact remains that the drugs contained in both texts are fundamentally paramount to the practice of good therapeutics. For this reason alone, official drugs should be familiar to every practicing physician who treats children.

A recent incident illustrates the trend among some commercial houses. A letter received from a Boston pharmaceutical establishment mailed to 1000 "leading pediatricians," asked for candid opinions as to preference for certain well-known official laxatives. These laxatives were to be prepared in palatable form for children and marketed. In return for the information submitted (signing of pediatrician's name to the

questionnaire immaterial) pediatricians were promised a liberal supply of samples.

The obvious point is this: The therapeutic needs of children have not been answered by the profession until now. Will pediatricians solve the therapeutic needs of children themselves, or will they have others with ulterior motives offer the solution? Which shall it be?

3. Another thought which deserves serious consideration is the restriction of the sale of drugs and therapeutic remedies potentially dangerous to infants and children without the written order from a physician.

New Jersey was one of the first states to curb the sale of barbiturates to the public over the drug counter. Recently legislation has been enacted in Pennsylvania so that the pernicious practice of obtaining barbiturates and other related remedies of the barbituric acid series by a mere purchase price over the drug counter is now impossible without a physician's prescription.

The sale of many potentially dangerous remedies is not restricted by law; they may be purchased without a physician's prescription. Restrictive legislation is important. Paregoric and amidopyrine (pyramidon) are examples. There are many others.

The pediatric committee can do constructive work along this line.

4. Posology presents another problem. Pediatric therapeutic remedies are prescribed too often by the hit-or-miss method. Posologic scales are practical and the age or weight rule simple, but nevertheless the arithmetical method involved in computing dosage of drugs is time-consuming and not particularly adapted to the needs of the busy practitioner. It is one thing to tell a group of students the dose of a given drug is enough to produce effect; it is quite another story to be able to know the proper dose of a remedy when occasion for its use arises. The student must have concrete ideas on posology. Why could not a standard, uniform, but flexible scale of dosages be available for those drugs of pediatric usefulness and importance—arranged according to age groups (body weight), i. e., the period of infancy, the child of the preschool age, and the school-age child? Here is a real challenge for the committee. The challenge is not an impossibility. Since pediatrics is a science, therapeutics in infants and children should be just as scientific and rational as it is possible to make it. Let pediatricians and general practitioners who treat children practice sound therapeutics by means of good pure standardized drugs, scientifically and con-

scientiously administered to meet the needs of the individual child. When these thoughts are fulfilled, therapeutic nihilism will give way to rational treatment—therapy that is useful for the welfare and well-being of children.

1904 N. Franklin Street.

THE MEDICAL WORLD IS SELDOM SET ON FIRE AT ELEVEN P.M.

A scientific medical meeting may be, in some of its aspects, compared to a play. At it the speakers have rôles comparable to the principal actors of the play, the discussers have secondary rôles, and the committee of arrangements and the officers compare to the directors. Films and slides may by a slight stretch of the imagination be compared to scenery.

Now those successful empiricists who direct the theater have found that audiences are very fickle in their tastes and that all kind of factors militate for and against the success of their efforts. Scientific audiences are just as fickle. In order to "put on a good show" at a medical meeting or on the stage, certain conditions having to do with the psychology and physiology of the audience must be met. There must be absolute teamwork and subordination of the individual to achieve these ends.

First the meeting must start and finish on time. Very few worlds are set on fire by addressing tired doctors at 11 p.m. The responsibility for the schedule rests squarely with the officers of the meeting. The speakers and discussers make a very poor impression, not only on the officers, but also on the audience when they depart from schedule. They must expect to be cut off when their time is up.

Secondly, the subject of the paper must be timely, well presented, and attuned to the interests of the audience. For modern medical audiences dogmatic assertions on the authority of the speaker are never well received. If a subject is so well understood by the audience to be true that one can be dogmatic about it there is no use presenting it, and if the subject is controversial the audience wants the reasons for the assertion. In science authority is a mighty small thing nowadays and does not compare in importance with a few simple observations or a well-planned experiment.

Discussers, as stated above, have subordinate rôles, but nevertheless important ones. They also must keep to the schedule. If they are allowed 5 minutes they must not take 20. Furthermore, and most important, they must discuss the paper and not give a separate address on some other subject only remotely connected with the paper. They also must not be dogmatic. If they disagree with the author of the paper they should not be content to state this fact, but the reasons why they disagree. Many very fine and important physicians seem to find it difficult to subordinate themselves to this extent. If they only realized the harm they are doing to their reputations with the audience by infringing upon these rules of good taste they would often be the last ones to act this way. We must all recognize that the reason many men take the trouble to write or discuss papers is more often a selfish one than an altruistic one. Even from the selfish standpoint the rules given above are exceedingly important.—Editorial, *New England J. of M.*, Nov. 28, 1935.

EDITORIALS

POSTGRADUATE INSTITUTE, PHILADELPHIA

We wish to extend congratulations to the committee of the Philadelphia County Medical Society conducting the recent Postgraduate Institute in Philadelphia. It is estimated that there were about 500 in attendance at each session. The luncheon that opened the session was very well attended, and among the speakers were the Honorable S. Davis Wilson, Mayor of Philadelphia, and Dr. William C. Hunsicker, director of public health of Philadelphia. Several of the officers and trustees of The Medical Society of the State of Pennsylvania were in attendance.

At the dinner meeting of the Philadelphia County Medical Society held April 22, as part of the Institute's activities, the Mayor again addressed the group. The Dr. I. P. Strittmatter award for the year 1935 was made to Dr. Seth A. Brumm in recognition of his devotion and self-sacrifice in the field of medical economics. The recipient was presented for the award by Dr. John M. Fisher. The acceptance of the award was formally made by Dr. Brumm. Not only the Strittmatter award but the DaCosta Foundation program was merged in with the Postgraduate Institute. The DaCosta Foundation address was delivered the same night by Dr. Frank Lahey, of Boston, on "Management of Biliary Tract Disease."

The Institute's many activities formed a wonderful program of graduate teaching, with enough of the social touch to make the program extremely valuable. Many of those in attendance expressed the hope that the Postgraduate Institute will conduct a similar week each year.

ADDRESS OF WELCOME TO THE HOSPITAL ASSOCIATION OF PENNSYLVANIA

At the fifteenth annual meeting of the Hospital Association of Pennsylvania, held in Pittsburgh, in April, 1936, in the enforced absence of President Alexander H. Colwell of the State Medical Society, the address of welcome in behalf of our State Society was extended by Dr. Harvey F. Smith, of Harrisburg, first vice-president.

The address will be found in this number of the JOURNAL, on page 714, and should be read by our members.

Dr. Smith has very properly stressed the big-

gest current problem—hospitalization insurance—that is conjointly affecting the medical and hospital groups. There is much in common to be accomplished by these 2 groups for the best interests of all concerned, and the efforts put forth must be a unanimity of action acceptable to The Principles of Medical Ethics.

MEMBERSHIP vs. FELLOWSHIP

There is considerable confusion relative to membership and fellowship in the American Medical Association.

A member of a county medical society automatically becomes a member of the state society and the American Medical Association but not a Fellow of the American Medical Association.

To become a Fellow of the A. M. A. he must make special application and pay to the American Medical Association the annual dues of \$7.

Every member of the county and state society should become a Fellow of the A. M. A.

Some of our members pay \$7 per year for their subscription to the *Journal of the A. M. A.*, but are not Fellows only because they have never applied for Fellowship.

Only Fellows may register or take part in the annual meetings.

LONGEVITY OF LIFE

As life begins, the stage is all set for its purposes and longevity. What shall the answer be? Within recent years much has been said of increasing the span of the years of life, yet no one has answered the question why. The theologian would possibly say, "Seventy years from the Biblical injunction." The sentimentalist, "Oh! for the beauty of living with loved ones and enjoying life's rewards." The economist might say, "Who is going to provide for him?" The sociologist, "Who is going to care for him?" If the purely unselfish individual who has had a tough time of it was asked, he, no doubt, would say, "The lure beyond 70 has no attraction."

It would appear, therefore, that medicine should concern itself with the very beginning of life—by aiding babies in getting off to a good start (saving their lives by guidance and prevention of infectious diseases); by guiding children into adolescence and from adolescence into manhood; and by keeping the mechanism of manhood in fairly good working order.

Certainly there would be no practical achievement to the practice of medicine in the prolongation of life (that is, life beyond age 70) if such a life is going to be physically unfit to sustain itself or mentally unfit to appreciate and adapt itself to reality. The present social and economic load of society's defective individuals at the beginning of life (imbeciles, idiots, morons, criminals, psychopaths, *etc.*) is too great to add at the other end of the grade a great group of seniles, arteriosclerotics, *etc.*, to be cared for by the state. No doubt the ancient Hebrews had things pretty well figured out when they concluded that, generally speaking, 70 years completed the normal span of life.

The American's revised version might limit it to 65. Of course, there are exceptions to all rules. Nature in the last analysis through all the ages has maintained, if left alone, a fairly good balance between life and death. It has been man's interference at times that has created the imbalance.

Medicine, in following the trends indicated here, has a sufficiently large job ahead of it. Laying aside all sentiment and looking at life as it really exists in the newborn, physically it represents a few cheaply purchasable chemical compounds largely diluted with water, molded into skin, muscles, organs, bones, and joints, and controlled by endocrine glands and a very delicate nervous mechanism. Its function is but a purposive activity set in motion for the satisfaction of the needs of growth, instinct, and desires. This function of growth, instinct, and desires is never to be lost sight of by the physician and should always be kept in the foreground if medicine is to be helpful in life's journey. Medicine will not find in the fulfillment of these things a most co-operative type of patient, for, regardless of what we think about it, that which we are to guide physically, psychologically, and biologically is concerned with but 2 dominant things, food and sex urge—in other words, self-preservation and the preservation of the species. Biologically, this is life's greatest function. (Some psychologists tell us that along with the wish to live there is also a wish to die.)

Viewing the matter from this angle, it is no easy matter for medicine to guide these basic desires into socialized settings while the child is enjoying his inalienable rights to normal mental, physical, and social development and to economic usefulness. The medical profession also should remember that, while it is basically interested in the mental and physical development of the child, it likewise has a very definite intimate relationship with other forces necessary

to guide the child's development mentally and physically, to wit, parents, teachers, ministers, and sociologists. We have no assurance what the life may be, although we plan the preservation of its health, its freedom from disease, its economic security, and its mentality so that the individual possessing this life may appreciate that which has gone before, the reality of things about him, and the things that are to be (education). However, the better the beginning, the more comfortable the journey to its end.

THE DRUG HABIT CALLED LESS HARMFUL THAN ALCOHOL ADDICTION

The twenty-second annual report of the Municipal Court of Philadelphia was recently released. The section of the report on drug addiction was prepared by Dr. Robert A. Schless, who resigned as chief of the Bureau of Charities and Correction when the office was abolished as of Jan. 1, 1936. Dr. Schless stresses that narcotic addiction is always curable but that many addicts return voluntarily to the habit after supposedly being cured because their associates are also drug addicts. He blames the Harrison act for much in regards to drug addiction for the following reasons:

1. The Federal Harrison act, barring general sale of drugs, "has done more to incite crimes of violence by drug addicts than any other action," because it made dope a bootlegged and consequently an expensive article.
2. Opiates may be relatively harmless to an individual and community if they are not used to excess.
3. Drug addiction has never been responsible for a crime of passion in Philadelphia in 16 years.
4. Even heavy use of narcotics over many years produces no permanent harmful physical effects.

Dr. Schless states that the courts of Philadelphia led the way some time ago in an "individualized" system of treatment for addicts which has been adopted by the Federal Government.

This system—whereby addicts are imprisoned until they are completely cured—has cut the admittance rate of addicts to the House of Correction, Philadelphia, from 737 in 1920 to 11 in 1935.

Dr. Schless further states that a fair appraisal of narcotic addiction cannot be published until we cast aside the tradition of looking upon the

use of opiates as differing essentially from habituation to tobacco, and as to evil effects, directly in crime or in damage to body and morale of the user, narcotics are far milder than the steady use of strong liquors. Certainly whisky, with its record of incitation to violence and lust and its permanent fibrosis of vital body organs, has incomparably more evil to answer for.

Even as alcohol may, in moderation, be used with negligible damage to the person and none to the community, so opiates may be relatively harmless. The House of Correction has received many middle-aged or old Chinese who had smoked an occasional pipe of an evening, warmed over the yen shi for the next day, and gone about their business with no interruption, but who had the misfortune to be delivered to the law.

SPLINT THEM WHERE THEY LIE

The purpose of the Committee on Fractures of the American College of Surgeons is to stimulate interest in and improve the treatment of fractures. According to the Yearbook of the American College of Surgeons, the committee functions through 3 main channels—first, the annual meeting of the American College of Surgeons; second, the annual meeting of the General Committee on Fractures; third, regional groups. This committee meets in January of each year. The committee has subcommittees, one of which is the Subcommittee on Transportation and Ambulance Equipment, with which this editorial is directly concerned.

The committee has concentrated its efforts during the past year on 2 main subjects: (1) The immediate application of traction at the site of the injury, following the dictum "Splint Them Where They Lie"; (2) the early reduction and improved treatment after the patient arrives at a hospital.

The application of immediate traction to long bone fractures has become more and more emphasized as high-speed locomotion by automobiles and airplanes has created serious injuries along highways. The deformities resulting from improper or no splinting during transportation not only delay the healing time of the fracture but also may cause serious shock, hemorrhage, or death. Men experienced in the treatment of fractures are convinced that reduction before edema and swelling occurs results in better replacement of fragments and hence diminished time of disability, and better function when union has occurred.

As to transportation, the Yearbook states that

a new edition of the American Red Cross First Aid Textbook is expected to appear within the next year. The American College of Surgeons has the assurance of their Director of First Aid and Life Saving that this new edition will contain the suggestion that fixed traction transportation be taught to all Red Cross classes instead of simply to large groups, such as police, fire, and industrial departments, as the present edition states. Instruction in this method is being continued actively before groups of approved Red Cross instructors, and it is expected that within a year and a half all instructors will have been prepared to teach this method. In 1930 a pamphlet was sent out by the Red Cross to all chapter chairmen outlining a procedure for establishing first-aid posts on the highways. On account of the economic depression this work has been held largely in abeyance. As soon as business improves they expect to enter actively into this field again.

The major portion of transportation of the injured in the country as a whole is done by the undertakers. One of their national organizations sent out a questionnaire on this subject, prepared by the subcommittee, to its entire membership. Replies were received from about 70 per cent. Of these about 70 per cent were in favor of adopting fixed traction for use on their ambulances and said they were ready to do so if they could be trained. The other large national organization of funeral directors is considering adoption of the method through its Committee on Education.

The following letter is respectfully called to the attention of the medical profession in the Regional Fracture Section included in this letter from Dr. King.

Apr. 18, 1936.

THE EDITOR.

Dear Sir:

Last fall, under the direction of Dr. C. Scudder, National Chairman of the Fracture Section of the American College of Surgeons, our Regional Fracture Section was established, which embraces Western Pennsylvania, part of Eastern Ohio, and Northern West Virginia.

Dr. Scudder is particularly interested in improving the transportation of fracture cases to the hospital or other first aid stations.

With this idea in mind, physicians have been appointed in various districts to see that all ambulances in their districts are equipped with adequate splints for handling fractures. Drs. John P. Henry, John W. Stinson, William B. Hetzel, Gustav F. Berg, and John H. Wagner have been appointed for the Pittsburgh district; Dr. Harry W. Bernhardt, of Rochester, Pa., was appointed for that district; Dr. Thomas C. McKee for Kittanning; Dr. Leroy W. Hoon for Monongahela; Dr. David E. Vogan for Mercer; Dr. Benjamin F.

Coe for Indiana; Dr. Frank A. Lorenzo for Punxsutawney; Dr. Arthur G. Davis for Erie; Dr. Marlin W. Heilman for Tarentum; and Dr. Charles C. Crouse for Greensburg.

It would be appreciated very much if you would aid us in creating a favorable opinion among the medical men in these districts, so that the work of these physicians will be made as easy as possible.

Thanking you in advance, I remain

Sincerely yours,

JENNINGS M. KING, *Secretary*.

We sincerely trust that this letter from Dr. King will be successful in securing the co-operation of the practitioners of medicine in this Regional Fracture Section.

HERBERT L. NORTHRUP, M.D.

Dr. Herbert L. Northrup, of Philadelphia, aged 70, died May 3, 1936, in the Hahnemann Hospital, Philadelphia, from bronchial pneumonia. Dr. Northrup was born Feb. 10, 1866, in London, a son of the late Reverend Henry D. and Sarah Northrup, while his parents were living temporarily in England. His father was a Presbyterian minister.

Dr. Northrup's early education was obtained in the schools of Seymour and Hartford, Conn., Birmingham Academy, near New Haven, Conn., and the Boys' Central High School, Philadelphia. He was graduated with honors from the Hahnemann Medical College of Philadelphia in 1889 and served his internship at the Hahnemann Hospital, Philadelphia. In January, 1896, he was appointed to the chair of anatomy at the Hahnemann Medical College to fill the vacancy caused by the death of Dr. A. R. Thomas, who was dean, and from 1907 to 1909 Dr. Northrup served as dean. In 1931, Dr. Northrup was given the degree of master of arts at Hahnemann at the same commencement that 2 of his sons, Drs. David and Richard F. Northrup, received their degrees of doctor of medicine.

He was a member of the Philadelphia County Medical Society, The Medical Society of the State of Pennsylvania, the American Medical Association, the American Institute of Homeopathy, the Philadelphia County Homeopathic Society, and the Hahnemann Clinical Club. He was also a Fellow of the American College of Surgeons. He served for a period as anesthetist at Hahnemann where he devised a method for producing general anesthesia by combining oxygen and chloroform. For a number of years Dr. Northrup was professor of surgery at Hahnemann Medical College. He was also chief of staff and head of the department of surgery at Hahnemann Hospital since 1919.

Dr. Northrup had a keen sense of humor, was a popular lecturer and had oratorical ability, and was exceedingly popular not only with the student body but with graduates as well.

He is survived by his widow, 7 sons, 2 of whom are on the staff at Hahnemann, a daughter, and a brother, Edward Northrup, M.D., of Spokane, Wash.

J. TATE MASON AND THE VICE-PRESIDENT, CHARLES GORDON HEYD

Over the success, the brilliance and the happiness of the Kansas City session lay the dark shadow of the serious illness of the president-elect—now installed as president of the American Medical Association—Dr. James Tate Mason of Seattle. Culminating a year in which he traveled widely and spoke much on behalf of organized medicine, he became ill with a severe involvement of his circulatory system, resulting eventually in multiple emboli which occluded blood vessels in the legs and also in the brain. At the time of this writing he has already suffered gangrene of the left extremity requiring its removal, complete paralysis of the left side, and a gradually advancing gangrene of the right leg and thigh. Notwithstanding this terrible illness as well as deaths among members of his family, he sent encouraging messages to the House of Delegates which will be found in its proceedings, and he telegraphed his personal appointments to fill vacancies in the councils of the Association. In view of the serious character of his illness and the certainty that the vice-president under the by-laws of the Association will be compelled to officiate in the place of the president during most of the term, the choice of a vice-president was especially significant. For this position the House of Delegates chose Charles Gordon Heyd of New York, at present professor of surgery in the Post-Graduate Medical School and Hospital of Columbia University, consultant surgeon at the Woman's Hospital and trustee of the Medical Society of the County of New York, and a distinguished contributor to the literature of surgery. Dr. Heyd has been president of the New York State Medical Society and as chairman in charge of arrangements for the last annual session of that association revealed an executive capacity extraordinary among practicing physicians. By his election the Association is assured a distinguished leader, a forceful speaker, and a genial physician to serve in the place of its president when the emergency arises.—Current Comment, *Journal of the A. M. A.*, May 23, 1936.

AN ADDRESS OF WELCOME*

HARVEY F. SMITH, M.D., HARRISBURG, PA.

It would be especially fitting if Dr. Alexander H. Colwell, president of The Medical Society of the State of Pennsylvania, could have the pleasure of welcoming you personally to his city. In his unavoidable absence he has delegated to me, as first vice-president of the State Medical Society, the privilege of greeting you in the name of the organization we represent—an organization whose reason for being is identical with your own, namely, the continued and improved care of the sick in our communities.

* Read before the fifteenth annual conference of the Hospital Association of Pennsylvania, Pittsburgh, Apr. 22, 1936.

In the accomplishment of this purpose we are and must continue to be interdependent. With a common purpose it follows that we are faced with much the same problems, and we would expect to find the subject of economics occupying an important place in your program. Physicians consider that it is unfortunate from a scientific and ethical point of view that these economic questions have assumed such overwhelming proportions. It is sincerely hoped that the tide will be stemmed before we are completely engulfed. Just how this is to be accomplished has not been determined, but it is essential that the problem be solved by ourselves and not by outsiders.

The present economic stress has resulted in many new divisions and subdivisions of the social order. The overworked alphabet is well-nigh exhausted in providing labels for them. The one that could most readily be spared is the group engaged so busily in solving other people's problems. This group is now profoundly disturbed by the quality and availability of medical service as at present provided, and especially by its cost. They have observed that physicians as a body are notably poor financiers and deplorably ignorant of economics. Medical ethics and medical economics they say are incompatible. In a truly altruistic spirit, having in mind the greatest benefit to physician and patient, they propose a professional receivership under really competent management. Let the physician heal the sick, but let the economic side of it be handled by those specially trained for such work, by governmental control for example, in which case the public is assured the management would be economical, efficient, and nonpolitical.

We do not deny that we have vulnerable points, and that in all human institutions there are wrongs that should be righted. But we are not yet willing to concede that whatever is—is wrong; that the old system of medical practice and medical ethics should be scrapped for plans which we are convinced will lower the present high standard of medical efficiency. Organized medicine recognizes the existence of many of the problems revealed by recent critical surveys and is earnestly working on their solution. Plans for adequate medical care of those in the low income group, the indigent, and the unemployed are being studied and we believe a satisfactory solution will be reached. We believe that our own organizations and not groups of professional reformers are best qualified to pass judgment on proposed changes in hospital management and medical practice.

You are no doubt considering suggested changes in your methods of administration, prepayment plans or some form of group hospitalization. Some of these same propagandists have represented organized medicine as opposed to all these plans. That is not true. The state and national medical associations oppose only the plans advocated by commercial organizations, plans which combine hospital and medical insurance. We believe that hospitalization insurance which promises a definite amount of hospital service is economically sound. Any such scheme that may be adopted will receive the hearty support of our association.

In spite of the turmoil and uncertainty associated with the existing social unrest, we have continued to work along a well-planned program to improve the character of medical services. This program includes many aspects of medical practice, preventive medicine, and community welfare. It includes improved medical teaching, improved hospital training for the young physician, and increased opportunity for graduate study

for the older practitioners. We are justly proud of the consistent advancement in the quality of medical service available, better than that of any other country in the world. Quality of service will always remain the physician's first and main objective.

Maintenance of the present front line position is possible only by a continued high grade of hospital service. Maintenance of medical skill at its present high level further rests upon the freedom of the profession to solve its problems in an orderly and rational manner. In this solution we regard you as an important factor; hence the significance to us both of meetings such as this.

Solving the problems of adequate care of the sick in our various economic groups with fairness to all concerned, fairness to the patient, the hospital, and the physician, will be an outstanding contribution to this changing social order. The Medical Society of the State of Pennsylvania reassures you of their desire to co-operate.

NORTHAMPTON COUNTY POOR MEDICAL SERVICE

The rules and regulations set forth January 1, 1934, by agreement between the Northampton County Poor Commissioners and the Committee of the Northampton County Medical Society are as follows:

QUALIFICATIONS OF THE RECIPIENTS OF MEDICAL SERVICE

1. All persons known to be on accredited lists of the County Poor Directors shall be eligible to receive medical aid and attention.

2. In each instance a proper and regular form or order must be issued by the County Poor Directors or their representatives authorizing the physician to render medical attention in a given case.

3. Only in a dire emergency shall a physician render a service without being fortified with the above-mentioned instructions or orders.

(a) Before second visit is made, a confirmation order must be obtained within 48 hours.

4. In the course of treatment of patients under this regulation, the general facilities available for free care and service in given communities shall be utilized.

5. If it becomes necessary to transfer a patient under treatment to one of the hospitals treating patients from the county, notification should be made to proper representatives of the County Poor Board before said transfer is made.

6. Only in a dire emergency shall this transfer be made without notification to the proper authorities.

7. When the patient is admitted to the hospital, the County Poor Board is no longer responsible for medical service rendered by an individual practicing physician.

8. In order to maintain the traditional family-physician relationship wherever possible, the patient shall be permitted to call the physician of his or her choice, provided the said physician desires to practice under these rules and regulations.

TREATMENT OF ACUTE ILLNESS

1. In patients acutely ill, medical care shall be limited to not more than 2 weeks or 10 visits, with a maximum fee of \$20 for that service.

2. During the period of time in treating a patient

under the maximum fee limitation, the physician shall furnish a reasonable amount of drugs and combinations of drugs to aid and assist in the recovery of the patient.

3. If any unusual medicines are required, they shall be authorized only after proper request is made to the County Poor Directors, or such other agents as they may delegate.

4. Under these rules and regulations, the treatment of patients shall mean:

- (a) The diagnosis.
- (b) The management.
- (c) The furnishing of reasonable medicines and supplies.

TREATMENT IN CHRONIC ILLNESS

1. Prolonged chronic illnesses, such as chronic heart disease, chronic asthma, chronic rheumatism, or diabetes, or any disease which has continued over a period of time with only a moderate degree of recession and without a complete recovery, shall be paid for by one visit per week only.

2. However, if the patient, due to unusual seriousness of the chronic disease, shall need more frequent visits, this individual case shall be submitted for proper determination to the County Poor Board or the proper agencies.

3. Insulin if needed shall be requested by the physician from the County Poor Board or their agents.

TREATMENT IN OBSTETRIC CARE

1. Obstetric care in the home shall be construed to mean:

- (a) A reasonable number of prenatal visits and attendance.
- (b) Delivery in the home by the physician.
- (c) The average number of postnatal visits.

2. The patient shall have the choice of obstetric care in the home or in the hospital.

3. If home conditions involve undue risk, or any condition of the patient lends more than reasonable seriousness to delivery in the home, the patient shall be requested to submit to delivery in one of the institutions rendering such service to the people in the county.

4. All hospital physicians handling such a delivery shall not be compensated under this regulation.

5. In the delivery of the indigent poor in their homes, it shall be construed in this regulation that supplies incident to the delivery, whether they be dressings, cotton, or medication, shall be paid for by the County Poor Directors, but all supplies incident to such delivery shall be furnished by the obstetrician in attendance.

SCHEDULE OF FEES

1. Bills shall be rendered to the County Poor Directors at the County Home, Nazareth, Pa., before the twenty-fifth of each calendar month and shall include:

- (a) The number of visits.
- (b) The dates made.
- (c) A diagnosis.
- (d) The condition of the patient at termination of treatment.
- (e) The name and address of the patient.

2. For an authorized home visit, including medicine and supplies, the maximum fee shall not exceed \$2.

3. For an authorized office visit, the maximum fee

shall not exceed \$1, which includes medicine and supplies.

4. For authorized obstetric care in the home, the maximum fee shall not exceed \$20.

5. No patient may be considered eligible to be treated as an acutely ill patient oftener than once in each 3 months of a year.

6. Examinations for commitment of mental cases shall be paid for at the rate of \$2.50 per physician, 2 physicians being required.

The above is an agreement set forth in rules and regulations for the care and attention of the indigent poor in Northampton County.

Said rules and regulations shall establish a working basis between the members of the Northampton Medical Society and the County Poor Directors of Northampton County.

MAKING MOTHERHOOD SAFE IN PENNSYLVANIA

The Commission on Maternal Welfare of the State Society has gathered some interesting facts from a study of the maternal deaths that occurred in Pennsylvania in 1935, and it is their desire to present these in order that the medical profession in this state will realize there is a problem right here in our own confines. The accompanying graphs visualize the situation with greater clarity than verbal descriptions could.

The statistical study presented here is solely provisional for 1935, due to the fact that there may be additions, even though minimal, to the actual figures; but these small additions or changes will not greatly alter the picture as a whole.

The maternal death rate per 1000 total births was 4.9 in 1935 as compared to 5.5 for 1934; there were 808 maternal deaths in 1935 as against 916 in 1934; there were 164,864 total births in 1935 as against 166,458 in 1934. Stillbirths dropped from 6220 in 1934 to 5511 in 1935, which is an encouraging sign.

In 1935 there was one live baby born every 3½ minutes, and one stillborn baby every 1½ hours. One mother died every 10½ hours from some condition of pregnancy, giving a rate of slightly more than 2 each day. One out of every 206 pregnant women in 1936 died from some condition incident to pregnancy as against one out of 182 in 1934.

What were the leading causes of maternal deaths?

In 1934, 401 maternal deaths, or 43.7 per cent, were due to sepsis; in 1935, 343 maternal deaths, or 42.8 per cent, were due to this cause. But in 1935 these septic deaths can be divided into those from abortions and those following full-term delivery; 23.8 per cent, or 192 cases, were due to abortions, whereas 151, or 18.8 per cent were accounted for under the classification of puerperal sepsis. See Chart 1.

Sepsis still leads the procession. More than 50 per cent of these septic deaths were from criminal or self-induced abortions, for which the profession cannot, nor should it, be held responsible. Each day in Pennsylvania a woman dies from a septic condition incident to pregnancy, and every fourth maternal death in 1935 was due to an infected abortion. Is this not a matter for further study? It is requisite and necessary that our own profession attack this problem in the open, by first realizing the seriousness of it, and secondly, by advising the innocent, misinformed, misguided lay public of the dangers of abortion.

Physicians as a whole have been too prone to com-

MATERNAL DEATHS

From
SEPSIS
in P.A.

1934 - 401 (OF TOTAL OF 916) = 43.7%

1935 - 343 (" " " 808) = 42.8%

A : ABORTIONS = 23.8%

B : PUERPERAL SEPSIS = 18.8%

OR EACH DAY ONE MOTHER
DIES FROM INFECTION.
EVERY FOURTH DEATH IS FROM AN
INFECTED ABORTION.

Chart 1.

placency and a sense of self-satisfaction at their accomplishments. Can any physician feel happy at knowing that in Pennsylvania one mother died every 2½ days from puerperal sepsis? Sepsis is still with us, and the profession must realize the fact. Final analysis of case reports will attempt to place the responsibility, but our hope at the present is to have the profession of our state realize that puerperal sepsis, so far as we are concerned, has not been wiped out. We have been advised, we have read, and we have been taught that puerperal sepsis is a controllable, if not a preventable condition. If such is the case, then why are 18.8 per cent of the maternal deaths assigned to this one cause alone, and this not including septic abortions? If the septic deaths from abortion and those from full-term deliveries be added together, the astounding total of 343, or 42.8 per cent, is attained.

The toxemias of pregnancy are second with a maternal death percentage of 13.2, comprised of 107 cases, 77 of these being classified as pure eclampsia. This is largely a problem of lack of understanding on the part

of the public in not applying for care during pregnancy. Most of these deaths occurred in cases in which prenatal care was entirely absent or of a very mediocre caliber. This presents one of the large problems for the profession to attack. The public is ignorant of the need for receiving adequate prenatal care. The profession must urge more forcibly that every expectant mother receive prenatal care to a degree of adequacy.

Third in order of frequency appears maternal deaths from hemorrhages, totaling 103 cases, or a percentage of 12.7. Deaths from postpartum hemorrhage, with 39 cases, slightly exceeded the placenta praevia deaths, numbering 37. There is one very vital point for study in these hemorrhage deaths, and that is the frequent absence of an appreciation and use of transfusion in such cases. Our task as a commission is not directed at laying down lines of treatment. But when total lack of the application of certain recognized remedial measures is apparent, it is our duty to call attention to such a state of affairs.

A study of Chart 2 shows the other factors which are concerned in maternal mortality in Pennsylvania. Each factor tells its own story; for example, practically one-third of the ectopic deaths are classified as septic. What significant facts are here hidden if they

MATERNAL DEATH RATE PER 1000 TOTAL BIRTHS
IN PENNA. ACCORDING TO MONTHS 1935

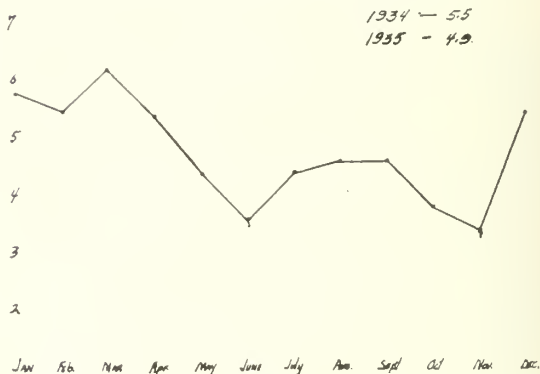


Chart 3.

are not delayed diagnosis, unnecessary extra-surgery, and the like?

Chart 3 records the monthly death rate for 1935 and stresses the urge for warnings of respiratory infections being very possible contributing factors in aiding and abetting maternal mortality. The question of endogenous and exogenous infections is beyond the scope of this survey. Are "droplet infections" duly appreciated in the management of women in labor? The hospital delivery rooms maintain certain standards, but how many physicians wear a face mask, sterile gown, and gloves in home deliveries? If we insist on a rigid technic in the hospital why not in the home, where the danger is just as great if not greater?

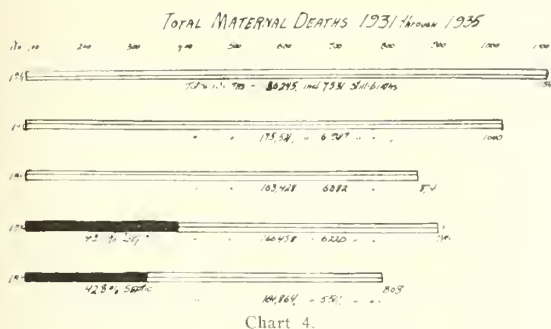
Chart 4 shows the total maternal deaths from 1931 through 1935, and also the total number of births including the stillbirths. In black relief for the years 1934 and 1935 the percentage of septic maternal deaths is recorded.

Chart 5 shows a graph depicting the lowering tendency of maternal deaths. It was less in 1935 than at any time since 1910, and it is our fervent wish that this

PERCENTAGE SCALE MATERNAL DEATHS IN PA 1935.



Chart 2.

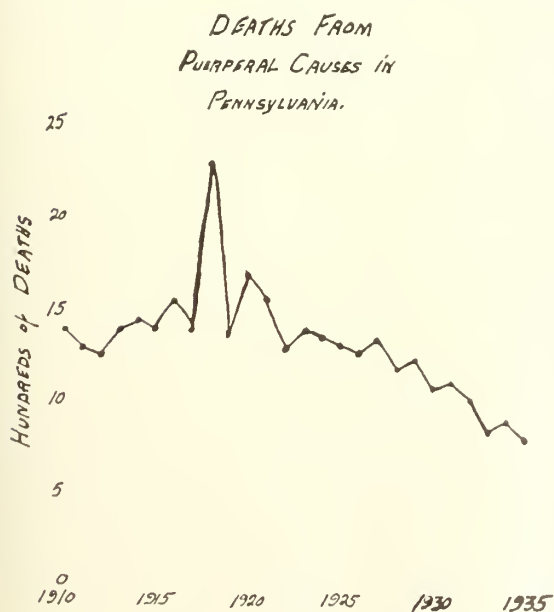


decline continues. It is not an impossible wish; it is one that can be fulfilled, but only by the profession thoroughly understanding the problem and gaining the hearty co-operation of the public.

This year it is our desire that meetings be held throughout the state at which the problem of maternal welfare will be intelligently detailed to the misinformed lay public. The public is more than anxious to learn the real truths of this problem. They want to know why so many mothers die. They want to learn it from the profession rather than from unauthentic, unreliable sources. We are in a position now to go to the public with concrete information. Only by gaining the full co-operation of the public will there be any marked reduction in maternal deaths. Prenatal care has been urged on the public for the past decade with only a half-hearted response; we must be more strenuous in our efforts and more insistent. The public still does not appreciate the need of adequate care for the expectant mother, but this should not deter us from continuing the appeal.

Pamphlets will soon be ready for distribution to all expectant mothers, which will also be of great assistance to physicians. They will outline many of the details of care which are prone to be overlooked.

There has been noted a sense of security in expectant mothers receiving adequate prenatal care to the utter



disregard of the fact that such care must be linked up with good delivery care. Furthermore there must also be meticulous postpartum care.

The county committees on maternal welfare have been greatly handicapped this winter due to the severity of the weather and the bad conditions of the roads; nevertheless, in the vast majority of cases they have done splendid work. There are, however, some very dilatory ones. If these only knew how their delayed reports cause greater delay in the complete analysis, they would work on the survey more arduously. They only impede the progress of the state survey; they are simply denying the truly faithful workers their just dues in knowing exactly how we stand as to the many various factors in this problem.

It is certain that the figures for 1936 can be lowered, but only by the profession appreciating thoroughly the relative values of the various factors and by the lay public being urged to co-operate with the profession.

THE COMMISSION ON MATERNAL WELFARE,
JAMES S. TAYLOR, *Chairman*.

COMMENTS AND EXCERPTS

Support for Birth Control Method in Chimp Studies.—Support for the birth control method known as the "safe period" or rhythm method was given incidentally by observations on chimpanzees reported to the National Academy of Sciences meeting by Dr. Robert M. Yerkes of Yale University's Laboratories of Comparative Psychobiology. In hundreds of chimp matings the beginnings of life occurred only during a period of about 6 days at approximately the middle of the feminine sexual cycle. Because the chimpanzee is very close to the human in physiologic processes, Dr. Yerkes expects that research upon human reproduction will benefit from the studies upon these simian creatures.—*Science News Letter*, May 9, 1936.

Achievements in Cancer Control.—Dr. Earl Ingram Carr of Lansing, Mich., the author of a paper in *The Journal of the Michigan State Medical Society*, Jan., 1936, concludes as follows:

It appears that the major forms of cancer which cause most of the deaths are due to controllable factors, generally some form of chronic irritation. It is a sound conclusion that cancer is usually a result of neglect. The human being is a machine which wears out. It wears out faster with broken parts. It functions better when parts are kept in repair. Like all fine machines, the human machine can go along for a time with impairments but the length of life is reduced if prompt repair and care is not continually provided.

Periodic examination will overtake troubles in the human machine. It may often lead to the prevention even of the beginning of trouble.

However, it may be a long time before all the public will have regular examinations. It may be a long time before all the doctors will recognize early lesions of cancer. It follows then that in prevention lies great possibilities and that plans for education of public and profession must be carried far into the future. Facilities for treating cancer must be increased and made accessible. The fears and pessimism of the past must be supplanted by a knowledge of what science offers.

While cancer is killing at the rate of nearly 10 per cent of all deaths at the present time, it seldom kills those who seek yearly health examinations by compe-

tent physicians of medicine and who accept and follow the advice thereby obtained.

Making Night Driving Safe.—The headlight problem, a factor in the increased number of automobile accidents after dark, and a recurrent problem to safety engineers and automobile manufacturers alike, may never be satisfactorily solved, but recent developments and trends in roadway lighting may make the headlight problem immaterial. Safe night driving, without the use of headlights, with automobiles and pedestrians visible 2000 feet ahead, has been demonstrated possible of attainment in a mile stretch of highway that is equipped with sodium vapor lights. This new member of the lamp family generates approximately 3 times as much light per unit as the lamps used ordinarily in highway lighting. It has been figured that the installation of sodium vapor lighting will result in the saving of approximately 6000 lives and more than \$50,000,000 in motor vehicle accidents annually, according to an article in the March, 1936, *Safety Engineering*.

Says the National Bureau of Casualty and Surety Underwriters, "One-third of the night fatalities (15,500 in 1933) could have been prevented by adequate lighting." Further confirmation comes from a group of cities that increased their street lighting budgets 11 per cent and experienced a 25 per cent reduction in night fatalities. Another group reduced their street lighting budget 14 per cent, and suffered a 7.6 per cent rise in night fatalities. As a guide to engineers and municipal authorities in planning adequate street lighting, the Illuminating Engineering Society has just published its standard Code of Street Lighting. Varying traffic conditions on different types of streets have been taken into consideration in preparing the recommendations.—*The Sight-Saving Review*.

Arctic Colds.—It is reported from Montreal by way of London that 2 scientists of that city, having spent some weeks in the study of health conditions among the Eskimos in the Eastern Arctic regions, discovered that tuberculosis is rapidly increasing among them, but that it is through contact with white men. The presence of common colds among the natives is "almost inevitable after the arrival of a ship." Infection from influenza is known to have wiped out small Eskimo communities.

On the other hand, it is stated that natives of these regions never succumb to cancer or diabetes, and while unable to resist infection from colds the Eskimos can stand extreme fatigue and extremely cold temperature. The healthiest groups were found where the inhabitants wore native clothes and were unable to obtain much of white man's food.

Extensive and protracted studies in that frigid area might be helpful to us in fighting diseases that are so prevalent in temperate regions, through the discovery of what possible inducing causes are prevalent here that are lacking there. The brief observation of these 2 scientists but calls attention to what should be further pursued.—Editorial, *New York Times*, Feb. 14, 1936.

Turnips Found Effective as "Carrier" for Iodine.—We may all soon be eating turnips as a means of getting goiter-preventing iodine into our systems, just as we now eat spinach for the vitamins it contains. Or if we live in the South, we may combine the 2 benefits in a dish of turnip greens.

At the meeting of the American Association for the Advancement of Science, Dr. Warren B. Mack told of experiments with many kinds of vegetables, to see which

would make best use of iodine applied with fertilizer to the soil. He found turnips to be most efficient, increasing their iodine content more than a hundred-fold when plenty of that necessary element was available in the soil.—*Science News Letter*, Jan. 4, 1936.

MEDICAL ECONOMICS

Do Not Stack the Guns Too Soon.—If we are still thinking of our friend the Secretary of Labor, we shall remember that she is said to be one of the projectors of the great national medical survey now in progress. It is also said that if the survey reveals a large amount of sickness lacking medical care, as is fully expected, that fact will be used to argue the need of state medicine to provide it. That is, we may say, local conditions or needs throughout the nation will create a situation of national concern, or an emergency, requiring federal action.

Did the Supreme Court happen to say anything in its verdict on the AAA to cover this point? It did. It remarked: "It does not help to declare that local conditions throughout the nation have created a situation of national concern; for this is but to say that whenever there is a widespread similarity of local conditions Congress may ignore constitutional limitations upon its own powers and usurp those reserved to the states."

Altogether, and by and large, and taking one thing with another, it cannot be said that the AAA decision brings any special hope or joy to the medical socializers' camp. In fact, it seems to bring them a rather large cargo of just the opposite. But it will not do to stack our guns too soon. Thus far the New Deal legislation has apparently been concocted with little regard for the Constitution, and more may follow the same path. If an act is passed setting up a structure of state medicine, many a doctor's practice can be badly upset before the act reaches the supreme tribunal. The best plan is to keep it from ever going on the statute books—stop it before it starts.—*N. Y. State J. M.*, Feb. 1, 1936.

Know the Truth—Spread Your Knowledge.—The following is an abstract from the President's page of *The Journal of the Michigan State Medical Society*, January, 1936:

The recent radio debate on the subject, "Resolved, That the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense," and subsequent debates on the same topic in high schools, colleges, and universities of various states, should make plain to the medical profession the insidious, progressive strides of the propagandists, and arouse the physicians to action. Magazines, the radio, high school, college, and university debates, propagandist brochures, well-paid itinerant lecturers—all these and other implements of warfare are being used against us. Can we afford to be blind or to remain silent longer? No, we must recognize their handiwork and answer their false testimony.

If it is true that medical service rendered to certain classes during this depression may not have been as extravagantly satisfactory as that demanded by the well-paid propagandists, the same is also true regarding food, clothing, and other necessities of life. Obviously, there was a lack of money to supply all the luxuries of service and commodities to everybody. It was an economic impossibility which even the statisticians themselves must admit.

Every physician knows the base untruth of those misleading statements to the effect that many people are unable to secure necessary medical care because of excessive costs. This erroneous impression implanted in the minds of your patients must be corrected by you, Doctor. You alone can reassure the people you serve on this point. You must do this—at once.

We cannot see why there should be a demand for socialized medicine, with the physician providing his services for cost; there has been no demand that banks loan money without interest; that clothing, food, all merchandise, heat and shelter be provided without profit, or that newspapers accept advertising for merely the cost of printing. Is it that medicine has been chosen to lead in a campaign for eventual complete socialization?

One question which the public is not asked to think about is whether the people can afford socialized medicine. We physicians can and should answer this. No, the people cannot afford it. The quality of medical service would be inferior to that which is given under the present system; the value of that service which the propagandists are urging would be second-rate. The public would pay a high price for an inferior article.

Know the answers when your patients ask you questions about socialization of medicine. If you plead ignorance on these important matters, perhaps your patients' confidence in your scientific attainments may be undermined. Take no chance like this. There is no one who can fight your battle better than yourself, since it is you who contact the public. It is the people who must be reached, not other physicians.

What Are We Doing About It?—On other occasions the *Rhode Island Medical Journal* has called attention to the encroachment on medicine of lay organizations. These bodies have been particularly active during the past few years. They may be divided into 2 groups.

Both groups have as a common text for their activity that medicine, as practiced, has failed. Lately they have added to their text such adjectives as miserably, wholly, and completely.

The first division assert their plan will produce better and cheaper medical care. In short, they will do a better job than is now being done by the doctors. The public is generally apathetic to arguments of this group, and does not share in its child-like simpleness. The layman knows that he had better leave medical work to medical men. The first group will always be with us, will never need answering, and will never get any results.

The second division, however, presents a different problem. This group is not interested in the improvement of medicine or medical treatment. Medicine is merely a stepping stone to another end. Medicine lends itself to political plans because it appears to be guided by an altruistic spirit. Those composing the second group are the most practical-minded politicians. They have no illusions. With them results, however obtained, are what count. Their right hand doesn't know and never will know what the left is doing. Innocent-looking bills come before Congress. The bills contain innocent appearing clauses, which later have a very far-reaching effect on the practice of medicine. Certain individuals in high political positions are given wide powers over the health of the nation. That politician incidentally is not a doctor.

It is time for organized medicine to strike back. Very few of the rank and file of politicians in either

party tolerate antagonizing 98,000 doctors in one single body. If an earnest start is made now, more than fine phrases will be forthcoming before election time. —Editorial, *Rhode Island Medical Journal*, Jan., 1936.

MEDICOLEGAL NOTES

Death of Patient on Operating Table.—On Feb. 25, 1936, a jury acquitted a Boston surgeon of a charge of illegal surgery in the death of a woman aged 29. The woman died while under an anesthetic on the operating table. The jury previously returned an acquittal by the direction of the trial judge on a charge of manslaughter. Suit had been brought by the husband.

Hospital Not Liable for Negligence of Nurses.—The Supreme Court of the State of New York on Apr. 7 issued a ruling that a hospital is not liable for the negligence of nurses while they are "exercising their profession and calling." This decision was announced by Supreme Court Justice Frederick P. Close when he set aside a \$4500 jury verdict against the New Rochelle Hospital.—*New York Times*, Apr. 8, 1936.

Privilege of Patient's Representatives.—The Mississippi Supreme Court, *Tonkel vs. Yazoo & M. V. R. Co.*, 154 So. 351, held that in a personal injury action against a railroad, the defendant's physician, who attended the person injured, who subsequently died in the hospital after the injury, could not testify as a witness in the case and a roentgen-ray picture was incompetent as evidence because it was made for the use of defendant's physicians and was a part of the information acquired by them in attending the patient.—*Medical Record*, Nov. 20, 1935.

City Not Liable for Negligence of City Hospital Employee.—In an action by a patient against a city and its insurance carrier for injuries sustained through the negligence of a student nurse employee of the City Hospital, the Texas Court of Civil Appeals held, *City of McAllen vs. Gartman*, 81 S. W. (2d.) 147, that a hospital constructed and maintained by a city for the principal purpose of conserving the public health, receiving indigent patients without cost to them, and applying all money receipts to expenses, is a purely charitable institution, and is not liable for the injury received by a pay patient resulting from the negligence of an employee of the hospital. Moreover the maintenance of such hospital by a city is in the exercise of a governmental power and on that ground the city is not liable for the act of negligence of such employee. Judgment for plaintiff was reversed and rendered for defendants.—*Medical Record*, Nov. 20, 1935.

Acquiescence by Employer in Employment of One Specialist by Another.—An employee who received a serious injury to his back was treated therefor by Dr. Nolan, a doctor whose bill was paid by the employer's insurance company. This doctor specialized in bones and as a necessary aid in the treatment for the back he referred the patient to Dr. Oviedo, who specialized in kidneys. The latter treated him for nearly 3 years to correct the kidney trouble. The Industrial Commission decided the kidney ailment was not caused by the accident and disallowed Dr. Oviedo's claim for treatment thereof. Dr. Oviedo sued the employer's insurance company and others for his bill. The insurance company, by one of its officers, had authorized

Dr. Nolan to give the employee any treatment he deemed necessary at its expense. Dr. Oviedo secured a judgment against the company.

The California District Court of Appeal, *Oviedo vs. London Guaranty and Accident Co.*, 34 P. (2d.) 1069, affirmed this judgment, holding that the company had acquiesced in the treatment that was given the employee by Dr. Oviedo and used the services of Dr. Oviedo to obtain, if possible, a quicker and more complete recovery of the employee's back injury in order that the company should pay the employee the smallest amount of compensation possible.

The disallowance of Dr. Oviedo's bill by the Industrial Accident Commission did not preclude an action by him therefor against the compensation insurer.—*Medical Record*, Nov. 6, 1935.

County's Liability for Emergency Service.—The Nebraska Supreme Court, in *Sayre vs. Madison County*, 254 N. W. 874, held that a physician, not hired by the county, may not recover from the county for services rendered to a poor person in an emergency (here an appendicitis case) where there exists a duly appointed county physician to care for the poor, the latter physician being able, willing, and ready to serve but not consulted.—*Medical Record*, Nov. 20, 1935.

Hospital Records in Evidence as Affected by Privilege Statute.—The St. Louis, Mo., Court of Appeals, *Allen vs. American Life and Accident Ins. Co.*, 83 S. W. 192, holds that while, under the general rule all records required by law to be kept are admissible in evidence, if properly identified, all matters required by statute to be recorded in public hospitals are admissible, still, if such hospital records contain any data which, under the privilege statute, the physician or surgeon has acquired from the patient while attending him in a professional capacity which was necessary to enable him to prescribe for such patient as a physician or to do any act for him as a surgeon, such data would not be admissible unless the privilege were waived by the party against whom the hospital records are offered as evidence.—*Medical Record*, Jan. 15, 1936.

HOSPITAL ACTIVITIES

Hospital Insurance by Groups of Hospitals or Single Hospitals.—No one of intelligence would attempt to gainsay the value of hospital facilities to any community, not only to the community at large through the provision of ordinary hospital accommodations, but reflexly through the installation of modern and expensive apparatus for diagnosis and treatment made available to practicing physicians of the community.

Undoubtedly, the ultimate financial returns to the hospital from any hospital plan offered to the community for the insurance of hospital accommodations is purely the business of the lay management of the hospital.

The organized medical profession interests itself in such proposals on the basic principle that the diagnostic and therapeutic facilities of the hospital become available to the public only through the skill and services of doctors of medicine. Therefore, there must be no confusion in the minds of subscribers to the plan, which sells hospital accommodations, regarding the inclusion of the professional services of physicians in or out of the hospital.

In the case of the Adrian Hospital, located in Punxsutawney, Jefferson County, representatives of its board of trustees, of its attending medical staff, of the med-

ical society of the county, and of the State Medical Society, after a personal conference and considerable correspondence, adopted a plan for insuring hospital accommodations which, it is believed, has as wisely as is possible conserved the interests of its subscribers and the hospital, and at the same time upheld the quality of the medical service in the community.

The result of such conferences is of great import to any community, since the economic interests of each hospital management and of the members of the medical profession immediately concerned are so inextricably related.

No one in the community but the physician can be reasonably expected to have the proper vision to relate such a proposal as to the quality of the sickness service available in the future to the entire community.—*Pittsburgh Medical Bulletin*, Apr. 25, 1936.

Condescending Staff Men.—Dr. E. M. Bluestone, director, Montefiore Hospital, New York City, in discussing the question of the hospital and the practitioner, singles out from the general group of medical men for special emphasis those practitioners who are "outsiders" as far as hospitals generally are concerned. Presumably one of the chief reasons why the practitioner is an outsider, left to his own devices, is that he does not measure up to the scientific requirements of the modern hospital, to which he often sends his patients when he can no longer, with his own limited resources, deal with them in the patients' homes. Dr. Bluestone suggests the following ways to meet the problem:

Specific recommendations to further co-operation between hospitals and practitioners are: (1) The practitioner should be informed of the disposition of his patient. (2) His record of the previous history of the patient should be requested. (3) He should be invited to the wards for the purpose of acquainting him with the findings of the staff (this is good practice for the intern who will be a practitioner himself some day). (4) He should be notified of operation or necropsy examination. (5) He should be notified when the patient has been discharged and advised about further care at home.

The good will of the practitioner is no small asset to any hospital. With closer co-operation the hospital may expect cases that have been better prepared, studied, and recorded by the practitioner before the admission of his patient to the hospital. A policy of this sort would put the physician on his mettle, knowing as he would the scientific standards of the hospital that welcomes him. It would point the way to better medicine by giving him an opportunity to see the other type of medical practice in which the clinical picture is clearer and more orderly. The training and experience of hospital staffs should be made freely available to the practitioner if the fundamental obligation of the hospital to teach medicine is to be fulfilled.—*The Modern Hospital*, February, 1936.

Negro Help Urged in New York City Hospitals.—According to the *New York Times*, Apr. 7, discrimination against Negroes in the Harlem (N. Y.) Hospital and other city institutions was charged in a report recently sent to Mayor LaGuardia.

The report renewed demands for the admission of Negro doctors and nurses in all city hospitals "in accordance with law." It also requested that city financial aid be withheld from any institution refusing equal treatment to Negroes. The report recommended that

the number of Negro doctors and nurses in Harlem Hospital be increased and that the hospital facilities be expanded to meet the needs of the area.

Conditions at the hospital, it was said, played an important part in the underlying causes of the Harlem outbreak.

The quota of nurses at Harlem Hospital should be brought up to full strength, the report declared. It said tuberculosis was developing among student nurses because of overcrowding and overwork. The report also demanded that Negro nurses have the same opportunities for further study that white nurses have.

"Are Blood Transfusions Worth While?"—In this paper by William B. Talbot, M.D., formerly assistant director, Grasslands Hospital, Valhalla, N. Y., he said in part that administrators of hospitals almost invariably co-operate with their medical staffs in arranging for blood transfusions for indigent patients. It is safe to say, however, that many administrators when called upon to approve extensive expenditures for blood donor service have felt honest doubt as to whether the end results really justify the expense.

At Grasslands Hospital, because they have pursued a policy requiring administrative approval for the hiring of donors, they naturally have investigated each individual case and have been fairly certain that the results were well worth while. It seemed desirable, nevertheless, to prove or disprove this assumption through a survey of a number of consecutive cases. The 318 consecutive transfusions studied were given over a period of several months, ending Oct. 1, 1934. The study of results was made 6 months later.

TABLE I

Number of patients transfused	207
Number of transfusions given	318
Number of above 207 patients, later discharged as improved or recovered, where the transfusion played a part in the improvement	150 or 73.5 per cent
Number of patients transfused who were later discharged as unimproved	3 or 1.5 per cent
Number of patients transfused who died	54 or 26 per cent
Number of patients transfused whose death could be attributed to the transfusion ...	0

The statistics in Table I are especially significant in their indication that almost three-quarters of the patients receiving transfusions were apparently improved thereby. It should be emphasized that at Grasslands Hospital blood transfusions are done for a variety of indications, and that the transfusion work during the period under study was by no means confined to cases in *extremis*. Had they been so limited the results would be much less favorable. On the other hand, a number of transfusions were given to prolong life in certain leukemias and other comparatively hopeless conditions, and although the patient eventually died, the immediate aim of the transfusion, temporary improvement, was accomplished.

TABLE II

Number of transfusions given	318
Number of transfusions where blood was furnished without cost to hospital by relatives, friends, or others	249 or 78.3 per cent
Number of transfusions in which donor was paid by hospital	69 or 21.7 per cent

Since the hospital in question is a public charitable institution, there is rarely any patient who is able to pay the donor. Expenses for blood donors become direct charges into the per capita cost of the hospital and if transfusion costs were not kept at a minimum

they would deplete the budget for medical supplies to which they are charged.

Aside from families and close friends, they have found the police and fire departments of the county the most helpful source of donors. These men have willingly offered assistance, often to persons in whom they had no personal interest whatsoever.

It is questionable whether any particular significance can be attached to the fact that the death rate was much higher among patients for whom voluntary donors were not obtainable.

It is worth noting that the patients whose donors were paid by the hospital, and who died, had an average of 2 transfusions each, while the whole group of 207 patients averaged one and a half transfusions each. Also, the patients whose donors were paid by the hospital and who were discharged recovered or improved received only 1.2 transfusions each.

The following points in connection with this small study, should be emphasized:

1. Blood transfusions were an important adjunct in the treatment of this group of cases, and the blood transfusion is believed to have been of definite help in almost all of the patients whose condition was improved.

2. Anticipation of the need of blood, so that relatives and friends can be found and used as donors, plays an important part in reducing hospital expenses for transfusion.

3. The study has relieved the administration of this hospital of any doubts which it may have held as to the value of its transfusion program.

INDUSTRIAL MEDICINE

Silicosis.—Secretary of Labor Frances Perkins, on May 2, announced the appointment of 4 committees in the co-operative campaign to lessen the ravages of silicosis to which 500,000 workers in mines, quarries, foundries, glass works, and other industries where silica dust may be inhaled are exposed in some degree.

On Apr. 14, 1936, she held a national conference in Washington, D. C., to lay the groundwork for the first concerted drive against silicosis which has taken a heavy toll among wage-earners. Representatives of employers, workers, insurance companies, government, technical societies, engineers, and physicians agreed to co-operate with the Department of Labor in a campaign to end silicosis.

"Silicosis, for which we know no cure, should be prevented," Secretary Perkins said. "The fact that it has been prevented in certain industries where there is exposure is sufficient grounds for making us believe that it can be successfully combated in practically all industries and that every effort should be made to study the particular needs and problems of those industries so as to devise ways suitable for the control of the disease.

"The technic of silicosis prevention lies in keeping the dust from getting into the air which workers breathe. This can be done by different types of ventilation—not necessarily general ventilation—but specialized control and collection of the dust at the point of origin so that it does not escape into the workroom.

"The use of wetting-down processes is also often helpful. The keeping of rooms clean, the cleaning of walls, floors, and machinery is also of assistance. The wearing of positive pressure masks is a possible method of control when nothing else is available, but this is not practicable in most places and under most circumstances. It is difficult for men to work an 8-hour day

wearing such a mask, but for certain short-time exposures it may be appropriate.

"Silicosis is caused by breathing very small particles of dust containing silica. The particles which are too small to be seen in the form of dust are the ones which are the most dangerous since, because of their minute size, they reach the small air cells of the lungs, penetrate the lining membranes, and cause irritation. This, in turn, causes the replacement of healthy tissue by fibrous or scar tissue.

"The concentration of the dust is another test of the degree of the hazard; also, the length of time a worker has been exposed. A short exposure may not create any particular hazard and may not cause any after-effects in the lung tissue. The degree of concentration of the dust and the length of exposure are extremely important factors.

"The symptoms are not very well known and are extremely difficult for the layman to recognize, also difficult for the physician to recognize; but in general the symptoms are a general malaise, shortness of breath, early fatigue, sometimes with some slight visible symptoms, but usually not. The actual recognition and diagnosis of silicosis can scarcely be made without roentgen-ray examination. The symptoms of tuberculosis are often confused with the symptoms of silicosis, and, in fact, silicosis and tuberculosis may be present in the same individual and may be related to each other, thus increasing the danger to the individual.

"Many personal damage suits have been brought by workers who have acquired silicosis in the course of their employment, and are not covered by the workmen's compensation laws. These suits have proved costly and the attention of industrial and legal groups in every state has been riveted upon silicosis and how to deal with it. An extremely expensive economic situation ensues if everyone who acquires silicosis can bring a damage suit. There has been, therefore, considerable canvassing of the laws and of methods by which this disease can practicably be brought under the workmen's compensation laws."

Appointment of the following committees was announced by Secretary Perkins:

Committee on the Prevention of Silicosis Through Medical Control: Chairman—Surgeon R. R. Sayers, U. S. Public Health Service, Washington, D. C. (This committee is represented by the following members from Pennsylvania: Thomas Kennedy, United Mine Workers of America, Harrisburg; Eugene P. Pendergrass, M.D., University of Pennsylvania, Philadelphia; J. Norman White, M.D., Scranton.)

Committee on the Prevention of Silicosis Through Engineering Control: Chairman—Warren A. Cook, State Department of Health, Hartford, Conn. (W. P. Yant, supervising engineer, U. S. Bureau of Mines Experiment Station, Pittsburgh, represents Pennsylvania on this committee.)

Committee on Economic, Legal, and Insurance Phases of the Silicosis Problem: Chairman—V. P. Ahearn, National Sand and Gravel Association, Washington, D. C. (Louis B. Raycroft, Pennsylvania Self-Insurers, Philadelphia, represents Pennsylvania on this committee.)

Committee on Regulatory and Administrative Phases of the Silicosis Problem: Chairman—L. Metcalfe Walling, Labor Commissioner, Providence, R. I. (Pennsylvania is represented on this committee by J. H. Oliver, Glen Alden Coal Co., Scranton.)

PHYSICAL THERAPY

Dementia Paralytica: Results of Treatment with Diathermy Fever.—Samuel H. Epstein, Harry C. Solomon, and Israel Kopp, Boston (*Journal A. M. A.*, May 2, 1936), state that a review of the literature of the results of treatment of dementia paralytica with fever produced by diathermy and related mechanical modes of hyperpyrexia indicates that, out of a total of 648 cases reported between 1929 and 1935, good remissions were recorded in 27 per cent. In their series of 33 patients who were treated by diathermy between February, 1931, and February, 1934, according to their analysis made in February, 1935, 8 patients were improved and working, and an additional 7 patients were improved but not self-supporting. Four patients, while remaining hospitalized, were known to be improved. Four patients were living but unimproved, and 10 patients had died. In one case there was a definite clinical and serologic relapse 4 years after the administration of diathermy fever therapy. Of the 15 patients who were clinically improved, 8, or approximately one-half of them, had completely normal or nearly normal spinal fluids. It seems quite possible to the authors that their results in the total group of cases would have been much better if the diathermy treatment had been more prolonged and at a higher temperature level. The longevity figures based on the percentage of patients who died within 2 years after treatment indicate that 27 per cent of the diathermy series represent deaths which occurred within 2 years. This is contrasted with 14.8 per cent for the malaria series and 13.5 per cent for the trypanamide series previously reported. A comparative study of the clinical results among patients treated with malaria, artificial hyperpyrexia including diathermy, and trypanamide indicates that the best remissions are obtained in a little more than 45 per cent of the malaria-treated cases and 42 per cent of the cases treated by trypanamide, contrasted with 27 per cent of the cases treated by artificial hyperpyrexia. A comparative study of the serologic results indicates that about 22 per cent of the diathermy series showed a normal spinal fluid following treatment, in contrast to 37 per cent obtained in the malarial and trypanamide treated cases.

Results Obtained by the Use of Fever Therapy in 3 Types of Cases Usually Refractory to Other Types of Treatment.—M. Hill Metz, Dallas, Texas (*Journal A. M. A.*, May 9, 1936), treated 6 patients with the most severe type of Sydenham's chorea with fever therapy by means of the Kettering hypertherm. All were girls and their ages ranged from 8 to 15 years. They had been kept at complete bed rest and had been treated with all the ordinary measures and with much sedation but the condition remained of the most violent type, requiring continuous restraints to prevent self-injury. All were given from 3 to 5 treatments at weekly intervals, each treatment consisting of from 3 to 4 hours, with temperature between 106 and 107° F. Shortly after the first treatment in each case there were fewer choreiform movements, and the patients rested with fewer sedatives. Improvement was slow but definite, and in from 2 to 4 weeks after the last treatment all involuntary movements had disappeared and the patients ate and slept normally. In only 2 cases was there the suggestion of choreiform movements under the stress of excitement. These cases have been followed for from 2 to 8 months, and there has been no recurrence of symptoms in any. Excellent results were also obtained in 2 severe cases of gonorrheal ophthalmia in May, 1935. Eight

cases of severe intractable bronchial asthma were also treated with fever therapy by means of the Kettering hypertherm. Multiple sensitivities to bacteria, foods, and pollens were present in each case. All patients had had severe attacks of status asthmaticus at repeated intervals, oxygen therapy having to be administered. The relief offered has been complete in 3 cases, lasting from 2 to 6 months. In 4 cases followed for from 1 to 12 months there has been only occasional mild recurrence, and in one case there was little or no improvement. No patient received more than 4 treatments at weekly intervals, each one consisting of from 3 to 5 hours of fever between 106 and 107° F. The author does not recommend this type of therapy as effecting consistent cure or even as a means of alleviating all bronchial asthma but believes that it is worth trying in severe asthmatic cases that respond to no other form of therapy.

PUBLIC HEALTH

Surgeon General Lists 6 "Musts" on Health Plan.—The Surgeon General of the U. S. Public Health Service, Dr. Thomas Parran, Jr., has 6 "musts" on his program for securing better health throughout the nation, based on his philosophy that "the greatest need for health action is where the greatest saving of life and suffering can be made." They are the following:

1. To finish the job of wiping out tuberculosis.
2. To wipe out that unmentionable disease, syphilis, the end results of which "crowd our jails, our poor-houses, and our insane asylums."
3. To make available to people everywhere facilities for the proper diagnosis and treatment of cancer, which in Dr. Parran's opinion would reduce by 20 per cent the deaths from this disease.
4. To reduce the "disgracefully high" death rates of mothers in childbirth and of babies in their first month of life.
5. To correct the conditions resulting from improper diet.
6. To restore crippled children to lives of usefulness.

Hospital System for the United States Proposed.—A hospital system for the United States, with details as to what classes of patients should be cared for in state and in private hospitals, was presented by Dr. N. W. Faxon, director of the Massachusetts General Hospital, to the American Hospital Association.

Hospitals today are being subjected to the same social and economic forces responsible for the political and social turmoil that has affected a large part of the civilized world, Dr. Faxon pointed out.

A complete state hospital system is not necessary, in his opinion. It is, however, the duty and responsibility of the community to provide hospital care for people unable to provide for themselves.

Public hospitals should care for the indigent and those patients paying less than half the cost of hospital care. In general, they should not admit private patients, when other hospitals are available.

"Private hospitals would care for patients paying more than half the cost of hospital care, for patients paying the full cost of hospital care, and private patients paying not only the cost of hospital care, but professional fees as well," Dr. Faxon advises.

"Patients with communicable diseases and psychiatric conditions would form an exception to this rule and it

would ordinarily be the responsibility of the community to provide facilities for their care regardless of their economic classification, although they pay according to their ability."—*Science News Letter*, Oct. 12, 1935.

Annual Conference of Milbank Memorial Fund.

—Public health authorities, meeting at the annual conference of the Milbank Memorial Fund at the New York Academy of Medicine, were told Mar. 27, that 25,000 to 30,000 lives might be saved annually in the country if inexpensive or free pneumonia serum were generally and quickly available.

Dr. Russell L. Cecil, chairman of the subcommittee on pneumonia of the Medical Society of New York State, told of the progress in the use of pneumonia serum. The possible saving in life, he explained, could not be accomplished for some time because of the expense of the serum and the difficulty of typing the cases quickly enough, especially in country districts.

The treatment is most effective in Type 1 pneumonia, in which the serum can effect a two-thirds reduction in the death rate, but there are also promising serums in Types 2, 5, 7 and 8. The Neufeld method of typing makes it possible to discover the type of the case in 2 or 3 hours.

He described the New York State program, developed in co-operation with the State Department of Health and other agencies, with typing in 95 laboratories and free distribution of Type 1 serum from 83 stations.

Albert G. Milbank, president of the fund, declared at the annual dinner that the present concept of public health has broadened and embraces such subjects as population, environment, housing, nutrition, and other factors that heretofore were not thought of as having a close and intimate relation to the problem of public health.

As a sign of a new stage in the history of public health, he cited the recognition on the part of the Federal Government that prevention of ill health is an essential measure in advancing the economic security of a large proportion of our population. But he listed certain activities of the Federal Government in recent years as throwing a doubt upon certain postulates that we had come to take for granted.

Referring to the scientists and health authorities present as the "brain trust" of the fund, he added that they were distinguishable from other groups similarly named in that each one of them has been selected not because of his ignorance but because of his knowledge of the subject."

Thomas I. Parkinson, president of the Equitable Life Assurance Society, defended the work of private research agencies and declared that in government agencies there were too many instances in which independence resulted in discharge of the person who showed it. Public policy, he said, must be based on the findings of many research institutions.

Dr. Elliott P. Joslin, of Boston, said that while diabetes was a disease for the family doctor to treat, the community could help by providing special hospitals, diabetic centers, and special nurses. For cancer, Dr. Alton S. Pope, of the Massachusetts Health Department, suggested special hospitals and education.

The population group took up the United States Public Health Service Survey of Chronic Diseases, now being conducted. Clark Tibbits, survey field director, said it would provide bases for population estimates and data on the unemployed.

Dr. Clyde V. Kiser, of the fund's technical staff, said that it would provide data for study of birth rates in various groups and classes. The study takes in 750,000 families in 90 cities.—*N. Y. Times*, Mar. 28, 1936.

Health Contest Won by Detroit.—The Associated Press announced Apr. 19, that in the annual health conservation contest conducted by the Chamber of Commerce of the United States in co-operation with the American Public Health Service for cities with over 500,000 population, Detroit was awarded first place.

Other winners for cities with a population of less than 500,000 are Oakland, Calif., Syracuse, N. Y., Schenectady, N. Y., Brookline, Mass., and Hibbing, Minn.

Morbidity in Pennsylvania in March, 1936

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	1	7	0	3
Allentown	0	9	13	0	28
Altoona	0	0	7	0	4
Ambridge	0	0	19	0	2
Arnold	1	0	0	0	4
Beaver Falls	1	0	8	0	0
Bellevue	0	14	2	0	0
Berwick	0	0	0	0	0
Bethlehem	0	4	2	0	6
Braddock	0	1	1	0	1
Bradford	1	2	2	0	9
Bristol	1	1	3	0	0
Butler	0	44	1	0	2
Canonsburg	0	0	1	0	0
Carbondale	0	0	3	0	0
Carlisle	1	0	15	0	0
Carnegie	0	14	12	0	0
Chambersburg	0	1	23	0	0
Charleroi	0	22	1	0	1
Chester	5	17	3	0	4
Chairton	0	4	0	0	0
Coatesville	0	0	0	0	0
Columbia	0	0	0	0	0
Connellsville	0	0	1	3	0
Conshohocken	0	2	0	0	0
Coraopolis	0	6	0	0	1
Dickson City	0	0	6	0	0
Donora	0	0	2	0	0
Dormont	0	4	1	0	0
Du Bois	0	100	4	0	0
Dunmore	0	0	1	0	0
Duquesne	0	67	0	0	1
Easton	1	5	8	0	8
Ellwood City	1	0	10	0	0
Erie	0	2	9	0	0
Farrell	0	0	1	0	0
Franklin	0	1	2	0	16
Greensburg	0	0	0	0	0
Hanover	1	0	5	0	0
Harrisburg	3	3	14	1	0
Hazleton	0	0	0	1	0
Homestead	0	0	0	0	0
Jeannette	0	7	4	0	0
Johnstown	1	0	5	0	15
Kingston	0	0	6	0	20
Lancaster	0	4	7	0	4
Latrobe	0	2	1	0	0
Lebanon	0	0	3	0	1
Lewistown	2	0	1	0	9
McKees Rocks	1	8	6	0	3
McKeesport	1	16	3	0	0
Mahanoy City	0	0	1	0	0
Meadville	0	0	0	0	2
Monessen	0	33	0	0	0
Mount Carmel	2	1	0	0	0
Munhall	0	9	0	0	0
Nantioke	0	0	0	0	0
New Castle	0	19	19	0	16
New Kensington	0	1	7	0	0
Norristown	0	4	4	0	0
North Braddock	0	1	11	0	0
Oil City	0	4	9	0	3
Old Forge	0	1	0	0	0
Olyphant	0	0	2	0	0
Philadelphia	17	1417	247	0	141
Phoenixville	0	1	17	0	4
Pittsburgh	13	141	453	0	74
Pittston	0	0	4	0	0
Plymouth	0	1	0	0	0
Pottstown	0	1	3	0	1
Pottsville	1	1	0	0	2
Reading	0	16	21	0	6
Seranton	3	11	18	0	0
Shamokin	2	3	2	0	0
Sharon	0	1	4	0	15
Shenandoah	0	0	2	0	0
Steelton	0	0	1	0	3
Sunbury	0	194	26	0	2
Swissvale	0	5	0	0	0
Tamaqua	0	0	9	0	1
Taylor	3	0	0	0	0
Turtle Creek	0	0	11	0	2
Uniontown	0	11	0	0	5
Vandergrift	0	0	2	0	2
Warren	0	0	4	0	0
Washington	0	0	3	0	0
Waynesboro	0	1	6	0	0
West Chester	0	24	1	0	17
Wilkes-Barre	6	5	38	0	24
Wilkinsburg	0	12	5	0	3
Williamsport	0	2	8	0	3
York	1	1	0	0	1
Townships					
Allegheny County:					
Harrison	1	0	1	0	0
Mt. Lebanon	0	13	10	0	19
Stowe	0	4	2	0	3
Delaware County:					
Haverford	0	8	8	0	23
Upper Darby	0	16	20	0	27
Luzerne County:					
Hanover	0	0	3	0	1
Plains	1	0	5	0	2
Montgomery County:					
Ablington	0	72	6	0	4
Cheltenham	0	32	3	0	1
Lower Merion	0	3	9	0	14
Total Urban ..	71	2430	1228	5	563
Total Rural ..	67	1409	1078	17	348
Total State ..	138	3839	2306	22	911

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the co-operation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

FEVER which lasts for weeks or even years and in spite of the most careful investigation remains unexplained is one of the doctor's most perplexing problems. Wherever physicians gather and exchange shop talk unexplained fever is a commonly discussed problem, but this subject is seldom dealt with in medical literature as an independent topic and in a comprehensive way. Hamman and Wainwright of the Johns Hopkins Hospital and University felt that importance of the subject merits independent treatment and set out to gather and analyze the records of cases with the diagnosis of obscure fever. Extracts of the article based on their studies are here presented, including their very cogent remarks on the rôle of obscure fever in tuberculosis.

DIAGNOSIS OF OBSCURE FEVER

With the aid of associates the records of 90 cases of fever of unexplained origin occurring in private practice and in the wards of the Johns Hopkins Hospital were ferreted out. These cases are not regarded as units of statistical calculation since their number is too small but rather as illustrations of the peculiar features of each case.

For convenience the cases were divided into 2 groups, the first comprising those with low-grade fever of from 100° to 101° F., with light symptoms; the second consisting of cases with higher fever and symptoms which usually incapacitated the patient and confined him to bed.

Patients of the first group complain of weakness and lassitude, of lack of energy and endurance. The zest of life is gone, they whip themselves up to undertake tasks formerly done with ease, and they are exhausted. Some have headaches, others digestive symptoms or palpitation of the heart. All are ill at ease, apprehensive, and depressed mentally and physically. Many have consulted successive physicians and have undergone various surgical procedures yet they feel no better and the fever persists. Such cases finally group themselves into these classes.

1. In a certain number, about 40 per cent, characteristic signs and symptoms develop which permit us, at last, to make an accurate diagnosis.

2. In another group, about 50 per cent, the symptoms slowly disappear, the fever subsides

and the patients get well, although we are never able to arrive at a well-supported diagnosis.

3. In about 10 per cent, the symptoms and the fever persist for many years and in spite of the most careful observation and painstaking examinations no satisfactory diagnosis is ever reached.

In the series studied an accurate diagnosis was finally made upon 10 patients as follows:

Malta fever	3 cases
Pulmonary tuberculosis	2 cases
Hypernephroma	2 cases
Hodgkin's disease	1 case
Tertiary syphilis	1 case
Ureteral stricture	1 case

In 6 other cases a presumptive diagnosis was made as follows:

Tuberculosis—pulmonary
Tuberculosis—mesenteric glands
Tuberculosis—perirectal abscess
Rheumatic fever
Malta fever
Multiple myeloma

The authors detail a number of case histories including a striking case of Malta fever that remained undiagnosed until the patient herself, more than 2 years after the onset of the fever, answered an inquiry by stating that she was splendidly well and suggesting that her illness

might be traced to milk from a herd of registered Holsteins infected with "contagious abortion of the most virulent type." Tests of the serum were then made, the results of which dramatically confirmed the diagnosis of Malta fever.

Under the heading "Specific Infections" the authors have the following to say concerning tuberculosis.

"Tuberculosis more frequently than any other of the chronic infections causes a slight, long-continued fever. Indeed such a slight fever is a characteristic, almost distinctive, feature of the disease. In addition to this the patients complained of the very symptoms which are precisely those usually complained of by the tuberculous, namely, weakness, fatigue, lack of endurance, tachycardia, sweating, and so on. Furthermore, all physicians know that often it is very difficult to discover the location of a tuberculous lesion which may be causing these general symptoms. Therefore, it is not at all surprising that under these circumstances tuberculosis was always suspected, nor is it in any way remarkable that very often this diagnosis was made. And yet in not a single instance was the diagnosis securely established. We have had the opportunity to observe some of these patients at intervals over many years; others have spent long periods at tuberculosis sanatoria and resorts. Opinions about them differ; some physicians are convinced they have tuberculosis, others are equally sure they have not. The conclusive evidence, namely, the demonstration of tubercle bacilli, has never been furnished. In the light of this experience we are prepared to defend the statement that, whereas tuberculosis is the most common cause of long-continued slight fever, it is seldom the cause of *unexplained* long-continued slight fever.

"When a patient with low fever comes for examination complaining of general malaise, weakness, exhaustion, and tachycardia, the physician at once makes a tentative diagnosis of tuberculosis. With this possibility foremost in mind the examination is planned especially to disclose the location of the tuberculous lesion. It is searched for carefully and assiduously, and if the search be thorough and often repeated, the tuberculous lesion seldom escapes detection. However, now and again it is overlooked and the memory of these unfortunate occasions is so bitter and tenacious that the physician is apt to diagnose tuberculosis whenever he is unable to discover any other satisfactory explanation for the symptoms. We all recall these sad experiences—slight fever, slight constitutional symptoms, negative examinations, negative roentgenograms; later, an attack of pleurisy with effusion, a mani-

fest pulmonary tuberculosis, tuberculosis of the mediastinal or mesenteric glands, etc.

"No one faces lightly the possibility of a repetition of these errors and therefore perhaps we are apt to be too cautious. It is as grave an error to diagnose tuberculosis when it does not exist as it is to miss it when it is present. It is right and proper that tuberculosis should always be suspected as the cause of unexplained fever and the suspicion tenaciously held until some other cause for the fever is discovered. However, the diagnosis should never definitely be made upon circumstantial evidence alone.

"In this connection we wish to call attention to a valuable test which is too often neglected, namely, the tuberculin test. The intracutaneous tuberculin test is easy to perform and utterly dependable in the information it gives. A reaction indicates tuberculous infection, not tuberculous disease, and therefore is of little value in diagnosis. But a failure to react indicates, aside from few well-known exceptions, the absence of tuberculous infection and this information may be of the greatest value in diagnosis. From 60 to 70 per cent of all adults will react to the intracutaneous tuberculin test with a dilution of 1 to 1000, but among those who fail to react there will be many who at one time or another may have symptoms which arouse a suspicion of the presence of tuberculosis. Under these circumstances to demonstrate that the patients are insensitive to tuberculin will definitely and at once dispel the suspicion. To illustrate how precisely at times the test may guide diagnosis we recall an experience published some years ago.

"In the spring of 1919, during the wane of the influenza epidemic, we were consulted by 2 young women, one within a few days of the other. Both gave similar histories, a fairly acute onset of the illness characterized by cough, sputum, loss of weight and strength, and a little fever. Both showed a small area of consolidation in an upper lobe. The diagnosis lay between a patch of unresolved pneumonia and tuberculosis. One reacted to the intracutaneous tuberculin test whereas the other showed no sensitiveness to tuberculin even when a 1:100 dilution was injected into the skin. It was our opinion that neither was tuberculous, but the one we felt confident we could dismiss without concern; the other we held under careful supervision. The patient who failed to react to tuberculin made a prompt and lasting recovery; the other patient failed to improve and a few months later tubercle bacilli appeared in the sputum."

Diagnosis of Obscure Fever by Louis Hamman and Charles W. Wainwright, Bulletin of Johns Hopkins Hospital, Feb., 1936.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

PROPOSED AMENDMENTS

A notice regarding parliamentary requirements for consideration of amendments to the Constitution and By-laws was published in this department in the May JOURNAL.

The following proposed amendment to the By-laws is presented by the Board of Trustees:

The proposed changes in Section 1 of Chapter III entitled Councilor Districts involve the constituency of 2 councilor districts as set forth in the following italicized words:

Chapter III, Section 1. The State of Pennsylvania shall be divided into 11 councilor districts, and each district shall be entitled to one councilor. The councilor districts shall be composed of the following counties:

.....
.....
Fifth Councilor District: Adams, Cumberland, Dauphin, Franklin, Fulton, Lancaster, Lebanon, and York counties. *Add Perry.*

Sixth Councilor District: Blair, Center, Clearfield, Huntingdon, Juniata, Mifflin, and Perry counties. *Delete Perry.*

The following amendment has been offered by Dr. William H. Mayer, Pittsburgh:

Amend Chapter IX, Section 4, of the By-laws to read as follows:

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relation to each other and to the public, *and to this end each member shall conduct himself so as not to defeat or tend to defeat the purposes for which the society is organized and is operating.*

MEMBERSHIP

Our paid-up membership on May 14 of this year, 7902, was not equaled last year until June 24. A total of 8171 members paid their dues for 1935, the largest number in the history of the society, and a net increase of 402 in 5 years.

The drive for new members should continue the year round, of course, but with July 1 close at hand the following paragraphs appear to offer timely suggestions:

Why should not all doctors of medicine in Pennsylvania share in the expense and the work necessary to develop and retain high standards of medical training and freedom in medical practice?

The Model By-laws for Component Societies, approved by the 1932 House of Delegates of The Medical Society of the State of Pennsylvania, in Section 1, Article VI, provide that "the dues for *new* members elected between July 1 and Nov. 1 shall be one-half the annual dues." Section 2 of Article IV of the Constitution of The Medical Society of the State of Pennsylvania provides that "the assessment of *new* members elected and reported between July 1 and Nov. 1 shall be one-half the annual assessment." This advantage to new members should be emphasized now.

It is interesting in this connection to remark that, of approximately 350 physicians passing the Pennsylvania State Board examinations as conducted in July, 1935, 113 have already united with county medical societies. The attention of the various county medical society secretaries is as usual being drawn to the nonmembership of the others.

FLOOD RELIEF

We hope in the July issue of the JOURNAL to print a summary by counties of the contributions received in response to the letter (see page 630, May issue) mailed on Apr. 8 by our Benevolence Committee to the entire membership of our State Society.

At this writing, May 22, it is possible to report that 984 checks were received, amounting to a total of \$5956.

Members will no doubt read with interest the following self-explanatory communications:

May 14, 1936

In Re: Flood Relief.

Dear Friend:

To you, one of 946 individuals who contributed in response to our committee's letter of Apr. 8, we have great pleasure in reporting that the total of \$5896 received has been distributed to 29 of your fellow members located in 4 different counties.

We append below the text of the communication which accompanied the check sent to each of these beneficiaries.

Thank you for your gracious response.

MEDICAL BENEVOLENCE COMMITTEE,
HOWARD C. FRONTZ, *Chairman*;
ROSS V. PATTERSON, *Treasurer*;
WALTER F. DONALDSON, *Secretary*;
CLARENCE R. PHILLIPS.

Fellow Member:

The members of the Benevolence Committee of The Medical Society of the State of Pennsylvania are privileged to forward the enclosed check to you in the name of hundreds of your fellow members in our State Medical Society. However, none but the members of our committee and your sponsor in your own county medical society need know to whom the money is distributed.

We wish it were possible to convey to you the many kindly sentiments expressed by those contributing to the Flood Relief Fund.

Trusting that you may be helped by this no doubt inadequate sum, and asking that you make no acknowledgment of it to the committee, I am

Sincerely yours,

HOWARD C. FRONTZ, *Chairman*,
MEDICAL BENEVOLENCE COMMITTEE.

FEDERAL SOCIAL SECURITY FUNDS

The Social Security Act approved by President Roosevelt on Aug. 14, 1935, is about to result in the inauguration in Pennsylvania of one of 3 forms of additional service designed especially to improve the quality of professional attention available to crippled children and to pregnant women and their offspring.

Members of our society after reading the appended communication are requested to communicate with any member of our Commission on Maternal Welfare regarding the educational meetings which may be arranged in the various counties. It has been strongly suggested that county medical society representatives maintain the active part in planning and conducting the meetings—both scientific and public—that will otherwise be assumed and credited to other organizations. We covet leadership but apparently do not always maintain it.

OBSTETRICAL INSTITUTE

A Federal and State Health Department and Medical Society Project

The Committee of the State Society appointed to confer with Secretary of Health MacBride-Dexter, which committee has held several meetings, is prepared by reason of the splendid efforts of Chairman James S. Taylor of our Commission on Maternal Welfare, who is also a member of the above-mentioned Conference Committee, to report to the individual councilors as follows:

A personal invitation is being sent by the Health Department to every licensed physician in Pennsylvania urging his attendance at the Obstetrical Institute to be held in his county. Every county medical society will receive a questionnaire, inquiring as to suitable date and time to hold same in the county, and as to choice of suitable subjects for presentation at the institute in the respective counties.

Teachers will be chosen only from the faculties of the medical schools of Pennsylvania, their honoraria and travel expense being paid by federal funds matched by the state.

The societies are also requested to choose the best center where this institute may be held, endeavoring to limit the travel expenses of the teachers. It is possible to have the institute held as a whole day session, at which 3 speakers may be arranged for. The only expense to the physicians attending will be transportation and lunch.

Each lecturer will furnish a synopsis of his paper to be mimeographed and distributed at the various institutes. If the institute convenes at 10 a. m., 2 lectures can be delivered before lunch. After luncheon there should be a presentation of the 1935 maternal death rate of the state, and especially of the particular county, this to be followed by the third lecture, and then by a round-table discussion, adjourning the day's institute at 3:30 p. m.

On the same day that this institute will be held there should also be held a public meeting in order that the truths and facts of maternal mortality may be given the lay public with particular reference to the situation in the county. Both the professional and the lay meetings should be well publicized for a week previous.

Each county may have its own particular obstetric problems to thrash out, and the day's program may be set to suit such needs.

It is planned to hold some institutes late in June and throughout July, and in September and October.

There are at present at least 8 counties which are anxious to entertain this program. It is hoped that the Institute will not replace a regular county medical society meeting. Where several counties can advantageously combine for this work, such would be highly desirable.

JAMES S. TAYLOR, Altoona, *Chairman*;
PHILIP F. WILLIAMS, Philadelphia;
OSCAR J. KLEVAN, West Chester;
WALTER J. LARKIN, Scranton;
ROY E. NICODEMUS, Danville;
THEODORE B. APPEL, Lancaster;
JOHN B. NUTT, Williamsport;
CHARLES G. STRICKLAND, Erie;
MILTON M. AUSLANDER, Ernest;
PAUL DODDS, Pittsburgh;
WALTER C. RAYMOND, Johnstown;
COMMISSION ON MATERNAL WELFARE.

INTELLECTUAL LAZINESS

Many additional reprints have been classified for use in the package library service this month, and more have been received in response to our requests from authors. Your interest is a great help in the development of the library since each query enables us to determine more definitely which subjects are likely to be of general interest to all the members of the society. If an inadequate supply of material on any subject is at hand, an attempt is made to secure the desired articles from authors.

Encouraging comments continue to be received. J. Boyd D. Stewart, Wilson, wrote, "The package was very good—I found what I wanted." D. L. McAninch, Lamartine, said when returning his package, "I considered it very helpful."

Members desiring to borrow reprints from the library should send 25 cents in stamps to cover the postage and part of the expense of collecting the material. Address the Librarian, 230 State Street, Harrisburg, Pa. Only one package may be borrowed at a time and it must be returned within 14 days.

Long-established custom results in the suspension of periodic scientific meetings of county medical societies throughout the summer months. It is believed, however, that with the rapid advances that have come recently, due to modern laboratory and research methods, physicians should *not* also take a vacation from their customary reading of published papers on clinical subjects. To this end it is the fondest hope of our Library Committee that requests for mail packages of reprints will not materially decrease during June, July, and August.

To our former member, the late Dr. William Osler, to whom we are indebted for our guiding principle—"The promotion and dissemination of medical knowledge throughout the State remains our important function"—we are further indebted for the following comments printed in the *International Clinics* of 1910 regarding *intellectual laziness*: "But after all, the killing vice of the young doctor is intellectual laziness. He may have worked hard at college, but the years of probation have been his ruin. Without specific subjects upon which to work, he gets the newspaper or novel habit, and fritters his energies upon useless literature."

UNITED STATES PUBLIC HEALTH SERVICE SURVEY

During the late summer and early fall of 1935 there was considerable discussion in medical publications and at medical meetings relative to

the scope and the purpose of the publicly announced survey of chronic illnesses in 19 states of the Union to be conducted by the United States Public Health Service.

After being convinced that this extensive investigation of personal illnesses was to be handled throughout in the usual approved manner of the United States Public Health Service, most medical practitioners no doubt shelved the project in their minds, awaiting the publication of the findings.

On May 15 of this year, however, we were reminded by the following communication that there remains a slight contribution of effort to be made by many practitioners. Physicians are assured that no question regarding illegal disclosure of confidential information is involved, and are urged to respond promptly, since in each instance the informant (his former patient) has given consent.

In Pennsylvania the survey covered 85,000 families scattered throughout portions of Allegheny, Center, Dauphin, Lackawanna, Lancaster, Luzerne, and Philadelphia counties.

WASHINGTON, D. C.,
May 12, 1936.

Walter F. Donaldson, M.D., *Secretary*,
The Medical Society of the State of Pennsylvania.

The field staff of the National Health Survey, carefully trained in gathering detailed, accurate information, has completed the extensive canvass of chronic and disabling illness conducted by the United States Public Health Service in 19 states.

When the study was initiated last fall, the program was discussed in the Oct. 5 issue of the *Journal of the A. M. A.* As announced at the time, there was special realization of the great value that would accrue to this scientific survey if supplementary facts could be obtained from physicians in cases of medically attended illnesses. Accordingly, when medical attendance was reported, permission to secure additional data from the doctor was requested of the family by the field worker. Assured that the information would be regarded as confidential and would be used for purposes of statistical compilation only, families were co-operative in granting the privilege of confirming diagnoses.

Appropriate forms are now being received by the attending physicians named by informants, and the Health Survey is asking the co-operation of members of the medical profession in this very important phase of the study. It will be appreciated if you will announce the confirmation plan to your society, urging the desirability of having the forms returned as promptly as possible.

For each form filled and returned the physician will receive a fee of 25c, a small compensation for the service he will render in executing the blank. By supplying the information requested he will contribute invaluable data to this study and assure the scientific accuracy of the results.

T. R. THOMPSON, M.D.,
Acting Surgeon General, U. S. P. H. S.

SCIENTIFIC EXHIBITS TO BE PRACTICAL

We tabulated the first 20 scientific exhibits for the State Society meeting in October the other day, and it makes an interesting array, covering the various fields and endeavors in medicine and surgery. As previously stated, they are primarily practical in character and we believe that they will serve as instruction and guidance in the newer phases of medical endeavor.

In one booth you will find the exact technic and the proper method of evaluation of a new liver function test. Demonstrators at regular intervals will acquaint you with the procedure so that you can later apply it with your own office laboratory facilities.

Another exhibit will show you precise technic in that most valuable procedure of vein obliteration by the use of sclerosing solutions.

One exhibitor will acquaint you with the various anatomic planes in the hand and show clearly the dangers which are involved in the lack of appreciation of this surgical hazard.

The folds of the gastric mucosa will be visualized, the technic of this valuable procedure explained, and the conditions in which it may give you help in diagnosis will be considered.

Material on the latest venereal disease, most recently called "lymphopathia venereum," will be on exhibit, coming from a famous clinic where original work has been done on this subject. All the varied phases of this condition will be illustrated.

Be sure that you avail yourself of this graduate study and that you reserve enough time for these various demonstrations, of which the above-mentioned are but a few.

Make the Scientific Exhibit hall at Pittsburgh your meeting place.

LESTER HOLLANDER, M.D., *Chairman*,
Scientific Exhibit Committee,
631 Jenkins Building,
Pittsburgh, Pa.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to May 12:

ALLEGHENY: *New Members*—William C. Barnett, 7431 Washington St., Swissvale; W. K. Fisher, 10 California Ave., Avalon; Bertram J. Miles, Wallace Bldg., Swissvale; Lorraine E. Ramsey, 206 E. Main St., Carnegie; Joseph E. Harenski, 3053 Brereton Ave., J. C. MacLean, Clark Bldg., Joseph Palkowitz, 4801 Second Ave., Lytle J. Powell, Magee Hospital, Irving L. Stutz, 1745 Fifth Ave., Pittsburgh. *Resignations*—Joseph M. Reed, St. Petersburg, Fla.; William E. Gardner, Riverside, Calif.; Ernest G. Kuhlman, Wellsville, O. *Deaths*—Orlando L. Cook, Pittsburgh

(Univ. Louisville '11), May 5, aged 56; Frank L. Todd, Pittsburgh (Univ. Pgh. '91), Apr. 17, aged 75; John R. Walters, Sewickley (Univ. Pgh. '97), Apr. 24; Ralph J. Raybeck, Pittsburgh (Univ. Cinn. '19), Apr. 27, aged 42.

BEAVER: *New Member*—Ralph E. Fennell, Ambridge. *Reinstated Member*—Louis Weiss, Ambridge.

BLAIR: *New Member*—Russell H. Barnes, 1251 Logan Ave., Tyrone. *Transfer*—John McL. Adams, Tyrone (formerly of Buckingham) from Bucks County Society.

BRADFORD: *New Member*—Walter H. Caulfield, Towanda. *Reinstated Member*—Daniel L. Bevan, Sayre.

CLEARFIELD: *Death*—James Linn Henderson, Osceola Mills (Med. Coll. of Ohio '82), Apr. 20, aged 83.

DAUPHIN: *New Members*—William Lee Clark, 1927 Market St.; Lenore R. O'Brien, State Hospital, Harrisburg. *Death*—H. Hershey Farnsler, Harrisburg (Med. Chi. Coll. '04), Mar. 14, aged 58.

DELAWARE: *New Members*—Paul M. James, 124 E. Eagle Road, Upper Darby; Jacob S. Lehman, 164 W. Baltimore Ave., Lansdowne. *Death*—Elizabeth W. Howell, Chester (Woman's Med. Coll. '96), Apr. 24.

ELK: *New Member*—Charles N. Silman, St. Marys.

FAYETTE: *Death*—Robert H. Jeffrey, Uniontown (Jeff. Med. Coll. '12), Apr. 23, aged 48.

FRANKLIN: *New Members*—Alfred W. Brunacci, CCC Camp S 107, Scotland; Thomas F. O'Leary, South Mountain.

HUNTINGDON: *New Member*—Robert Steele, Huntingdon. *Removal*—W. F. J. Vogel from Huntingdon to Riddlesburg (Bedford Co.).

LANCASTER: *New Member*—Corinne T. Dryer, 229 E. Frederick St., Lancaster.

LAWRENCE: *Resignation*—Theodore R. Shrop, Akron, Ohio.

LEHIGH: *New Member*—David B. Alexander, 1140 Walnut St., Allentown.

LUZERNE: *New Members*—Joseph V. Fescina, Markle Bank Bldg., Otto J. Libener, 28 Seager Bldg., Hazleton; Harold B. Fear, 612 Main St., Freeland; Lewis T. McAloose, 24 E. Main St., McAdoo; Edward Wm. Custer, White Haven.

LYCOMING: *Transfer*—Alexander McG. Duff, Jr., Williamsport, from Fayette County Society.

McKEAN: *Transfer*—John Henry Smith, Duke Center, from Clearfield County Society. *Resignation*—Hilding A. Nelson, Jamestown, N. Y. (formerly of Mt. Jewett).

NORTHAMPTON: *Transfer*—Thomas H. A. Stites, Nazareth, from Cambria County Society. *Death*—Jacob D. Updegrove, Philipsburg, N. J. (Univ. Pa. '90), Mar. 22, aged 74.

NORTHUMBERLAND: *Removal*—C. A. Marsh, from Selinsgrove to 5225 N. Capitol Ave., Indianapolis, Indiana.

PHILADELPHIA: *New Members*—William Edward Chamberlain, 3401 N. Broad St., Wilbur P. Rickert, Philadelphia Hospital for Mental Diseases, Byberry, Howard C. Leopold, 4623 York Road, Perk Lee Davis, 1737 Chestnut St., Philadelphia. *Reinstated Member*—Thaddeus L. Montgomery, 1930 Chestnut St., Philadelphia. *Deaths*—C. Henry Lefcoe, Philadelphia (Jeff. Med. Coll. '97), Apr. 4, aged 60; Henry S. Wieder, Philadelphia (Univ. Pa. '02), Apr. 22, aged 55; William T. Van Pelt, Philadelphia (Univ. Pa. '85), Apr. 20, aged 72; John Jos. Stanton, Bala Cynwyd (Jeff. Med. Coll. '03), Apr. 15, aged 56.

POTTER: *Removal*—Carroll W. Kjelgaard, from Galetton to 600 S. Liberty St., Endicott, N. Y.

SCHUYLKILL: *Removal*—Henry C. Bowman, from Gilberton to 100 E. Main St., Schuylkill Haven; Louis C. La Barre, from Shenandoah to State Hospital, Coaldale. *Resignation*—Oden A. Schaeffer, Coral Gables, Fla.

YORK: *Resignation*—William L. Bird, Greenville, Mich.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since April 10. Figures in first column indicate county society numbers; second column, State Society numbers:

Apr. 11	Dauphin	211-213	6790-6792	\$22.50
13	McKean	46-47	6793-6794	15.00
	Huntingdon	31	6795	7.50
	Indiana	48	6796	7.50
	Delaware	169-174	6797-6802	45.00
	Philadelphia	1196-1964	6803-7571	5767.50
	Lackawanna	256-260	7572-7576	37.50
15	Montgomery	193	7577	7.50
	Erie	158-160	7578-7580	22.50
	Elk	17-20	7581-7584	30.00
16	Lycoming	112-114	7585-7587	22.50
	Lawrence	65-69	7588-7592	37.50
18	Blair	87-95	7593-7601	67.50
20	Schuylkill	156	7602	7.50
	Berks	161-162	7603-7604	15.00
	Lehigh	98-145	7605-7652	360.00
21	Elk	15	7653	7.50
	Luzerne	308-316	7654-7662	67.50
23	Bucks	76-77	7663-7664	15.00
24	Somerset	40	7665	7.50
	Bradford	31-39	7666-7674	67.50
25	Berks	163	7675	7.50
27	Chester	101-103	7676-7678	22.50
28	Huntingdon	32	7679	7.50
	Perry	12	7680	7.50
29	Franklin	62-64	7681-7683	22.50
30	Lancaster	165-170	7684-7689	45.00
30	Allegheny	18, 19, 1171-1274,		
		1276-1281	7690-7801	840.00
May 1	Luzerne	317	7802	7.50
2	Blair	96	7803	7.50
	Venango	46	7804	7.50
5	Lehigh	146-148	7805-7807	22.50
6	Beaver	92	7808	7.50
	Philadelphia	1965-2021	7809-7865	427.50
7	Lawrence	70	7866	7.50
	Westmoreland	154-160	7867-7873	52.50
	Allegheny	1282-1284	7874-7876	22.50
8	Beaver	93	7877	7.50
9	Luzerne	214	7878	7.50
12	Blair	97	7879	7.50
	Schuylkill	158-159	7880-7881	15.00
	Chester	104-105	7882-7883	15.00
	Cambria	145-154	7884-7893	75.00
	Erie	161-162	7894-7895	15.00

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contributions to the fund:

Woman's Auxiliary, Lycoming County Medical Society	\$150.00
Woman's Auxiliary, Philadelphia County Medical Society	100.00
Woman's Auxiliary, Bucks County Medical Society	10.00
John B. Carrell, Hatboro (Bucks Co.)	7.00

Total contributions since 1935 report \$1068.50

COMMITTEE ON SCIENTIFIC WORK

FREDERICK B. UTLEY, M.D., *Chairman*,
Pittsburgh

PROGRAM OF THE SECTION ON EYE, EAR, NOSE, AND THROAT DISEASES

The program of the Eye, Ear, Nose, and Throat Section for the coming State Society meeting at Pittsburgh will be varied and interesting. The addresses of the guest speakers, Henry P. Wagener, of the Mayo Clinic, and Albert Carl Furstenberg, of the University of Michigan, are certain to prove of sufficient interest to stimulate attendance at these sessions.

There will be papers by the members on exophthalmos, localization of ocular foreign bodies, blindness in Pennsylvania, chemical conjunctivitis, foreign bodies in the larynx and trachea, carcinoma of the larynx, the relation of sinusitis to bronchitis, allergic rhinitis, rhinologic and otologic meningitis, brain abscess, retropharyngeal abscess, and the correction of displaced quadrangular cartilage.

The officers of the section have endeavored to have subjects of interest presented by representative men, and to have the papers limited in number and length so as to allow ample time for adequate discussion without unnecessarily prolonging the sessions. An innovation will be a midsession recess for the demonstration of several eye, ear, nose, and throat subjects in the Scientific Exhibit.

County Society Reports

ALLEGHENY

Mar. 17, 1936

The regular meeting was held in the Hotel Schenley. Owing to the severe storm of the evening and the onset of the flood which was just beginning, the attendance at the meeting was relatively low.

The scientific exhibits were displayed in the lobby and were composed of presentations by the Children's Hospital of Pittsburgh and the Mayview Hospital under the Department of Welfare of the City of Pittsburgh. Both exhibits were well presented and very favorably received.

"The Clinical Value of Gastric Analysis" was presented by Chauncey L. Palmer and was comprised mainly of statistical study, amply demonstrated by the projection of charts, using a new apparatus, the bal-opticon, which uses the actual charts, thus eliminating preparation of glass slides.

"The Clinical Importance of Visualizing the Mucosal Pattern of the Stomach and Duodenum" was presented by Morris A. Hershenson, whose remarks may be summarized as follows:

The roentgen-ray examination is the most important laboratory procedure in studying organic disease of the

stomach. The purpose of this paper is to emphasize the clinical importance of examining the mucosal topography of the stomach and the duodenal cap, which is but one phase of gastro-intestinal roentgenology. The typical gastric roentgenogram is a silhouette of the barium-filled stomach. It shows the morphologic characteristics located along the margins. In contrast with this is the much more informative roentgenogram which shows the mucosal relief throughout all of this viscus.

The mucosal folds of the normal stomach present a rather constant pattern. At the cardiac end, their direction is quite irregular. Along the greater curvature, this irregularity is less marked, while along the lesser curvature and extending towards the pylorus, the rugae run in parallel lines in the same direction as the long axis of the stomach. When inflammation of the mucosa occurs, these folds become thickened and edematous. They stand out as prominent cords. At other times, the reaction to chronic inflammation may result in atrophy of these mucosal folds.

Of particular importance is the disappearance of the rugae in cases of malignant infiltration of the mucosa and the submucosa of the stomach. In an illustrative case, this finding led to the diagnosis of carcinoma even before a filling defect of the lumen of the stomach had appeared.

The niche of gastric ulcer can be demonstrated by such "mucosal pattern" roentgenograms even when the ulcer is not along the margin of the stomach. This "fleck" of barium in the ulcer crater is the pathognomonic sign of active ulcer. Its persistence means that the ulcer has not healed, even though the clinical symptoms may have abated.

The normal mucosal folds of the duodenum run transverse to the long axis of the bowel. The duodenal cap is an exception to this. Its mucosal pattern presents a transition between the longitudinal folds of the stomach and the transverse ones of the intestine. It simulates the former more than it does the latter. Thus the duodenal cap may be defined as that portion lying between the pyloric ring and the first group of transverse rugae, representing the valvulae conniventes.

The most common cause of filling defect of the cap is duodenal ulcer, but the cap may be deformed by scar constrictures subsequent to the healing of an ulcer. It may remain permanently so deformed. Periduodenal adhesions may similarly produce cap distortion. Hence the value of studying its mucosal pattern lies in determining whether such cap deformities are due to peptic ulcer or to scar constrictures or adhesions. Finding the ulcer niche affords the method of differentiation.

In discussion, Lawrence Wechsler stated that mucosal studies of the esophagus are of especial value in diagnosing varices long before clinical symptoms of cirrhosis of the liver appear. This technic is also of value in recognizing peptic ulcers on the posterior wall as well as early infiltrative growths. From experience in the past 2 years it has proven an important additional aid in confirming clinical gastro-intestinal diagnoses.

Catharine Macfarlane, professor of gynecology at the Woman's Medical College of Philadelphia, presented a paper on "Dysfunctional Uterine Bleeding." She said in part:

This condition is distributed fairly evenly from puberty to the menopause with the exception of a sharp rise in the fourth decade. About one-third of all cases occur between age 40 and 50; about one-half of the women are married and have borne children. Prevailing theories of Graafian follicle persistence and anterior pituitary insufficiency were discussed.

Apr. 21, 1936

The annual meeting was held in the Hotel Schenley at 2 p. m.

"A Clinical Laboratory Study of Heat Diseases," presented by Marlin W. Heilman, of Tarentum, was based on a study of 13 unusually severe cases out of a total of 184 observed in the industrial plants which the author attends. A group of 50 individuals, working under the same conditions but not showing evidence of heat disease, was used as a control. Laboratory examinations, including plasma chloride, blood sugar, concentration by hematocrit, and the estimation of the usual urinary constituents, were conducted upon the control group at the beginning and end of the usual 8-hour day and upon the afflicted individuals as the cases occurred.

The phenomena of heat diseases are dependent on loss of water and salt by perspiration and vary with the level of sodium chloride in the blood. This factor must be considered in the treatment, as the administration of water alone merely dilutes the blood and aggravates the condition, while the administration of isotonic salt solutions does not.

For general classification, the types of heat diseases are divided into 3 main groups: (1) Muscle cramps, affecting the muscles of the shoulder and calf particularly, usually accompanied by vomiting and having a prodromal period varying from hours to days; (2) heat exhaustion, characterized by faintness, vertigo, stupor, apathy, and relaxation of sphincters, but usually without cramps; (3) heat retention, often referred to as "sun-stroke," characterized by rise in temperature, headache, vertigo, tinnitus, and emotional instability, usually occurring in persons who perspire less than normal.

The control group showed a relatively low plasma chloride and hypoglycemia at the end of the day, varying with the degree of fatigue. The specific gravity of the blood averaged the same for both patients and controls.

In the treatment of the first group, it has been found that the use of gum drops and salt tablets serves as a prophylactic measure, while for the developed attack, intravenous salt solution is indicated. In the second group the administration of sugar and alkali tends to counteract the state of hypoglycemia and toxemia by which it is characterized. In the treatment of the third group, rest in bed, reduction of the body temperature not below 101° F., and the administration of fluids orally, subcutaneously, and intravenously is employed.

"Prostatic Resection" was to have been presented by Robert L. Anderson, but on account of illness was given by James J. Lee, his associate. A summary follows:

After four years' experience with prostatic transurethral resection, during which time they have performed 532 resections, they consider it the method of choice for the removal of bladder neck obstructions. It is a major operation and should never be attempted by anyone not thoroughly skilled in the technic of cystoscopy. It requires a thorough knowledge of the anatomy, physiology, and pathology of the vesical neck.

They group their cases according to Randall's classification. Rigid preoperative preparation of these patients is essential. This includes a thorough physical examination, complete blood counts, blood chemistry determination, kidney function studies, and laboratory data if indicated. Catheter drainage is essential in all cases, particularly those presenting severe infections and large amounts of residual urine. Urinary anti-

septics are administered on admission and continued throughout convalescence.

Cystoscopic examination is made prior to operation to estimate the type and degree of obstruction, the presence of cystitis, calculi, bladder tumor, diverticuli, and the development of trabeculations. A low spinal anesthesia is used, consisting of 75 mg. of neocaine dissolved in 1.5 c.c. of spinal fluid. The anesthesia that results has been found adequate in all cases, and has not caused any undue relaxation of the bladder sphincters.

Their experience has been limited to the use of the Stern McCarthy resectoscope. The spark-gap type of electrical unit is preferred. All bleeding of importance is controlled at the time it occurs. All tissue which projects into the bladder and urethra is removed so that the floor of the prostatic urethra and the floor of the bladder are on the same level. As their experience with prostatic resection has increased, they have constantly modified their technic. More tissue is being removed. There is no hesitancy in removing obstructive tissue anterior to the verum montanum. They prefer to, and usually do, perform the operation in one stage. The retention catheter is withdrawn on the fifth postoperative day, which allows sufficient time to elapse for the edema resulting from cutting and coagulation to subside. Postoperative hospitalization averages 7 to 10 days.

Hemorrhage and infection are the most common complications following resection. Such complications as perforation of the bladder, rectovesical fistula, incontinence of urine, *etc.*, are due to lack of experience. Epididymitis has occurred postoperatively in less than one-half of 1 per cent of the cases.

Resection is a superior operation for the relief of bladder neck contractures, median bars, moderately enlarged middle lobes, small and moderately sized lateral lobes, small and moderately sized hypertrophied subcervical glands, small carcinoma, and in elderly patients, age 75 or more.

During the 4-year period prior to Mar. 1, 1936, 532 resections were performed. It was necessary to repeat the operation in 8 cases. Hemorrhage occurred in 6 cases. There were 2 complete failures. There were 12 deaths, or a mortality of 2.25 per cent; the majority of the deaths occurred during the first 2 years they were doing resections. As the surgeon becomes more experienced in the use of the resectoscope and in the selection of his patients, the results will be proportionately better and the mortality further decreased.

"Helpful Hints in the Diagnosis of Puzzling Types of Indigestion" was presented by Walter C. Alvarez, of the Mayo Clinic. Dr. Alvarez, in his introductory remarks, cited the increasing tendency to depend upon laboratory and roentgen-ray findings for diagnosis, calling attention to the fact that this increases laziness of thought. Moreover, it often results in the undue stressing of normal or slightly unusual findings with a resultant neurosis worse than the suffered disease.

The first glance at a patient may often reveal the type of personality, and growing experience develops the ability to size up the individual. While some physicians favor the diagnosis of neurosis only after a tedious process of exclusion, the author believes that this may often be done much earlier, particularly when the physician realizes that the condition found could not account for all the symptoms presented.

Following the idea of the subject of the paper, he called attention to the rhythmic pain of ulcer, the sudden onset of pain and "indigestion" in the aged individual, suggesting cancer, and the sudden excruciating

pain, occurring usually at night and requiring hypodermics for relief, so often found in gallbladder attacks. He also called attention to the various types of paresthesias, particularly in Jewish individuals, and to certain types of gastric pain following "emotional debauches." It is often well to have the patient describe a typical day during which the complaint occurred and to describe measures which afforded relief as well as the reaction to drugs. In considering the individual, it is well to note whether the sensitivity to pain is abnormally high, the reaction to the process of examination, as well as the attitude toward other physicians consulted. The exact location of the pain, its radiation, whether it awakens the individual at night, and its relation to constipation should be decided. The present complaint should be carefully analyzed and not accepted at face value; for example, "belching" may signify the aerophagia of a failing heart or an apoplexy attacking the vagus rather than a motor center. Whether the patient can sleep, or read with enjoyment, may often indicate a degree of brain fatigue. The author also believes that sympathetic and constructive help should be given individuals suffering from nervous exhaustion rather than ridiculing or belittling their complaints.

"Recent Observations on the Mechanism of Headache," presented by Temple Fay of Temple University, Philadelphia, detailed the result of 11 years of research in the study of headache and its associated phenomena of vomiting, stupor, and coma.

Citing in his introductory remarks that pain is the most common factor in bringing the patient to the physician, he pointed out that headache is the most common of human pains. While usually considered as residing in the head, it is highly important to realize that the origin of the exciting stimuli is commonly found elsewhere. First of all, the complaint must be analyzed as to whether it is a dull aching, throbbing pain referred to the interior of the head or eyes, the true "headache," or whether it is of a sharp, shooting, or burning character along the anatomic distribution of the nerve course, a true "neuralgia."

Considering briefly the physical properties of the head as factors of a mechanical nature, the head must be considered as an indistensible safety vault, the contents of which are 3 main components—the mass of nervous tissue comprising brain and nerve roots, the circulating blood, and the volume of cerebrospinal fluid. Furthermore, careful research has disclosed that sensory fibers responsible for the sensation of headache are found chiefly along the major blood vessels. Thus, alterations in the balance between the volume of blood within the brain mass or in the bulk of fluid around and within the cavities of the brain produces a relative hyperemia or ischemia with the resultant change in the tension upon the sensory networks clinging to the vessels. Painful stimuli thus produced are carried by way of the sensory vessels down into the thoracic cavity where they enter the posterior roots of spinal nerves, particularly the first and second dorsal, cross over to the opposite anterior column and are carried upward to arouse in the thalamus the sensation of pain.

The logical treatment, the type of headache having been properly diagnosed as hyperemic or ischemic, is to counteract the unfavorable hydrodynamic force. Thus, hydration for the former and dehydration for the latter should be carried to the point, and no further, of re-establishing the proper balance between blood and fluid pressures, so that the brain mass will occupy its normal

proportion of available space without distortion of its vessels and their attached pain fibers.

Following the dinner at 6:30 o'clock, the guest speakers again gave short addresses. Dr. Fay presented the subject "Why Do We Laugh?" and Dr. Alvarez "How to Fit a Diet to a Dyspeptic." This meeting also being the occasion of the annual election of officers, the society chose for its main positions the following individuals: President, Sidney A. Chalfant; president-elect, William H. Guy; vice-president, Earl V. McCormick; secretary, George R. Harris; treasurer, Ernest W. Willetts.

HAROLD P. HOOK, *Reporter.*

BEAVER

Apr. 9, 1936

The following officers were elected: President, Thomas W. McCreary; vice-presidents, Ruth W. Wilson and J. Willard Smith; secretary-treasurer, Boyd B. Snodgrass; censors, Albert N. Mellott, Horace D. Washburn, and Milton L. McCandless; district censor, Harry B. Mead; delegates to state convention, Fred B. Wilson and John C. Stevenson; alternates, Philip F. Martolf and Francis H. McCaskey.

The meeting was held at the Rochester General Hospital, Rochester, Thomas W. McCreary presiding. About 55 members were present.

Ruth W. Wilson, of Beaver, gave an address on "Allergy." A summary of the paper follows.

The ramifications of this hereditary peculiarity with its many symptoms and apparently unrelated conditions are so universal that only one manifestation of it should be approached at a time. Most allergics who come for diagnosis have already been assured that they have no serious organic pathology, or that it was only asthma, or that more rest and some drug would probably help the migraine.

No satisfactory explanation has yet been made to account for the fact that one man's meat may be another man's poison. The theory of Vaughn—that the cells of the body have taken up the unicellular ability to split protein which is only done partially, and that this incomplete division produces a toxic amino-acid which causes vascular spasm, cerebral in migraine, bronchial in asthma, nasal in vasomotor rhinitis (perennial or seasonal), dermal in hives and dermatitis—is probably the most satisfactory explanation. This is sufficient to satisfy any curiosity as to cause so long as we have something to offer in the way of relief.

Certainly no disease is as definitely hereditary, and in a family where a good family history can be obtained it seems hardly worth while considering allergy if a definite history of migraine, hives, hay fever, dermatitis, or asthma cannot be obtained for several ancestors. The second help is a marked eosinophilia in the blood or nasal secretion of all but the migraine and gastro-intestinal patients. Many cases of chronic bronchitis with minimal fever and moist lungs will present a marked eosinophilia and be found to have definite allergic bronchitis long before it develops into definite bronchial asthma. The history, blood, nasal secretions, and a careful physical examination are sufficient to make a diagnosis of allergy.

The next big task is to find the allergen or allergens.

The disrepute in which skin testing has been held is largely due to an insufficient number being given, or to incomplete testing or scratch testing alone. The patient then thinks that the ground has been covered when it has scarcely been touched.

The scratch test has been extremely satisfactory for pollens. By plucking all garden weeds and sending them to Dr. John Stewart, of Geneva, to identify, and by having Mr. Ross Gridley review the trees and grasses common to our neighborhood in addition to the summary furnished by the company which supplies our material, we have made up a list of 64 pollens to which we test every hay fever or rose fever patient who presents himself.

If symptoms occur in March and April, it is probably trees; if in May and June, it is grasses; if from August fifteenth to frost, it is weeds or any combination of the 2; but most are not any single type. Only wind-borne pollens need be considered unless the patient is a gardener or farmer. Nearly all are sensitive to some in each group—not sufficiently to cause symptoms alone—but if they are not included in the desensitization, unsatisfactory results are obtained.

Of 6 cases we now have under observation, one uncomplicated grass and 5 mixed-type cases, 5 had almost perfect relief last year. The remaining one was a tuberculous patient who went to Ohio. His inoculations were not given by us, and he probably came in contact with some weeds to which he had not been tested. We are now carrying these 5 through this year with perennial treatment and hope to desensitize them completely by one inoculation a month over a period of about 3 or 4 years. When to stop will be determined by negative skin tests repeated about the third year.

The foods and epidermals are not so simple, and most careful history-taking is necessary to select the proper things to use for testing.

We found the scratch method with the materials which we used practically useless. So few positives were obtained that intradermal tests had to be done. These tests should be done with sufficiently diluted material, in small quantity, and, if the patient is extremely sensitive, too many should not be done at one time. This method is necessary for most complete results. We have selected for testing the list of foods considered absolutely essential by Feinberg, of Chicago, and Vaughn, of Virginia.

We find that, with some additions of our own, the list reaches 200, including 30 epidermals.

A patient with migraine of 12 years' standing with never less than one disabling attack a week was tested to about 180 epidermals and foods. White potato and egg yolk were found positive. She went home pleased, went one week without headache, then had a beauty. She brought back a food diary of all she had eaten. In this, celery appeared. When tested to this, she was found positive. The elimination of celery gave her relief for 2 more weeks, then another return occurred. Her food list gave us no help at first. When I inquired what salad dressing she used, she did not know. We thought it might be cottonseed and so tested her to this food. The reaction was 2+. This was 3 months ago. Any headaches she has had since then have been traced to Crisco in pie crust, Wesson oil in salad dressing, or some cottonseed-oil butter substitute. She has now learned to avoid these and is extremely comfortable.

Aside from diagnosis and treatment aimed to relieve allergic symptoms, there is still another phase of this subject which is important. We have all recognized the danger of allergic reactions to antitoxins made from horse serum, but there is still another consideration, namely, the sensitization which occurs to the nitrogen content of commonly used vaccines of all types. Many latent lung lesions have been thought to be activated by vaccines requiring repeated use, in which the patient

becomes sensitized by the first dose and occasionally has an acute allergic explosion to a later dose. This possibly should be considered before using any vaccine especially those which are nonspecific and aimed at prevention, and particularly in those families where definite family histories can be obtained.

Allergy must be diagnosed on:

1. History and careful physical examination with endless dates, places of occurrence, and time element questions, as well as skin testing. This testing must be intradermal in the case of food and dusts and cover all the common exposures.

2. Treatment must be based on individual skin reaction, 1+ to 4+, of each pollen to which the individual is commonly exposed. Desensitization is of little value if it is not quantitatively and qualitatively individualized.

3. Care must be used in testing and extreme care in treating with such individualized antigens because of danger of anaphylactic shock. (One case which we had was almost fatal.) Adrenalin and a tourniquet must always be on hand. Never let a patient leave for one-half hour after each injection.

4. Endless patience is necessary. If all causes are not eliminated by 1 or 2 trials, the case must not be considered hopeless. With thousands of proteins, someone can find the offending one.

5. Sixty-four pollens and 200 foods and epidermals have been used. These are only the bare necessities, for many patients will be found negative to all this group.

6. Intrinsic factors such as hormones, digestive disturbance with retained proteins in the gastro-intestinal tract, infections from chronic sinuses (and these should not be confused with vasomotor rhinitis and allergic polypi), and particularly the allergy to bacterial proteins in old bronchiectatic pockets.

These all help to account for cases which we have been unable to help by trying to eliminate extrinsic factors. These need testing to autogenously grown organisms, which is beyond our field.

In discussion, Donald B. Knapp brought out by case histories the influence of infection making evident latent allergic manifestations.

DONALD W. GRESSLEY, *Reporter.*

BLAIR

Apr. 28, 1936

The regular monthly meeting was held at 9 p.m. in the lecture room of the Jaffa Mosque in Altoona; Harold F. Moffitt, president, presided. Collier F. Martin, Philadelphia, head of the Department of Proctology of the Graduate School of Medicine, University of Pennsylvania, gave an address on "Proctology for the General Practitioner and Lymphopathia Venereum." Dr. Martin stated that he desired to define the limits between proctology as a specialty and proctology for the general practitioner. The function of the specialist is to help the general physician out of tight spots and that in this regard the best interests of patients always should be kept foremost. He expressed the opinion that almost a year of graduate study is necessary to diagnose rectal and anal conditions correctly, and many more years of clinical experience are required to treat these conditions properly. For this reason the average intern knows very little about this type of work and his diagnoses are often of no value. Statistics based on hospital records are for the most part valueless.

The lecture was illustrated with a series of lantern

slides. The first of these concerned the anatomy and embryology of the rectum and anus. Occasionally a child is born with an imperforate anus and in most cases this can be remedied surgically though sometimes the cases are hopeless. The anorectal line is the point at which the anal membrane disappears. Any damage to the tissue above the anorectal or pectinate line will not cause pain but instead a sensation of distention; and damage below this line will cause pain varying from mild to severe. There are several spaces in the areola of fat tissue around the anus and rectum, and these are important as the sites of abscesses. There are the ischiorectal spaces on either side of the rectum and a postanal space where the two communicate. These are below the levator ani muscle while above that muscle there are the superior pelvirectal spaces which also are the sites of abscess formation.

Hemorrhoids or piles are varicosities of the hemorrhoidal veins. The location is not chance but anatomic. There are 2 types, internal and external. Internal hemorrhoids are rectal structures, that is they develop above the white line or anorectal line. They occur in 3 positions, anterior, and right and left lateral. They are covered with mucous membrane and for that reason ulceration does not produce pain. The symptoms of internal hemorrhoids are bleeding at the time of defecation, prolapse and pain if they become strangulated. The treatment varies with the stage of the disease—certain types may be reduced and palliative measures used, others may be injected with a sclerosing solution, while far-advanced types are only relieved by operative removal.

External hemorrhoids are dilatations of the external hemorrhoidal veins, that is external to the anorectal line. They are covered with skin or anal membrane. Pain is produced by distention and not by inflammation. Any thrombi may be hidden by edema but may easily be detected by digital examination. They should never be manipulated with the thought of reducing them. The treatment depends on the individual peculiarities of the physician. Many types will get well spontaneously and leave skin tags which interfere with proper anal hygiene. Others will require incision with removal of the thrombi. Many types are amenable to operative removal.

Cryptitis or anal ulcer may be caused by trauma such as the passage of rough feces. They usually occur posteriorly. In the relaxed position they appear as fissures but when the anus is dilated they appear as ulcers. On the skin external to the ulcer there is usually scar tissue which is known as the sentinel pile. The painful ulcer excites muscle spasm. Both the sphincter ani and the levator ani participate and the resultant pain is cutting or burning. This is usually noted at or following defecation. Slight bleeding may also occur. Palliative treatment consists in heat, mineral oil internally, and topical application of cocaine. Curative treatment consists in the excision of the ulcer and if the sphincter is tight, section of it. This last procedure puts the muscle at rest until the ulcer has an opportunity to heal.

Abscesses result from lymphatic drainage, and from diseased rectal and anal conditions. There are 3 types—ischioirectal, submucous, and superior pelvirectal. Diagnosis is usually best made by digital examination. The treatment is early adequate incision and the post-operative application of warm compresses. Incision should always be made through the skin and never through the bowel wall as some operators do in treating the superior pelvirectal type. In case this last mistake is made there may never be any healing.

Fistulae are pyogenic tracts connecting 2 mucous or epithelial surfaces. They are always complete. There is considerable difficulty in determining the location of the internal opening. It is wrong to try probing to find this as there may result extensive spread of infection with a prolonged convalescence. The fistula is named for its internal opening, e. g. fistula-in-ano, rectal fistula, vaginal fistula, etc. Fistula-in-ano is the most common. The cause of fistula-in-ano is found in some injury to the anal mucous membrane with direct infection or by lymphatic drainage. Many of them follow improper treatment of ischiorectal abscesses. Others are of unknown origin. Treatment consists in obliterating the fistulous tract by surgical means.

Lymphopathia venereum is a condition not described in the older texts but which is rapidly becoming prevalent especially in the larger centers of population. The transmission is usually by sexual contact. Its cause is at present unknown but its effects are terrible. It produces large irregular swellings of the male and female genitalia with complete destruction of normal parts. This often leads to marked obstruction of the normal genitourinary and rectal openings requiring surgery for the continuation of functions. Scarring is very great and progress is quite rapid. It may affect other portions of the body as well. Negroes seem to be particularly susceptible. It is said that Ethiopians are afflicted with a large percentage of syphilis but it is very probable that instead this condition under discussion is the real ailment. Treatment is only empirical and palliative since nothing of therapeutic value has been found.

Pruritus ani is relatively common and is most difficult to treat. The cause varies in different cases but in a majority it is likely that some fungus infection is present. Ointments containing salicylic acid have been found helpful. Surgical correction of anal conditions may help. The most that can be hoped for is alleviation of the intense itching with some medication. This may cause a temporary remission for about 6 months or more.

MARLYN W. MILLER, *Reporter*.

CAMBRIA

Apr. 2, 1936

The regular monthly meeting was held in the Bachelors Club of the United States National Bank Building. Hugh H. Young, professor of urology, Johns Hopkins Medical School, Baltimore, Md., gave an address on "Congenital Abnormalities and Plastic Operations and Results." A dinner was given in the speaker's honor.

Among other interesting things presented in an effort to bring urologic problems up to date in the minds of the general practitioners, he mentioned congenital hydronephrosis and the remarkable recovery in seemingly hopeless cases by drainage. Mention was made of the increasing frequency of the discovery of lymphomatosis of the kidney in its different stages and the ultimate destruction caused by it. The typical horse-shoe kidney and the possibility of removal of the isthmus and nephropexy were discussed. Early removal and thorough surgical intervention was encouraged in regard to tuberculous processes occurring in the kidneys.

Considerable stress was laid on bladder growths and the great advancements in their therapy by the use of radium and high frequency currents. In speaking of the prostate and its treatment, he discredited the idea of the universal removal by the transurethral route, explaining that it was useful only in select cases. After description of the prostatic pathology and anatomy,

considerable time was given to the directions for preparation of prostatic operative procedures; especially, the importance of catheterization, frequent estimation of the blood urea and semi-hourly phenolsulphonephthalein test for kidney function.

C. REGINALD DAVIS, *Reporter*.

CHESTER

Apr. 21, 1936

The regular meeting was held at the Pennsylvania State Hospital, at Pennhurst. The physicians were the guests of the Pennhurst Institution and were served luncheon prior to the meeting.

Dr. Howard Davis, a member of the Board of Trustees of the hospital, gave an address of welcome.

At the business meeting a letter was read from the Public Health Nurses Association of Chester County, inviting the members of the Public Health Commission of the society and also the chief of each infant and child welfare clinic to attend a meeting on May 12, at the Chester County Hospital. The president was instructed to appoint a committee to meet with the nurses for the purpose of discussing the whole question of clinics and clinic activities.

The executive committee's report provoked considerable discussion concerning that part of the report dealing with the conduct of clinics. The society some 3 years ago unanimously endorsed the principle that all patients attending clinics from the county be admitted on the card of a physician. As there was some difference of opinion concerning the wisdom of this provision, it was agreed that the committee discussing this subject with the Public Health Nurses Association first hold a meeting and decide on a definite policy concerning this question. It was felt that any committee discussing this subject with other groups should present a united view representing the majority wish of the society rather than enter into a free discussion of personal opinions concerning clinic activities.

A program of music, dancing, and singing by patients of the Institution was next presented.

The afternoon program was terminated with a presentation of the actual clinical cases of the hospital.

JOSEPH SCATTERGOOD, JR., *Reporter*.

DAUPHIN

May 5, 1936

The regular meeting was held at the Academy of Medicine building; Park A. Deckard presided. The scientific portion of the meeting consisted of a symposium on focal infection.

"The Role of Focal Infection in the Causation of Disease" was presented by Frank F. D. Reckord, who said in part:

A focus of infection is any limited tissue of the body which harbors pathogenic bacteria and their toxic products. Although the focus may be anywhere in the body, 90 per cent of foci are in the head. Absorption of the septic contents of the focus may or may not take place, with or without systemic disease resulting.

The general recognition of the fact that symptoms of disease may be caused by some hidden and often symptomless lesion elsewhere in the body is a modern development, but there are numerous suggestions of this relationship in older medical chronicles. During the past quarter of a century, few subjects in medicine have attracted more attention than has the question of focal

infection. The problem that is still unsolved in relation to most distant conditions induced by foci of infection is the mechanism of production of the secondary condition: Is the secondary disease due to septicemia, toxic allergy, or direct damage by circulating toxins? Some metastatic invasions, such as gonorrheal arthritis and typhoid osteomyelitis, are undoubtedly effected by the transportation of living organisms in the blood stream, but most of the conditions are not so obviously explainable.

Treatment of foci of infection, when the foci are well established and systemic symptoms are present, consists of prompt and complete removal of the foci whenever this is possible. Many foci of infection may be prevented by preliminary or prophylactic treatment of susceptible individuals by carrying out well-established principles of medicine and surgery when the formation of such a focus is threatening or even at an early period after its actual inception.

"The Nose and Throat Aspects of Focal Infection" was read by J. Landis Zimmerman, who said in part:

For practical purposes, the ears as foci of infection can be ignored, and attention directed entirely to the tonsils and sinuses.

A list of the diseases which have been ascribed to infection of the tonsils reads like the index of a textbook on medicine. No less than 40 common disease conditions in the body have been attributed to infected tonsils. The tonsils should not be removed until a thorough study has failed to show any more likely cause of the secondary condition.

The tonsil should be removed entirely, in its capsule. If a stump is left behind, this tag may be the basis for lymphoid regeneration and a consequent continuation of the original symptoms. Tonsils should not be removed without proof of their diseased condition. This proof consists of the presence of one or more of the following: Recurrent acute attacks of tonsillitis; escape of liquid pus when pressure is applied; enlargement of anterior cervical glands; a deep pink or purplish tinge limited to the anterior pillars in marked contrast with the surrounding mucous membrane; and an abnormal preponderance of leukocytes in follicular plugs taken from tonsillar crypts.

Electrocoagulation as a general method of removing the tonsils is to be condemned, as the entire tonsil is seldom removed by this method and the remaining portion is sealed in by scar tissue, giving any infection present no chance to escape except by being absorbed.

There is a great divergence of opinion as to the importance of chronic sinusitis as a source of focal infection, but certainly the great number of cases of disease attributed to a focus, cured by adequate drainage of involved sinuses, should be sufficient to indicate that the sinuses are to be reckoned with in this category.

In a routine physical examination, the notation of points that might indicate a focus of infection is not sufficient. Make as definite a diagnosis as possible and definitely advise the patient what to do about the condition.

"Focal Infection From the Dentist's Standpoint" was presented by C. Stanley Holmes. He said in part:

It is the dentist's task to eliminate infection from the mouth. In this work, he is aided by the roentgen ray, transillumination, and vitality tests. This latter test is often more accurate for the purpose of detecting the presence of infection than is the roentgen ray, although roentgen ray is indispensable as a preliminary to extraction. Cystic infection at the root of a tooth is shown only by a roentgenogram, and cysts must be

detected and removed or some of the infection will be left in the mouth.

Gum tissue disease, from simple gingivitis to extensive periodontal aplasia (pyorrhea), may form a focus of infection.

Whether or not dental caries, feeding a constant stream of bacteria into the gastro-intestinal tract, can give symptoms referable to focal infection has not been definitely determined.

A. HARVEY SIMMONS, *Reporter*,

ERIE

Mar. 10, 1936

The meeting was held at Hamot Hospital, with Clarence H. Lefever presiding. Members of the society, together with members of the Erie County Dental Society, formed one of the largest meetings this society has had to greet an out-of-town speaker.

Edward C. Rosenow, of the Mayo Clinic, gave an address on "Experimental and Clinical Studies on Focal Infections and Elective Localization." This address was of great interest to both physicians and dentists in that both branches of the healing art are much concerned with the effects of foci of infection.

The proper technic of obtaining cultures from foci of infection was stressed and carefully described. A laryngeal mirror, an ordinary pocket flash light, a tongue depressor, and a platinum loop are all that is necessary for obtaining cultures from suspected tonsils. By illuminating the throat with the light and placing the laryngeal mirror at the anterior pillar and instructing the patient to swallow, the tonsil is everted and the pressure thus exerted causes the plugs of pus and mucus to be expressed from the tonsillar crypts. The specimen is then obtained by means of the wire loop and inoculation of the culture media is carried out. A culture medium consisting of a 2 per cent dextrose-brain broth is used. Cultures of foci in infected teeth are made by inoculating dextrose-brain broth with the specimen obtained from the root canal or the apices of infected teeth.

After obtaining the culture it is placed in the incubator for from 12 to 24 hours before being injected into the blood stream of the test animal. The animal is kept under close observation and any abnormal signs are noted. Smears of pus obtained from the focus of infection as well as smears of the cultures are stained and the type of micro-organism is determined.

Chronic infections at the apices of pulpless teeth are capable of producing systemic disorders and when patients are ill with some systemic disorder nearly all pulpless teeth are found to be infected. When a patient does not recover from the clinical symptoms of a systemic disorder after the removal of the focus of infection which is thought to be its cause, the answer is that the focus of infection has not been found. Filling a root canal in a devitalized tooth does not always remove the focus of infection, for the root canal may have several channels at the apex of the tooth.

Lesions produced in the rabbit following the intravenous injection of cultures of streptococci seem to show a selective affinity for attacking certain tissues. The selective affinity of certain types of streptococci has been proven numerous times by obtaining cultures from foci of infection in a patient suffering from some systemic disorder, injecting some of the culture into the test animal and producing the same systemic symptoms as existed in the patient. In this manner gastric ulcers were produced in dogs following the intravenous injection of cultures of streptococci.

tion of cultures of streptococci obtained from the tonsil of a patient suffering with gastric ulcer.

A reel of motion pictures was shown illustrating several cases of nervous disorders such as chorea, torticollis, sneezing and hiccoughs produced in rabbits following the injection of cultures of streptococci obtained from foci of infection in the teeth and tonsils of patients afflicted with a similar condition. Slides of tissues of rabbits illustrating the presence of the streptococcal organism following the intravenous injection of cultures also were shown.

It has been proven that bacteria carry a negative electrical charge. With this characteristic in mind Dr. Rosenow and his associates have constructed an apparatus whereby they have been able to determine the cataphoretic time or the migration rate of various types of micro-organisms. They have found that various strains of streptococci have different migration rates. Thus they have shown that streptococci obtained from foci of infection in the teeth or tonsils of patients suffering with arthritis, myositis or like disorders have a migration rate of 3 seconds whereas in cases of encephalitis and other nervous disorders the streptococci have a migration rate of 4 seconds. Selective infective power and the migration rate of micro-organisms is somewhat comparable.

Apr. 7, 1936

The regular monthly meeting was held at Hamot Hospital with Clarence H. Lefever presiding.

William F. Rienhoff, of Johns Hopkins University Hospital, gave an address on the "Surgical Treatment of Diseases of the Lungs." This subject is comparatively new, especially in regard to the surgical removal of the lung for tumor of that organ. The address was illustrated with a series of lantern slides showing the various steps in the treatment of the disease and the response of the patient after the removal of the lung.

Previous to 1933 chest surgery consisted of resection of ribs, drainage of abscesses and empyemas. Since that year, with the improvement of technic, excellent results have been obtained in operations for the removal of a lung in case of tumors. The medical public is becoming "chest minded" and the general practitioner must think of the lung especially in relation to tumors, that these cases may be referred to the surgeon at a time when good results can be expected. Unexplained dyspnea may be due to a bronchogenic tumor. A tumor in a primary bronchus often gives rise to pain in the chest wall directly over the site of the tumor. Early tumors of the lung are not often seen on the roentgen film. The film in such cases shows an atelectasis to the side of the tumor with the mediastinal contents drawn over to the affected side. Hemoptysis used to be considered an almost certain sign of tuberculosis of the lung unless proven otherwise, but at present hemoptysis is thought to result from a lung tumor unless proven otherwise.

Dr. Rienhoff states that his first interest in surgery of the chest was in regard to cancer of the esophagus. While operating on these cases by way of the thoracic cavity oftentimes one lung had to be collapsed. Realizing that it was a comparatively easy procedure to collapse a lung the thought arose as to the removal of a collapsed lung. The opportunity came in 1933 to remove a lung in a case of carcinoma.

The technic of procedure: First collapse the lung by injecting air into the pleural cavity to see whether or not the tumor is operable; if operable, an incision is made just above or below the nipple cutting through

the pectoralis muscles. The intercostal muscles are divided and the ribs separated by means of a retractor. After the lung is exposed in this manner the mediastinal pleura is incised and the bronchus, the pulmonary artery, and pulmonary vein are ligated separately and carefully; these structures are cut and the lung removed; the incision in the mediastinal pleura is then closed, thus covering the stump and leaving it entirely in the mediastinum; the thoracic wall is closed. With this procedure, the anterior approach, the thoracic cage remains intact, the mediastinum and heart are little interfered with, and better results are obtained than formerly with other technics.

After removal of the lung for tumor there is a compensatory dilatation of the remaining lung sometimes to the extent of twice its normal size. In case of removal of the left lung the right lung undergoes a compensatory dilatation pushing the heart and mediastinum over to the left sometimes to the extent of filling the cavity formerly occupied by the left lung. In case of removal of the right lung, however, the mediastinum is not capable of shifting to the right and the compensatory dilatation of the left lung is not as marked. This compensatory dilatation of the remaining lung takes place very shortly after the removal of the affected lung so that the patient suffers only slight discomfort from embarrassment of respiration. After removal of the lung nature tends to obliterate the remaining dead space by filling it with plasma. This becomes organized and after a time small cavities appear. In case of removal of one lobe of a lung there is a compensatory dilatation of the remaining lobe. If a lower lobe is removed the upper lobe dilates sufficiently to occupy that space but in removal of the upper lobe the lower lobe seldom fills up the upper part of the chest.

Patients who have had one lung removed seem to get along without much discomfort.

The technic introduced by Graham, that of pneumocauterization, for the removal of tumor of the lung, has been discarded because of the shock and hemorrhage accompanying this procedure. Roentgen-ray therapy is of value in inoperable cases but causes cleavage around the pulmonary vessels which makes trouble in operable cases. Partial lobectomy for bronchiectasis in patients under age 30 gives good results.

DELMAR R. PALMER, *Reporter.*

FRANKLIN

Apr. 22, 1936

The meeting was held at the Waynesboro Hospital, and was well attended. Maurice C. Pincoffs, of Baltimore, professor of medicine, University of Maryland Medical School, gave an address on "The Treatment of Heart Diseases."

The treatment lies very largely in prevention. The secondary part, treatment itself, is just a matter of postponing the inevitable. Not many patients live more than 2 or 3 years after decompensation occurs. Consequently the major place of value of the physician lies in helping the patient to avoid heart disease wherever possible.

There are various age groups in this disease. There is a great difference between the management of heart disease in a child and its management in an elderly man.

Heart disease in childhood may be divided into 2 classes—congenital and acquired. We are not likely to have much to do with the congenital cases, since ordinarily they do not live very long. These are the

cyanotic cases, and they present a bad prognosis. Such patients may die quickly, others survive for a few years, but they rarely live to adult life.

This is not true with respect to those having murmurs but without cyanosis. Some of them have lesions that will allow of long life.

In general, the treatment is not directed to the murmurs but to the patient's heart. We must judge how well he withstands excitement and the strain of his work, and then limit his activities to a degree well within the capacity of his heart. The gauge of this will be to keep him free of symptoms of heart distress. One of the major effects to be guarded against is infection. Consider the case of a man, age 20, who appears to be getting along nicely but who has a known heart lesion existing since childhood. For a few months, he has not been so well. He has some dyspnea, sweats at night, and is losing weight. There are petechiae on the skin. Streptococci are found in the blood stream. He is dangerously ill. Such a patient always has the Sword of Damocles suspended over his head.

In a young group who have tonsils that are suspicious as etiologic factors in this condition, the question arises as to whether these tonsils should be removed. When?

It is a very common practice to remove such tonsils, but frequently the anticipated result is not attained. Many attempts have been made to prove the virtue of this step, but most of these large groups of statistics have not proved their case. These cases cannot be judged *en masse*, but each must be taken on its individual merits. There seems to be no definite rule to guide us. Where tonsils are definitely diseased, probably it is good practice to remove them. But even in the most carefully selected persons, we must expect to meet with frequent disappointments. If the case is desperate, the infection active, and the heart demands attention, we may be justified in employing surgery. Dr. Pincoffs remarked that often he had seen the temperature rise to unpleasant heights after a tonsillectomy. But he strongly advised against having tonsil surgery done in the presence of an actively infected tonsil. It is dangerous even though there may be but slight temperature rise. Wait till all symptoms have subsided. Even to this tentative rule there are exceptions, as when the patient does not tend to recover. The situation is precarious then. The patient may die; something seems to be demanded. These cases may seem to justify surgery even though the tonsils are definitely diseased.

When does the rheumatic heart become safe for treatment? When should such patients be allowed to get out of bed? When is this kind of heart lesion inactive?

Opinions vary greatly. Some physicians favor a system of treatment in which rest will be continued for months, even a year. It is the speaker's practice not to allow patients up for a month after all fever has disappeared. In forming an opinion as to the treatment of such cases, the sedimentation rate has considerable value. It should be taken every week or two. If this rate rises to 15 or 18 it is an acceptable indication that the progress of the disease is arrested. It will be safe then to give an anesthetic for surgery.

The treatment during convalescence from rheumatic heart disease is most important. If we insisted on months of rest, many would be saved who otherwise show progressive changes for the worse. Such patients are more likely to have recurrences in the autumn and spring.

What can we do about the group of patients who

are up and around and who have a valvular lesion? There are 2 groups of these patients. In the one are those in whom mitral stenosis occurs. They may live about 15 years. Finally, the heart is worn out and the patient dies. This kind of patient is perhaps best treated by ascertaining what he can do, what his heart will endure, without becoming breathless. They have a narrow margin of safety, to ascertain which will take care and study of what exercise may be allowed. The pulse rate should be carefully recorded. Keep them well within their physical bounds. A loud blowing murmur may make the sufferer nervous. It demands attention, and the patient may not want to rest. He may feel fairly vigorous and misunderstand the attending physician's worthy orders. Such patients demand an accurate judgment and much patience. Two cases may appear, superficially judged, to be the same, yet one will require restriction of activity, the other encouragement to exercise fittingly.

There is another point that is highly important—the size of the heart. That should be watched carefully for 6 months.

Recurrence of infection is another danger. If it were possible, much good might be accomplished by moving children with the so-called rheumatic hearts into semitropical climates. Such diseased hearts do not seem to occur, or are very rare, in warm climates. Hence it is reasonable to conclude that the warm climates may mitigate danger of reinfections. Such is the consensus of opinion. Children sent to Porto Rico improve.

Middle age may be said to be the period from 25 to 50. Rheumatic hearts are seen in this age period. The heart may wear out or the individual may die from various accidents. Also in this age group there may be heart disease that is only functional. The outstanding sign is palpitation. This awakens the patient at night. There may be some pain around the heart. He is short of breath when he tries to do anything or gets excited.

As to treatment of these cases, there does seem to be a method of approach, but they are the hardest kind of cases to control. The first thing to be done is to make the most thorough physical examination. You may listen to the heart, hear no murmur, and tell the patient there is nothing organically wrong. Most patients will not believe you. Get the size of the heart after suitable exercise, then have them lean to the left and you may hear a murmur. Search for infection. Use roentgen ray and the electrocardiograph. Always bear in mind that the symptoms are practically the same as occur in low-grade infections. The thyroid gland should be studied. The urine should be fully evaluated. Pyuria should be considered.

If a functional condition is thought the proper one to diagnose, the physician has a kind of certainty that allows him not to guess. Inform that patient that the nature of his symptoms does not indicate a fatal end. Kill the fear. The more apprehensive he becomes the less confidence he will have in your ability to treat his condition. You have to break that vicious circle or fail. You must believe this yourself. Truth must prevail; nothing else will convince your patient. Try to gain the fullest confidence and convince the patient that he is not in danger from his heart. The automobile may serve as an example for illustration. The engine may break down. It is sent to the shop and the valves are leaking. These can be repaired. The wiring system may get out of shape, yet it can be set aright. The heart is like that engine. The body has extra safety

devices far superior to any ear. Judgment must be used in repairing or uneven function results.

Put such patients on a régime of exercise, very carefully adjusted. They may walk or swim or take whatever exercise is well within their endurance.

The World War showed the value of exercise in such conditions. These were done in the form of drill. After 6 weeks of such exercise, marching with full pack showed those that were being benefited.

Catch these apprehensive patients at the inception of their fear, assure them that there is nothing organically wrong. Convince them and see that they follow a hygienic régime, and you will get good results.

Syphilis plays a part in aortic insufficiency. The apex will be found displaced to the left, widely. To get these patients before the aortic valve is invaded and the coronary orifices closed would be ideal. You cannot often do this. It is difficult but possible. If their appearance suggests tertiary syphilis it is a good rule to diagnose syphilitic aortitis. In the man who has no obvious lesion the commonest lesion is aortitis. If you can be sure of the diagnosis you can attack the problem with more certainty. There is no hypertension. The aortic second sound is booming. It is well to inspect the aortic arch through a fluoroscope. Do not forget that age makes common changes in the arch form.

In latent syphilis, treat the syphilis, but with this codicil: Go easy with the treatment. The Herxheimer reaction may occur, which may kill; edema may close the coronary opening. Be careful. Be cautious.

If the diagnosis is fairly clear, treatment may be started with bismuth iodide in very low dosage. After some weeks give one-tenth gram. After 6 weeks more, treatment of higher strengths may be used. Untreated cases of this kind rarely live 3 years.

Surgery has been employed for the alleviation of hypertension. Narrowed arterioles constrict the passage for the blood. The heart meets the situation by more work and the pressure rises. Cutting the splanchnic nerves prevents the vessels from contracting. This is a safety valve. The Peet operation and others have been tried, but the outlook, on the whole, is discouraging. It is dangerous and still in the experimental stage. It is only justified in desperate cases.

Basophilic adenomata of the pituitary gives hypertension; deep roentgen therapy may be of value. Sometimes the adrenal is at fault. One case is reported where the adrenal made as much as 200 c.c. of 1:1000 solution of adrenalin. Surgery was effective in curing this case for years. Blastoma of the ovary has been found to be a cause of high blood tension. In children, it is well to think of myosarcoma of the kidney.

Essential hypertension will perhaps in time be shown to be due to half a dozen different things.

In the 50-year age group edema and lactic acid dyspepsia are often seen. Seek the cause over the entire body. It will depend upon the nature of the hypertension. Sometimes this condition has been coming on for some time, and the patient becomes overactive, tense. He has a rapid heart beat. Suddenly the heart begins to fibrillate, beating 130 to 140 at the apex. You ask if he has ever before felt this heart flutter. He may give you valuable information. Or you may not find any edema. But the patient loses weight. Your examination may be disappointing. However, do not overlook the thyroid gland. Remember thyrotoxicosis may be the only explanation for fibrillation. And fortunately such a case gives the best result of any kind of heart disease. One test for a toxic goiter is the basal metabolic rate, and another is the use of Lugol's

solution. Use the solution for 2 or 3 weeks. If it is a thyroid heart it will make its appearance then. The rate lessens and may change from plus 30 to minus 60. Operation is now due. A good heart may be the result. FASSETT EDWARDS, *Reporter*.

LANCASTER

May 6, 1936

The regular meeting was held at the Medical Club rooms at 8:30 p.m. Vaughn C. Garner, University of Pennsylvania, presented the scientific address of the evening. He illustrated his presentation with lantern slides and said in part:

Though impetigo is a common disease, it is often misdiagnosed and frequently mistreated. Ammoniated mercury in low percentage is the best treatment in spite of the newer drugs which have been recommended, but will be ineffectual if not rubbed in after crusts have been removed. It is recommended that the ointment be rubbed in for 5 minutes at least. A low carbohydrate diet is helpful, and in occasional cases roentgen-ray treatment will shorten the course.

The ichthyotic palm or parchment palm should be indicative of a general tendency to ichthyosis which is frequently the background for a subsequent eczema. All patients with such palms should be warned against too frequent bathing and should use frequent oil inunctions and starch baths. Ichthyosis is usually manifested on the palms, soles, extensor surfaces, forehead, and the pretibial areas.

Acne rosacea, better called rosacea, has a vasomotor reflex basis. It involves the middle of the face, leaving the lateral borders free. It is mostly seen in middle age and usually in women. These patients almost invariably run a low gastric acidity and have foci of infection. The treatment consists in giving dilute hydrochloric acid by mouth and getting rid of all possible foci of infection. Relieving the psychogenic element as much as possible is also essential. The scalp should be examined and treated if it is the site of seborrhea dermatitis. A weak sulphur ointment, and occasional roentgen-ray treatments are helpful.

The psychogenic background of verucca plana is definitely recognized though not understood. The treatment depends upon the number of warts. If only a few exist, roentgen ray is useful. If too widespread, the intramuscular injection of a bismuth preparation weekly can be used.

Herpes zoster may follow the course of many peripheral nerves. It is usually associated with neuralgia, especially after the eruption fades. For this 10 c.c. of a 10 per cent solution of iodide of sodium every 3 days is helpful.

For the eruption on the trunk of tinea vesicular, sodium thiosulphate solution locally is helpful. This should be continued for weeks, and not stopped as soon as the eruption disappears. Fels Naptha soap used when bathing is often beneficial.

In alopecia areata, the treatment must depend upon stimulation. For this use pure phenol if the spot is not very large, and follow it with alcohol. Ultraviolet light is also used.

Dermatitis is really an example of a contact eczema. Pemphigus differs in appearance principally in the size of the lesions, the latter condition having gigantic bullae instead of smaller blebs and vesicles. Two drugs can produce lesions which mimic pemphigus—veronal and phenolphthalein. These drugs are also capable of

producing so-called fixed eruptions with discoloration, in susceptible persons.

Most of the real eczemas are of external origin. A careful history will frequently bring out the exciting cause. Too many physicians are guilty of saying, "Oh, you just have too much acid," and ordering citrocarbonate. A slide showing a case of nickel eczema was presented. This patient was studied by several physicians before the cause of the dermatitis was found. The patch test will prove the cause in these cases. Use a piece of the suspected agent, place it on the skin and cover with cellophane, then cover with a larger piece of adhesive tape, leaving it on for 24 hours or more. The offending substance will produce a redness or vesication.

In the eczemas, an allergic history is often obtained. In only about 5 per cent of cases is the skin allergic test of help in eliminating the cause, however.

Stasis dermatitis is usually seen in middle-aged men in the lower third of the leg. The patient frequently is using too much carbohydrate and alcohol in the diet, is bathing too frequently, and has poor circulation in the lower extremities. Patients more than age 50 cannot tolerate too frequent bathing with soap; they will almost surely suffer bath pruritus and other skin affections.

Neuroderma is definitely precipitated by mental stress. It is sometimes called nervous prostration of the skin.

The dermatophytids found on the hands or trunk are almost invariably secondary to a primary eruption on the feet. Both must be treated. Usually following nervous strain, high carbohydrate diet, and sweating, the eruption is spread. It is thought that the toxins or perhaps the organism itself gets into the blood stream and precipitates eruptions elsewhere. Always inspect the feet. The papulofollicular dermatophytid of the hands and trunk usually occurs in explosive-like eruptions. They must be differentiated from the group papulofollicular syphilid and the group papulofollicular tuberculid (the so-called lichen scrofulosus). The three look alike.

Psoriasis is now being treated with anthralin, made by Abbott. It is a derivative of chrysarobin but not so dangerous. Rarely use arsenic in the treatment of this disease or any other dermatologic condition. With prolonged use it predisposes to cancer, dermatitis, and keratosis. Rarely use roentgen ray in psoriasis. Lamp treatment is good in some cases, along with low protein diet, tar products, and autohematogenous injections. Old-fashioned ammoniated mercury in weak strength is also good. The arsenic keratoses on the hands may be differentiated from syphilis by the scars which always form from the latter when they heal. No arsenic keratoses on the mucous membranes have been reported.

Pityriasis rosea is usually initiated by a herald or mother spot. It occurs in the fall and winter months and the eruption follows an axial distribution, seldom below the knees and elbows. The lesions have fawn-colored centers and an erythematous halo. Around the center is a scale, very diagnostic of the disease. It is self-limiting, lasting 5 to 6 weeks. Use general lamp and 2 per cent sulphur and salicylic ointment. The papular type must be differentiated from syphilis. Look at the soles and palms, and if lesions are present there in all likelihood it is syphilitic.

Lichen planus shows flat, polygonal, violaceous eruptions which on healing produce atrophy. The cause is now found to be of microbic origin. Lichen planus on the tongue and mucous membranes was shown. Arsenic is here justified, and roentgen ray may be used locally,

also bismuth intramuscularly. Only one other disease produces so violaceous a hue, and that is a bromide rash.

Ring-like lesions are not all due to ringworm. Many examples were shown to prove this. Erythema multiforme is a toxic eruption showing a central bulla, and intermediate polychromatic zone, and a vesicular border. Ringworm of the scalp is not seen in people over age 15. The animal type of *Microsporon* is more amenable to treatment, so it is advantageous to study the bacteriology of the organism. Roentgen ray may be used to produce the depilation which is necessary. Dr. Garner advises against the use of thallium acetate to depilate children because of the danger of using so toxic a drug.

Circinate impetigo, circinate psoriasis, circinate erythema multiforme, circinate syphilis, circinate tuberculosis, circinate seborrhea dermatitis, annular lichen planus, and vitiligo were shown to demonstrate that many diseases may produce the ring-like appearance seen in ringworm. Slides of granuloma annulare and hyperkeratosis concentrica (which is a form of nevus) were shown also to demonstrate this.

A slide representing a case of tertiary syphilis of the nose was shown. The term "cat scratch" best describes the appearance, the area showing scars, and also crusts with ulcers beneath. These scars and crusts will not occur in acne rosacea, though the distribution suggests this diagnosis.

There is a tendency in syphilis for healing to occur on one side, while the lesion advances in another direction, the whole conformation being arciform.

The papulonecrotic tuberculid occurring on the fingers and ears is a clue to the diagnosis of tuberculosis elsewhere in the patient. They probably represent embolic showers in the skin. A case of primary inoculation on the arm with tuberculosis was shown. The lesion was circinate in form. It was removed with the regional lymph node, and no further tuberculous focus has so far been detected in the patient.

WILHELMINA S. SCOTT, *Reporter.*

LEHIGH

Apr. 14, 1936

The meeting was held at the Allentown Hospital; Charles Fox presided. The guest speaker was Ralph Pemberton, Philadelphia, professor of medicine, Graduate School of Medicine, University of Pennsylvania, who spoke on "The Present Status of Arthritis and the Treatment of It." He said in part:

A great need today in the United States in the field of arthritis is extension of sound information in an easily tangible way to the great mass of practitioners who first see the disease. What the general practitioner needs to know is not the subtleties which enter into controversial doctrines but the importance of a broad-gauged view which sees and seizes the problem as a whole, recognizes it as necessarily open to many influences, and proceeds to bring these to bear cautiously but as completely as possible. All the links in the chain between etiology and the end results of arthritis are not known.

Arthritis is certainly not a disease of joints alone although these are conspicuously involved. It is a systemic disease.

The modern concept of arthritis starts with knowledge of the organic pathology of the articular tissues which divides the syndrome into the 2 types, atrophic and hypertrophic. This knowledge of the purely

morphologic changes is important but, notwithstanding, it is of limited significance. There is no common agreement that the disease is primarily in these tissues and it is certainly not confined to them. Many persons belonging within the category of the rheumatoid syndrome go through life with little or no true arthritis. It is indeed possible thus to see arthritis so obliquely as to regard it as a localized anatomicopathologic curiosity and to miss appreciation of basic features that must precede this.

It is necessary in both types to accept the probability of undetermined factors. It is unnecessary, however, to make all of these factors radically different for the 2 groups. By the same token, much has been said and written regarding the different treatments necessary to the 2 types, atrophic and hypertrophic. We are not in a position to deny to either type the benefits from measures useful at times or frequently to the other type. This statement has particular relevance for the general practitioner in that it is doubtful whether he can be expected, for some time to come, to distinguish accurately between the 2 types; and, indeed, about 13 per cent of all cases offer great difficulties to any observer.

The arthritic, in all except the early stages perhaps, may be ill in many ways. The cold hands of the atrophic arthritic are almost among the clinical landmarks of medicine. There is less unanimity regarding disturbances of the gastro-intestinal tract but, in the opinion of the writer and of others, disturbances here constitute a significant feature, though of varying importance, in the full-blown syndrome. Whether changes in the systems of the body precede, parallel, or follow the disease is, in a therapeutic sense, relatively unimportant. It is at least certain that these changes do not always follow the disease alone.

The first recommendation to the general practitioner is to put his true arthritics to bed. Suffice it to say that the warmth of the covers alone will open many otherwise closed capillary channels. Assumption of the recumbent posture relieves the sympathetic nervous system of that activity which determines the active blood flow, throughout the body, necessary to maintenance of the erect posture. In recumbency, the posed organs of the severe arthritic are spared their customary drag and are started on the path of relaxation and unhandicapped function. Rest minimizes the trauma to joints. It is important at this point to caution against that unthinking prescription of rest which allows ankylosis to arise in atrophic cases. These subjects should put their involved joints through their given range of motion at least once daily.

These considerations possibly explain, in some part, the return to gainful employment of 60 per cent of patients admitted to the Government Hospitals of Sweden devoted to the care of arthritics.

With the institution of a better capillary and nervous equilibrium in the sick arthritic, attention can be given to the important and widely present factor of infection. Only at this stage, in the writer's practice, is anything more than analysis undertaken. There is here involved a wide equation between the reaction of infection towards tissues. The influence of one upon the other is a function of their respective potentials, both of which are variables. Many precipitating infections have been removed at the wrong time with the result that the arthritic as a whole was made worse. Incidentally the writer is convinced that, whereas on the one hand the removal of infection by no means constitutes the whole story, analysis for focal infection is very far from

being adequate in more than relatively few centers in this country. Indeed, in the opinion of the writer, the analysis for focal infection in arthritis is almost a specialty within a specialty. Gingivitis may be a greater menace than are abscessed teeth and the gallbladder is usually much better analyzed than is the prostate. But whether analysis and treatment be adequate or inadequate, the arthritic will respond better if the initial approach be as above outlined. So prepared is the soil of the arthritic and so delicate his equilibrium that a minimal infection will keep him unbalanced.

Focal infection should be removed in arthritis, except in early and mild arthritis, only after optimal "physiology" has been obtained in the arthritic sufferer, following intelligent rest in bed.

The whole problem of subacute infection must be regarded today in the light of those ill-defined factors which inhere in the availability and utilization of many kinds of foodstuffs, of which the vitamins are exemplars. In this relatively unmapped congeries are to be considered specific organ tissues, various replacement therapies, and such a balance of foodstuffs in general as will augment rather than handicap the operation of these factors. Nutrition in arthritis should not be understood as determined only by obesity or emaciation.

The chronic arthritic, in all except early, robust cases, should in general be given his full caloric requirement but rarely more when at rest. This should be so arranged as to give him ample protein in the form of meat, milk, *etc.* (and incidentally there is some evidence that the arthritic sometimes suffers from a low plasma protein); ample vitamins, in which the attempt should be made to administer some of them in somewhat concentrated form; an ample supply of green vegetables and fruits, not only for their vitamin but also for their carbohydrate content; and, finally, a reduction of the concentrated carbohydrate foodstuffs, such as cane sugar and the heavier flour products. It is well recognized that insufficient protein or excess of carbohydrate may render inadequate otherwise adequate quotas of at least 4 vitamins. Among arthritics the gastro-intestinal tract frequently shows ptosis, stasis, and hypochlorhydria which call, respectively, for attention.

Of the disturbances of physiology, that in the capillary beds is among the most prominent. This is to be seen in the cold hands and, perhaps, in the tender and eventually wasted muscles, of the atrophic arthritic especially. No drugs in the pharmacopeia will correct or even influence this condition. The field of physical therapy, meaning by this principally heat and massage, offers the only specific measure, sound in principle and clinically successful, available to this end. Granting that the metabolic errors in the muscles and other tissues of the arthritic are not fully understood, it is clinically established that heat and properly given massage will do more than will any other single measure to rectify some of the disturbances characterizing this aspect of the disease. These disturbances, furthermore, cannot be regarded as isolated aberrations. A philosophical perspective requires that they be seen in conjunction with function of the organism as a whole and clinical experience teaches that ministrations in this connection have systemic consequences far beyond the mere surface outcrops of the disease in the form of symptoms. Here is a philosophy which the general practitioner, by definition, may have difficulty in living up to but must finally understand.

The profession must learn the importance of physical therapy and how to prescribe it; to appreciate and

utilize the services of persons trained in this field; and to demand a vastly greater available quota of such persons than now exists.

He must bring to bear on his arthritic subjects the enormously reparative forces of physical therapy, meaning essentially heat and massage, in such a restrained and cautious manner as to undo in a mechanical way, to some extent at least, the circulatory, lymphatic, and metabolic errors which widely exist. Physical therapy should not be focused upon the sore joints. It should be directed chiefly at somewhat removed sites. Like other potent instruments physical therapy is capable of as much harm as good. No single verbal message, however, will cover this huge field.

The symptom which leads the arthritic to seek advice is usually pain. Only now is there growing appreciation of the fact that, for the most part, the relief of pain should depend upon modification and correction of the physiologic disturbances which give rise to pain. Perhaps in no other disease in medicine is this relationship so clearly to be seen. Anodyne drugs are greatly abused in this field. Adequate analysis of arthritics, and an adequate therapeutic approach to the disease, obviates the necessity of three-fourths of the pharmacology exhibited today towards arthritics.

The salicylates are of value to meet emergencies and should be reserved chiefly for this purpose. Sedation of the nervous system is often valuable at the outset of therapy. Applications of hot, saturated magnesium sulphate may be very comforting. In the long view, constructive tonic medication, such as very small doses of strychnia, arsenic, and liver extract, play a significant rôle. Their influence is exerted, however, only when the strain of living is removed, when the machinery of the human automobile is idling and when the gentle therapeutic stimulus given in one direction is not negated by overwhelming and improper demands in another.

The use of drugs does not constitute the way out from arthritis. Anodynes should be used chiefly or only at the outset, while those measures are being brought to bear which modify or correct the disturbed physiology productive of pain. Arthritics need a betterment of many phases of their physiology and not subjugation to further intoxication from the "coal tar" products. Opium is contraindicated in the treatment of arthritis and has not been administered for years in our clinic.

The writer is not hostile to vaccine therapy; much that has been regarded as "specific" in the field of bacteriology is now known to depend upon more generic phenomena than had been previously thought. Vaccines are applicable to a certain proportion of cases only.

Despite the attractive implications attaching to the definite rôle of infection in arthritis, the use of vaccines should be reserved for a small and critically selected group.

Rest in mild opisthotonos may correct kyphosis and benefit visceroptosis. Breathing exercises will expand the narrow or fixed thoracic cage. Abdominal and breathing exercises will compensate for reduced vital capacity of the lungs and for at least some of the secondary consequences of wheel-chair inactivity.

The attempt must be made to prevent and undo angulation deformity, by maintenance of corrective postures and intelligently directed exercises, beginning in bed, whether this angulation has to do with the chest, the spine, or, as more usually understood, the joints themselves.

The above seven recommendations to the general practitioner constitute nothing more than some basic considerations upon which a more elaborate therapeutic superstructure should be raised. Nearly every measure of value almost constitutes a specialty by itself. There is probably no other disease in which such wide demands are made upon the general practitioner. It must be accepted that, alone, he cannot be expected to cope with the problem adequately in more than a few instances.

VAUGHAN SPENKEL, *Reporter.*

LUZERNE

Apr. 15, 1936

The regular meeting was held in the Medical Building, with Vivian P. Edwards presiding. The following were elected to membership: Otto J. Libener, Joseph Fescina, Hazleton, Louis T. McAloose, McAdoo, and Harold B. Fear, Freeland; and the following delegates and alternates were elected: Lewis T. Buckman, for 4 years; Albert R. Feinberg, for 3 years; Thomas R. Gagon, for 2 years; and Charles L. Shafer, for 1 year. Alternates are Michael J. Murphy and Thomas F. Flemming; H. Gordon Guyler and Francis T. O'Donnell; Manfred H. Kudlich and John R. Dyson; A. Burton Smith and Almon C. Hazlett.

Frank R. Ober, Boston, Mass., read a paper on "Arthritis." He said in part:

In approaching a case of arthritis, it must be realized that the patient, in many instances, is suffering from a joint disorder which is presumably a late manifestation of a constitutional disturbance that has been dormant or progressing insidiously for a considerable period of time, before the joint symptoms and signs become apparent.

Pathology.—There are many conditions which result in joint disturbances; for example, gout, syphilis, tuberculosis, hemophilia, gonorrhea, benign tumor, malignant disease (both primary and secondary), typhoid arthritis, bursitis, sprains, fractures, and intermittent hydrops. The two common types of chronic arthritis are the degenerative, or hypertrophic, and the proliferative, or atrophic.

Degenerative.—The essential pathology of the degenerative type is the fibrillation of joint cartilage and the production of spurs in and about the joint. The bones in the neighborhood of these joints become heavier and the joint surfaces tend to become eburnated.

Proliferative.—The proliferative or atrophic type of chronic arthritis begins in the synovial membrane as an inflammatory reaction, fluid in the joint, thickening of the membrane by the products of inflammation, deposition of granulation tissue along the marginal attachments of the membrane and a spreading of this tissue across the joint in the form of a pannus resulting in adhesions, destruction of cartilage, and ankylosis. The bones in the neighborhood of the joint become atrophied and this process probably hastens the ankylosis.

There is no single etiologic factor responsible for this very crippling disease.

In getting to the bottom of the causes of this condition, a careful history of the patient's life, occupation, and physiologic processes must be obtained. Inquire about the ears, respiratory tract, the urinary tract, the digestive tract, and their functions. The ears, nose, accessory sinuses, mouth, teeth, tonsils, pharynx, and lungs are places that may harbor focal infections. Chronic constipation is often associated with arthritis. The same type of arthritis may be seen in diarrhea, as here again there is probably a disturbed function. Ptosis is still another condition seen in the arthritic.

Food intake may be at fault. A diet high in carbohydrates or fats is not always well tolerated by the arthritic. Foods which produce allergic manifestations may bring about allergic reactions in joints. Chronic fatigue, worry, fear, and frequent or chronic emotional crises and disturbances are in my experience commonly seen in arthritis. In fact, it may be impossible to obtain any other history than that of emotional stress, and even this may not be learned unless due sympathy is shown. Disturbances of endocrine glands are a source of trouble and should be investigated. The same type of arthritis may be seen in hyperthyroidism as in hypothyroidism. The acromegalic may have arthritis.

Symptoms.—There is often a so-called prodromal stage of arthritis. The patient complains of general muscular soreness and stiffness, usually worse in the morning and disappearing through the day.

The later symptoms show pain, swelling, inflammation, loss of motion, and often flexion deformities in the affected joints.

Physical Examination.—The examination of the patient should be most thorough and complete. Laboratory examinations are necessary and should include hemoglobin test, blood count, blood chemistry, urine and stool tests, especially microscopic reaction and character, metabolism test, blood pressure tests, and a roentgenogram of the intestinal tract. Intestinal speed test with carmine red, small doses of barium (one teaspoonful with a morning meal and roentgen-ray checks) charcoal, or millet seed may be used, and the Graham test where indicated.

Every joint should be examined for limitation of motion, muscle spasm, thickening, swelling, fluid, and deformity. Inflamed, painful joints must be handled with extreme care in order to avoid discomfort to the patient and injury to the joint. Roentgenograms should be made of the cervical spine, even though no symptoms are present in that region, since practically every adult case of arthritis shows roentgen-ray signs of joint disturbances in this region. All the obviously affected joints must also be roentgen-rayed. For instance, in the degenerative type of arthritis it is quite common to find that perhaps a knee, which shows no symptoms, may be as much or even more involved than the joint for which advice is sought.

Treatment.—Chronic arthritis is too often considered a hopeless and an uninteresting problem. The contrary, however, is true. It is not hopeless and it is one of the most interesting problems in medicine today. Its treatment is both medical and surgical. The medical treatment is directed toward relieving the causative factors which have been discovered in the general physical examination and to changing the patient's mode of life so that he can be restored to as normal a condition as possible. Minot says, "strive to obtain the optimal in cell metabolism." If we fail to do this we do not combat the basic factors in the cause of arthritis. There is no single form of therapy that will cure all arthritis—advertisements and other opinions to the contrary.

The removal of the so-called foci of infection should be done on the grounds that any focus of infection has a bad effect on any person's health no matter what is wrong. In a few instances permanent relief may be secured from such treatment but only too often the relief is only temporary. The problem of the infected sinus is one that should be taken care of by climate, proper food, proper housing, and proper attention to that part of the respiratory tract. If the patient has hyperthyroidism or hypothyroidism, the thyroid gland

should receive proper attention. If the prostate gland shows signs of irritation or inflammation, the patient should be placed under the care of a genito-urinary surgeon. If there are disturbances of the pelvic organs in the female, they should be treated by a gynecologist.

A well-planned diet should be insisted upon so that the patient obtains food that may be completely digested. If the food goes through the intestinal tract too fast then it is necessary to cut down the foods that speed up the movements of the tract, especially fruits and foods containing a large amount of roughage. If the speed of the intestinal tract is too slow the vitamins should be increased, especially vitamin B. So-called elimination never cured a case of arthritis. Attempt to educate the patient so that he has a normally formed stool every day. Rest may be desirable in relieving an irritated bowel. The digestive apparatus is upset by fatigue, worry, and emotional disturbances. Common sense psychology and a careful study of the patient's problems will do more toward solving the difficulty in most individuals than any other method of approach. If a patient has a normal stool every single day after a period of several weeks or months, it is fair to assume that the cell metabolism is approaching the normal and then the patient's joints will begin to feel better.

The surgeon should be responsible for the physiology of the patient's joints, the use of apparatus and physiotherapy being best carried on by a physiotherapist under the direction of the surgeon. In the degenerative type of arthritis, the joint should be rested during the painful stage and as soon as the patient is comfortable, exercises to improve the tone of the muscles about the joint and exercises to increase the motion of the joint by stretching may be carried on. In cases of adducted hip due to morbus coxae senilis, a lift under the heel to relieve pressure on the acetabular spur will tend to diminish the irritation and oftentimes increase the apparent lengthening of the leg.

In cases of hypertrophic arthritis of the spine, a good fitting corset plus physiotherapy will give relief. In arthritis of the cervical spine, a Thomas collar will give relief. Stretching exercises and a Sayre overhead sling will help to alleviate pain in the neck, basal headaches, and neuritis in the arm. When this type of arthritis affects the knee joint, patients should be kept on crutches during the period of synovitis. They should have baking, massage, and exercises to improve the tone of the quadriceps muscle in order to get it back to its normal size and tone. If spurs have broken off and are acting as loose bodies in the joint they should be removed.

The ankylosed elbow may be made mobile by arthroplasty, provided no signs of active arthritis are present or have been present for a period of at least 2 years. In the knee with a large collection of fringes, synovectomies are indicated when no active signs are present. In the flexed knee with motion, a capsuloplasty gives an excellent result provided the patient is not too old. Osteotomies to correct extreme deformities, such as those limiting a patient to a wheel chair, may be necessary. The patient with acute proliferative joints must be put to bed with his extremities supported on counterbalanced splints so that the joints can be exercised without having to fight against gravity. These joints should be kept quiet for a good part of the day, allowing a little motion within the range of discomfort once or twice a day. Active setting of the muscles about the joints may be done a few times every hour. Gentle baking may be used in the beginning and as the sensitiveness disappears, massage between the joints plus

active exercises, nonweight-bearing in the lower extremities, may be carried out, always avoiding injury to the joints. Stretching of these joints should never be indulged in and no passive motions should be allowed. Motions should always be active or assisted active and they should be carried out daily by a competent physiotherapist. As soon as the pain has disappeared, the active exercises can be increased gradually and swimming in a tank or pool is one excellent form of exercise. Physiotherapy treatment done in the above manner improves the tone of the muscles, combats atrophy of all the structures about the joint including skin, muscles, and bone, improves the function and movements of the joint itself, and tends to restore the joint to a normal physiologic condition or as near normal as is possible under the circumstances.

MARJORIE E. REED, *Reporter.*

MONTGOMERY

May 6, 1936

The regular meeting was held at Norristown; there were present 50 members and 6 visitors. A donation of \$100 was voted for the relief of flood sufferers. The address was given by Edith MacBride-Dexter, Secretary of Health of Pennsylvania on "Tuberculosis and the State Department of Health." She said in part: This subject was selected partly because it is one of the oldest and most extensive services of the Department and partly to call attention to the fact that, in spite of the 30-year campaign against it, there is still a too high mortality rate from tuberculosis in certain age groups.

In 1903, the State Legislature appropriated \$8000 for the erection and maintenance of a camp at Mont Alto. This marked the first constructive interest on the part of the state government in tuberculosis, which then ranked first as a cause of death and was known as "The Great White Plague." In 1905, the Department of Health was created, with Dr. Samuel G. Dixon as the first Commissioner of Health, and the present Mont Alto Sanatorium was established. From a sanatorium of not more than 30 patients it has grown to the present size of 1040 patients. To that were added Cresson and Hamburg, with a combined capacity of 2400 patients, and 85 clinics and 20 admitting centers. Each county of the state has a definite quota based on population, which for Montgomery is 67. Mont Alto is for incipient or ambulant cases; Cresson for both incipient and advanced cases; while Hamburg is largely for the more advanced, hospital cases. For the past 6 or 8 years the waiting list has averaged between 800 and 1500. Another institution is needed which should be located in the western part of the state.

It is estimated that there are 45,000 cases of active pulmonary tuberculosis in Pennsylvania, and that 90,000 children and 45,000 adults are in contact with these cases. In 1906, tuberculosis ranked first as a cause of death; it now ranks seventh. Last year only 5625 cases were reported in Pennsylvania out of the 45,000 estimated number. All cases should be reported at once to the local health officer. In spite of the success of the campaign against tuberculosis, there is an unfavorable side to the picture. It still kills more of the youth of high school and college age than any other disease. Within this same school-age group, 3 girls die for every 2 boys. The explanation for this excessive mortality lies in the failure of physicians, parents, and teachers to recognize the disease in its latent stage during the preceding 10-year period.

During the past 5 years, 3000 children have been admitted to the preventorium at Mont Alto Sanatorium; 53 per cent of this number gave a definite history of contact with tuberculosis in their homes. Positive Mantoux tests ranged from 12 per cent in rural schools to 71 per cent in one orphanage. If the present system could be supplemented by a general examination of all school children from the seventh grade through high school, using the Mantoux test and roentgen-raying all positive reactors, practically all of the infected contacts and the tuberculous and pretuberculous children in the commonwealth would be known and proper supervision and treatment could be instituted.

WALLACE W. DILL, *Reporter.*

NORTHAMPTON

Apr. 24, 1936

The monthly meeting was held at the Hotel Bethlehem, Bethlehem; Thomas C. Zulick, Jr., presided.

E. W. Gilchrist and T. H. A. Stites were elected to membership.

Dr. Feinberg, an intern at the Easton Hospital, who is licensed to practice in New York State but not in Pennsylvania, was admitted to membership.

Jacob Kineov said that last year a proposal to tuberculin-test the children of the Easton schools was opposed by this society because it originated in a lay organization. Would it be proper for this society to sponsor such a measure at this time? The matter was referred to the Public Relations Committee.

J. Arnold Bargaen, of the Mayo Clinic, presented a paper on "Pathogenesis of Cancer of the Large Intestine." He said in part:

There are 3 sources of cancer of the large intestine: (1) It has been demonstrated that adenomatous polyps may develop into full-blown carcinomas; (2) multiple cancerous foci may appear in the course of destructive change and healing occurring in such inflammatory diseases as chronic ulcerative colitis; and (3) solitary overgrowths of epithelium may originate in isolated spots of the wall and mucous membrane of the rectum or colon. Possibly, in the future, students of the problem may demonstrate that these 3 varieties of new growth have a common inception. At present, however, it can be said that while the growths which develop in these 3 ways are essentially alike, their characteristics during stages up to the time they become fully developed are quite different.

It is not the purpose of this paper to attempt to deliver any startling information or even to add new facts to the already existing knowledge about cancer of the colon, but rather to arrange in some systematic manner the information which has been gathered through experience with innumerable cases of cancer of the colon and to suggest some rather obvious conclusions arising out of this experience.

Cancer arising from polyps.—Facts would seem to indicate that cancer of the colon is produced by a virulent influence affecting the cells, which influence promotes a state of abnormal multiplication and then through the stage of so-called adenomatous polyp results in full-blown carcinoma.

Cancer associated with inflammatory disease of the colon.—There is much evidence at hand to suggest that cancer finds a foothold and grows in an uncontrolled manner in severely inflamed tissue in which there is a tendency to healing.

Single or multiple carcinomas of the colon.—There

is abundant evidence at hand to suggest that carcinoma of the colon, at least, does not originate in a single focus. Multiple carcinomata have been observed in the colon of a single individual in the absence of grossly demonstrable change in the cells between the carcinomata; on the other hand, the intact epithelium adjacent to the carcinoma may reveal cellular variations, from the bizarre carcinoma cell to the normal, goblet cell. There is no evidence of a protective influence by the apparently normal cells in the vicinity of the carcinoma against invasion.

It may be of interest to call attention to the fact that in 2.7 per cent of 400 cases of proved carcinoma of the colon and rectum observed at the Clinic, some type of malignant neoplasm, different from that in the colon, had been removed prior to the discovery of the intestinal lesion. It is also of interest that single carcinoma not infrequently occurs among several members of a family through several generations in a similar segment of colon.

Conclusions.—The observations recorded seem to lend support to the thought that cancer of the large intestine is not the result of a single influence, but rather of the combined effect of various bodily disturbances. The facts here related suggest the importance of the inflammatory and hereditary factors and the factor of altered tissue metabolism or disturbed tissue resistance to the baneful influence which makes cancer possible.

It would seem that attention in the future should not be directed toward the search for a single extraneous etiologic agent, but rather toward a study of the broad subject of the factors influencing growth of tissue.

FREDERICK J. PEARSON, *Reporter.*

PHILADELPHIA

Apr. 8, 1936

SYMPOSIUM ON ARTHRITIS

"Social and Economic Importance of Arthritis" was presented by Theodore F. Bach. He stated that arthritis is the greatest single cause of disability in the temperate climates. In 1933 a survey in the state of Massachusetts alone showed that 138,000 were ill with rheumatism, and of these 5600 were totally disabled. It is the oldest disease known, vestiges of it having been found not only in prehistoric man but in the dinosaur as well.

Reference was made to the special societies devoted to the study of this troublesome affection. It becomes a social problem when the person afflicted becomes a burden to his fellow citizens. Economically, it is serious when it causes infirmity and inability to work. Because of its morbidity rather than its mortality it is productive of enormous economic loss. American statistics are meager in this regard but the British Ministry of Health has shown in its records in 1924, covering 91,000 persons, that 27.6 per cent were treated by physicians for rheumatism. About 30 to each thousand were men, while 22 to each thousand were women. In 1922, rheumatism in England was responsible for a loss of more than 3 million weeks of work and involved sick pensions of 2 million pounds. The cost of rheumatoid disease to the country in that year was between 17 and 20 million pounds. In America, 10,000 deaths annually are charged to rheumatism; 4000 directly, 6000 indirectly to acute or chronic rheumatism. Two-thirds of these were rheumatic fevers, one-third chronic rheumatism, arthritis, and gout. The death rate is about 4

to each 100,000 persons. This rheumatism represented only 4.1 per cent of all diseases. Rheumatism accounts for nearly 9 per cent of all accidents.

There are more than half again as many cases of rheumatism as there are cases of heart disease, 8 times as many as tuberculosis, and 12 times as many as cancer. The annual loss to wage earners suffering from rheumatoid disease is 30 million dollars. In 1933, 7,500,000 working weeks were lost from it. In 1931-35, the ex-service men in this country received over 3 million dollars in pensions for arthritis, and these figures are destined to increase progressively. At the time of the armistice, there were 60,000 cases of rheumatism among the American forces. Statistics from foreign countries all emphasize the extent of this disabling illness. As to prognosis, from 57 to 60 per cent show recovery under adequate treatment. This paper outlined the need for the intensive study of this affection now being conducted in all medical centers.

"Gross and Microscopic Anatomy" was discussed by John Eiman. Arthritis is a state characterized by disability and usually by structural changes in one or more joints involving the soft structures as well as the bones. That condition which does not fall into this grouping but has a more disseminated character is called rheumatism. Atrophic arthritis is the rheumatic arthritis of England and the continent. Hypertrophic arthritis is the osteo-arthritis of England and the continent. In the atrophic form, there can be demonstrated proliferative changes in the joints, particularly in the synovial membrane and perichondria. In the hypertrophic form there is primary degeneration of the cartilage. The pathologic change is limited but the gross appearance depends upon whether the changes are proliferative or degenerative.

As to cause, no single agent has been found to account adequately for the production of this disease. Many factors play important rôles, and vary with individual cases. There is a disturbance of balance in the various physiologic processes. Arthritis is not merely a disease involving only the joints and bones but is a systemic disease with local manifestations. A brief outline of the structure of a joint was given and followed by an account of the structural changes in the 2 principal types of the condition, atrophic and hypertrophic. This was followed by a series of slides illustrating these changes.

"Etiology and Physiologic Deviations Characterizing Arthritis" was presented by Charles W. Scull. He concurred in the thought expressed by Dr. Eiman that no single etiologic factor was demonstrable and proceeded to emphasize and enumerate the multiple factors. Infection occupies a prominent place. Eighty-seven per cent of all cases show demonstrable foci of infection. About 77 per cent of the atrophic cases have infection. Ordinary types of micro-organisms have been found to be responsible. The mechanics of the production of metastatic infection from these foci has given rise to considerable debate. Malnutrition, fatigue, and exposure to cold contribute by lessening the resistance. Changes in the synovial fluid may be affected by changes in the general chemistry of the body and interfere with the nutrition of a joint and constitute a factor in the production of arthritis. Changes in the blood supply may be operative in a similar manner. Protein metabolism is also disturbed. Carbohydrate metabolism also shows a suggestive deviation. Charts were shown to demonstrate a possible way of evaluating the sum total of the factors involved in the production of rheumatism.

"Treatment" was discussed by Ralph Pemberton. He stressed the necessity for the extension of sound information in easily obtainable form for the use of the practitioner who first sees the case, it being essential that he have a broad appreciation of the problem as a whole. Arthritis is not a disease of the joints alone but is a systemic disease and must be treated on that basis. A limited outlook upon the disease is creative of difficulty in treatment. Observers with limited viewpoints exclude other considerations. It is necessary in both types of the disease to accept the probability of undetermined factors. He regards disturbances of the intestinal tract as having a significance although of varying importance. Rest in bed is necessary for the arthritic as is warmth. Ankylosis can and should be prevented in all but a very few cases. Foci of infection should be removed, but judgment must be exercised as to the proper time for such removal. This almost constitutes a specialty within a specialty. Attention to the general nutrition of the patient is essential to the proper treatment of a case of rheumatism. There is evidence that the arthritic suffers from low plasmic protein and he should have ample vitamins. He should also have a reduction of concentrated carbohydrate foodstuffs. Physical therapy (heat, massage, *etc.*) is necessary to overcome the physiologic disturbances of the affected area, but may be required at somewhat removed sites. Drugs are not satisfactory. Anodynes may be used in the early stages. Quinine is contraindicated. Vaccine therapy is overrated. Limitation of time curtailed detailed therapeutic recommendations.

Apr. 22, 1936

By reason of this meeting taking place in the midst of the Postgraduate Institute, it was held in the Bellevue-Stratford Hotel, and all the physicians attending the institute were invited and encouraged to attend. It was preceded by a well-attended dinner at which Alexander H. Colwell, president of the State Society, Maxwell Lick, president-elect of the State Society, Rufus Reeves, Frank H. Lahey, of Boston, and the Hon. S. Davis Wilson, Mayor of the City of Philadelphia, spoke.

The formal meeting was devoted to the Strittmatter Award and the Da Costa Oration. John M. Fisher, on the part of the society, made the presentation address giving the Strittmatter Award to Seth A. Brumm, who accepted the same. Both of these addresses appear in full in the *Weekly Roster* and *Medical Digest* for May 2, 1936.

The Da Costa Foundation and its purpose was explained by John A. McGlinn, after which Charles F. Nassau introduced Frank H. Lahey, of Boston, who had been chosen to deliver the oration this year. Dr. Lahey selected for his topic "The Management of Biliary Tract Disease." In his introductory remarks he stated that, were it not for its clinical features, surgery would have failed to satisfy him as it did. The paper presented was based upon a personal experience covering over 2000 operations for cholelithiasis and infection of the biliary tract. He stated that a diagnosis of gallstones is frequently made too late and that it would be much better from the standpoint of mortality and morbidity if the physician did not wait for gallstone colic or repeated gallstone as an indication for surgery in cholelithiasis. Delay in biliary tract surgery results in liver damage. Long-standing biliary tract disease, particularly cholelithiasis, leads to infection of the common and hepatic duct, to the formation of stones, dilatation of the biliary tract, and diminution of the

liver function. Excluding spontaneous rupture of the gallbladder, a very rare condition, and acute infections of this structure, most of the fatalities related to gallstones are the result of obstruction and infection of the common duct. The real evil in gallbladder disease is the effect on the liver structure.

Gallstones found in the course of routine examination should be removed. They seldom exist in the absence of infection. A patient may go through life without difficulty with gallstones, but they may bring about symptoms demanding operation at a time when he or she is unable to withstand an operation with safety. He believes that all digestive difficulties should be investigated as to the possibilities of underlying infection in the gallbladder preceding the formation of gallstones. The whole question of indigestion is too lightly regarded. Any patient who has digestive difficulties of over one week's duration should be investigated as to whether the condition is due to carcinoma of the stomach, infection, *etc.*

Statistics were given as to the mortality of the several contributing conditions. Rules were also given for the guidance of physicians in the care of cholelithiasis especially as to when operable. Delay in the diagnosis of stones in the common duct increases the mortality. A series of 17 slides were thrown on the screen to support the contentions of the speaker. The absence of jaundice does not mean the absence of stones in the common duct. Not only must the surgeon take out the gallbladder but he must also open and explore the common or the hepatic duct and prove there are no stones there. His remarks upon anesthesia were also of interest.

SAMUEL HORTON BROWN, *Reporter.*

WARREN

Apr. 20, 1936

The meeting was held at the State Hospital, Warren. Eli Markowitz, of Philadelphia, who is instructing the members of the hospital staff in neurology, addressed the society on "Brain Tumors in General Practice."

He said that 10 per cent of all neurologic conditions have been found to be tumors, and that their early recognition would be responsible for a more favorable prognosis.

He classified tumors according to age, rapidity of growth, and location.

A multiform spongioblastoma is a rapid-growing tumor in adults, located in the cerebral structure and very fatal, whereas a tumor in children, known as a medulla blastoma, is also rapid and fatal, but is located most often in the cerebellum.

A meningioma has a good prognosis if seen early and before pressure has caused damage. Pressure in the cerebellum may be of little moment but near the medulla may cause severe general disturbance. In the frontal or silent area, local symptoms may be few. Symptoms of brain tumor are those due to pressure—in general, headaches not definitely localized, vomiting, and papilledema. The headaches are unrelieved by ordinary sedatives, and morphine is apt to increase the cranial pressure. The vomiting is not projectile and is without gastric disturbance. The papilledema is likely to be present at some time in 90 per cent of all tumors, and when present it is apt to be due to intracranial pressure.

An early sign is a blurring of the disk, and tortuous retinal veins are suspicious. Convulsions may occur

early. By use of air distention of ventricles and roentgen ray much better localization has been obtained.

In frontal lobe tumors there are sensory and motor disturbances, some ataxia, motor aphasia, abasia, and changes in personality.

Tumors in the parietal region result in paretic symptoms, superficial monoplegia in the postcentral area, paresthesia, convulsive seizures, and speech disorders.

Tumors in the temporal lobe result in uncinate convulsions with distinct auras, more speech defects, and visual fields disturbed giving rise to hemianopia. When the tumor is located in the occipital lobe, visual disturbances are the most important symptom, with visual hallucinations and field defects.

Cerebellar tumors are the most common in children. Fifty per cent of all brain tumors in children are apt to be in that location with symptoms of vomiting, papilledema, and ataxic gait. The cerebellum can be destroyed in large part and yet life continue.

Tumors connected with the auditory nerve (acoustic neuromas) are usually seen in adults, and may grow to large size and cause tinnitus, deafness, nystagmus, and gait disturbance. They are extramedullary.

Many other diagnostic procedures were mentioned. Total protein estimation of the spinal fluid is important. This is low in posterior fossa and cerebellar tumors, but high in acoustic and spongioblastic tumors. In meningiomas it is lower.

No doubt, many brain tumors go unrecognized. If the general practitioner would bear these symptoms in mind, early diagnosis could be established and proper surgical treatment carried out.

Twenty-seven members and 3 visitors attended. Dr. Gail Riddlesperger was elected to membership.

The members of the state hospital staff furnished the dinner.

MICHAEL V. BALL, *Reporter*.

WESTMORELAND

Feb. 13, 1936

The meeting was held in the American Legion Home, Greensburg; President William J. Robinson presided.

Joseph A. Hepp, of Pittsburgh, discussed "Recent Developments in Gynecologic Endocrinology." In part, he said: The physician should have some knowledge of endocrinology in order to employ hormone products intelligently. This does not mean that their intelligent use is sure to be effective; indeed it may be very ineffectual. Nevertheless, it is certainly a great advance from the "cleansing theory" and the "lunar theory" of menstruation to the present-day "hormone theory."

Menstruation in the human female is caused by 4 hormones, and they must be properly balanced in a quantitative way and must operate in a certain sequence. Prolan A makes possible the ripening of the follicle; prolan B causes luteinization of the follicle or formation of the corpus luteum; folliculin, also called estrin or theelin, causes hyperemia of the uterine mucosa; and finally progesterin causes secretory activity in the endometrium. The continued formation of folliculin causes an inhibition of the anterior lobe so that the amount of the stimulating hormone available diminishes, and this results in a degeneration of the corpus luteum and in a cessation of folliculin production. Menstruation then occurs. Thus it is shown that ovarian function depends completely upon a stimulus from the anterior lobe of the pituitary, and the pituitary gland is sometimes called the motor of the ovary. Furthermore, functional

gynecologic problems are often due to disturbances of hormonal mechanism.

Functional uterine bleeding.—This type occurs most frequently in women approaching the menopause although it may occur at any age during reproductive life. Here the endometrium shows the characteristic "Swiss cheese" pattern of hyperplasia, and because of the absence of ovulation there is no progesterin formed and bleeding results. If we had progesterin today, we could help this bleeding. (Progesterin is now available, one product under the name *proluton*, the other one *progesterin*.) The closest approach to progesterin is antuitrin-S or follutein. Mild cases of this disorder are frequent, and often the endocrine imbalance is spontaneously readjusted without treatment of any kind. In using antuitrin-S, wait until the onset of the bleeding and then give 100 to 200 units intramuscularly each day for about 7 days depending on the severity of the bleeding and the effect of the treatment. In women near middle life the treatment is somewhat different. Here a diagnostic curettage should always be done to rule out cancer; then radium should be used to abolish the menstrual function entirely. Radium should never be used to treat functional bleeding in young women. If the basal metabolic rate is low, thyroid extract is indicated, but the results sometimes are not very good.

Dysmenorrhea.—The etiology of this condition is unknown, and its treatment will remain unsatisfactory until its cause is discovered. Some investigators recommend glandular therapy; they think that antuitrin-S decreases uterine contractility and for this reason employ it in primary dysmenorrhea.

Amenorrhea.—The glands concerned are the ovary, pituitary, thyroid, and adrenal. Thus amenorrhea may be due to a change or weakening of one or all the links of the endocrine chain. It is often associated with hyperfunction of the thyroid or adrenal, or hypofunction of the ovary or pituitary. Thyroid extract is useful in hypothyroid cases but is of little value in other types. Treatment here is usually unsatisfactory and should be looked upon as placebo to both the patient and the physician. In the light of our knowledge a rational treatment would be the administration of theelin followed immediately by antuitrin-S. The most to be hoped for is a single menstrual period, and when this treatment has to be repeated month after month the patient becomes tired and usually goes to another physician. In amenorrhea with sterility there is not much to be hoped for from ovarian organotherapy in its present state.

Menopausal symptoms.—Nothing definite is known about the vasomotor flushes, sweats, and heat flashes that characterize the menopause. The cause no doubt is due to withdrawal of ovarian function and is due to diminution of folliculin from the follicle of the ovary. The administration of theelin seems logical in an effort to tide the patient over this period in her life. Some good reports have been had from sistomensin. The use of theelin in this condition is not meeting with universal success, but since there is always a large psychic factor it is difficult to evaluate results properly.

SPURGEON S. DEVAUX, *Reporter*.

WYOMING

Apr. 8, 1936

The regular quarterly meeting was held in Tunkhannock; the auxiliary had lunch with the county medical society.

A communication relative to Workmen's Compensa-

tion fees was read. After some discussion the president appointed Helen B. Brackbill and Arthur B. Davenport to draft a schedule of fees for the approval of the county society.

The members are in favor of continuing the annual seminars held at the Packer Hospital in Sayre during the summer.

District Councilor E. Roger Samuel expressed a few pertinent thoughts—the facilities of the library of reprints at the State Society Headquarters, Harrisburg, are available and should be used; the activities of the Medical Benevolence Fund Committee in helping physicians who had lost heavily during the recent floods are most commendable. The next councilor district meeting probably will be held at Eagles Mere this summer.

ARTHUR B. DAVENPORT, *Reporter*.

YORK

Apr. 15, 1936

The regular meeting of the society was held with Clyde L. Seitz, president, presiding.

Emil Novak, associate in gynecology, Johns Hopkins School of Medicine, Baltimore, Md., gave an address on "The Use and Abuse of Organotherapeutic Products in Gynecology." He said in part: Endocrinology is a real field, the facts of which must be crystallized and appraised for the medical profession. The elements concerned in normal menstruation were given: The normal formation of a corpus luteum, in the average woman, up to the time of its rupture, and the formation of its hormone known as folliculin were first mentioned; after rupture of the graafian follicle a collapsed shell is left, and the follicle takes on a new span of life and becomes a new corpus luteum which is yellow and mature later on; corpus luteum as it grows continues to produce folliculin but also its own characteristic hormone known as progesterin or progesterol.

Folliculin is a growth hormone affecting the mucous membrane of the genital canal and its vascularization; as progesterol is built up its effect becomes one of secretion. Folliculin is a substance sold commercially as progynon (Schering), amniotin (Squibb), or theelin (Parke, Davis & Co.). Progesterone is a substance obtained commercially as proluton (Schering).

Folliculin alone cannot produce menstruation, but it does build up the endometrium, and if 5 or 6 days later progesterol is added it will cause a bleeding provided the organic product is stopped a few days before the desired bleeding. Folliculin does not stimulate the ovary, but 250,000 units of folliculin added to 60 to 90 units of proluton will start a normal bleeding in most women.

The form dissolved in oil is the best to use because it is more slowly absorbed. Proluton is only available in one-unit doses.

The normal time of ovulation was cited. The ovum after its extrusion from the follicle generally lives only 24 hours or less; the life span of spermatozoon after entry into the genital canal is not over 36 hours, but motility may be present longer.

No fertilization takes place between the thirteenth and eighteenth day of maturation; coitus itself in lower animals may cause rupture of the graafian follicle.

The probable safe period of coitus was outlined, and the second intermenstrual week was quoted as the most likely time for fecundation to take place.

Menstruation is not a purely pelvic phenomenon, but a constitutional one involving such glands as the hypo-

physis or pituitary, thyroid, etc. Mention was made of adiposogenital dystrophy or Fröhlich's syndrome, and the Aschheim-Zondek reaction. The collaboration of American and European workers did much to bring to light the importance of the pituitary hormone.

The pituitary gland works in a triangular fashion, secondly on the genital mucous membrane; the anterior pituitary is an endocrine gland which dominates many other such glands governing the action of the ovaries, thyroid, adrenal cortex, islands of Langerhans, and also contains a growth hormone and a milk-producing hormone, but it produces mainly 2 sex hormones: Prolan A (a ripening of follicle and sex hormone production); and prolan B (the forming of progesterin and lutein tissue or the luteinizing hormone).

Based on the anterior pituitary hormone in the urine of pregnant women, an A-P-L substance is found early in pregnancy and makes such tests as the Aschheim-Zondek, or Freedman, valuable to detect pregnancy early.

Reference was made to such clinical problems as the functional disorders which are considered as departures from the normal, for example, the unovulatory cycle in which a girl may menstruate normally but ovulation does not take place. This can be determined by scraping a small amount of tissue from the uterus at a time just before menstruation. If it reveals secretion, then the corpus luteum is present; if simple hypertrophy of the uterine mucous membrane, then the woman is not ovulating.

Generally one pituitary sex hormone becomes active before the other, viz., the secretory before the ovulatory or luteinizing. No one hormone of the pituitary is essential for rupture of the follicle but a qualitative balance.

The speaker advised giving 200 units of proluton just before the menstrual period to cause ovulation. If the follicle does not rupture, but hyperplasia of endometrium results, this may cause a reverse effect, which is inhibitory on the pituitary, and the production of folliculin stops.

Cancer in later years of womanhood must be eliminated by simple curettage therapeutically. In functional bleeding during unproductive years, radium or roentgen ray must be used properly; in productive years, perhaps curettage with organotherapy is sufficient for there is a strong tendency to restoration of endocrine balance. Give antuitrin S and proluton to stop bleeding and continue until the endocrine balance is struck, remembering that curettage temporarily stops bleeding. Never use roentgen ray or radium in young girls except in very severe cases; proluton is useful here.

In discussion, Eli Eichelberger, York, asked if organotherapy is useful in the vasomotor disturbances of the menopause. W. Frank Gemmill, York, asked if in acromegaly there is an ovarian secretion which would allow pregnancy. To what is the fluid in a patient's abdomen following laparotomy (pelvis) due? Is it pathologic or physiologic? In functional bleeding, can bleeding take place into the fallopian tube? M. Heine Shear, Dover, asked if whole pituitary is good at the menopause. Harry B. Thomas, York, asked if organotherapy is useful in pernicious vomiting of pregnancy.

Emil Novak, in closing, said the menopause is a normal phase and most women do not need any medication. But in the small minority and in surgical cases the hormone factor present is a folliculin withdrawal, when the treatment is to eliminate the psychic factor

and women, and the uterine collection is born one by month 2 times, because their biologically, primary, by monthly for one month. The secondary only, and studies of ovaries, they have made, and in most cases, there is anovulation, according with cysts in the ovaries causing fertility. The rate of a patient with functional bleeding, for the 1st 10 days of ovulation, as it appears, as an indication of the quality of ovulation, menarche blood may

flow into the uterus, having reached from the uterus to the tube. It had in the abdomen in the "physiologic ascite" of "Group Noval." Clear fluid may be found in the abdomen with or without removal of the graafian follicle. In operation, vomiting, organotherapy is of no value, despite the previous theory that the corpus luteum secretions were normal.

PAGE M. REISCH, *Reporter.*

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MR. GEORGE C. YESSER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

By the time this goes to press, your president will have had the great honor, in company with your delegates, of representing Pennsylvania at the meeting of the National Auxiliary at Kansas City, Mo. It is a privilege to speak for such a large group of forward-looking women, women who have made their auxiliary, in numbers and achievement, the foremost in the land. Hence it will be our particular mission to emphasize the part you have played in public relations, particularly as evidenced by the number and character of your health institutes. It will be a joy to report that you have made medical benevolence no mean part of your work, and that each year sees sustaining and increasing effort in this laudable cause.

April seems to have been "Health Institute Month" by common consent. Philadelphia reports its Sixth Annual Health Institute, on the twentieth, with an attendance of upwards of 300 at an all-day session. This same day was the occasion of the First Health Institute of Schuylkill County. Attendance at the Philadelphia function prevented our presence at Pottsville, Pa., on the twentieth, a representative group of health-minded women were the guests of the local auxiliary at their Health Institute. It was our privilege to be there and witness the success of their approach to their public relations responsibility. At Doylestown, the president was honored by the auxiliary at a luncheon held in conjunction with the Bucks County Medical Society. These joint meetings are worthy of favorable comment, and we are much impressed with the increasing interest shown in the work by the men.

An ambitious itinerary was planned for August, but the devastating floods made necessary a

change of program, leaving April a month devoid of activities which included visiting. Despite terrific handicap there is no slowing down of interest on the part of these brave women in the flood areas. They are perfectly willing to continue with their program as soon as they have adjusted themselves in this crisis. More honor to them!

The approaching Pittsburgh session is beginning to cast its shadow across our path and we are filled with our responsibility for its successful consummation with your help.

Appended are some reminders of things to be done.

Year Book. Please remember that from Mrs. Walter S. Breholtz will come an appeal for material for the Year Book. Her success in this momentous task is predicated on your prompt return to her of such material as she requests.

Necrology. Please send to Mrs. Clarence R. Phillips, chairman, the names in full of deceased members from your county, with date of death.

Annual Reports. Your prompt reply to the several State Auxiliary chairmen who ask for reports will make their task much lighter.

It is hoped that the visit to Kansas City will yield much in experience and inspiration. We shall bring home some valuable suggestions, and we are sure that we will come home well increased in our public relations work in the auxiliary which we have the honor to serve.

MRS. W. BEHN COENART

COUNTY AUXILIARY REPORTS

Allegheny. The annual annual conference of a section of the county medical society was held at a session to meet at the county hospital, a special program for the meeting. The meeting was held on August 18 at 10:30.

Dr. Roy R. Snowden outlined the value of the Public Relations Committee of the county society to the laity.

Dr. James S. Taylor, of Altoona, chairman of the Commission on Maternal Welfare of The Medical Society of the State of Pennsylvania, spoke on "Safer Motherhood in Pennsylvania." He said that a thorough investigative study of the subject had been started in 1934, and through the use of the radio, health clinics, and talks by physicians, the public is being educated to the necessity of prenatal care for mothers.

Dr. Cornelius C. Wholey gave an illustrated talk on "Presentation of a Case of Multiple Personality."

Tea was poured.

Berks.—At the March meeting, Mr. Stanley Fink, principal of the Tyson-Schoener School, discussed the benefits and handicaps of leisure time, and the necessity of making adjustments to the new system of hours. Mr. Fink said that when we learn to master the machine, shorter hours, and the new technic, all of which affect leisure time, then only will we control our leisure time effectively.

A program of entertainment, which included vocal solos, accordion solos, group singing, and an acrobatic dance, was presented by the Tyson-Schoener students.

Dauphin.—Mrs. W. Burrill Odenatt will be the guest of honor and speaker at the annual meeting of the auxiliary which will be held at the Penn-Harris Hotel, and will be preceded by a luncheon. At this meeting the following nominations for officers will be acted upon: President, Mrs. Joseph W. Shaffer; vice-president, Mrs. Hewitt C. Myers; recording secretary, Mrs. A. Harvey Simmons; treasurer, Mrs. Mathew H. Sherman; corresponding secretary, Mrs. Ralph S. Walters.

The *Hygeia* magazine, through the courtesy of this auxiliary, has been placed for a year's subscription in the reading rooms of the following institutions: Harrisburg Public Library, Y. M. C. A. and Y. W. C. A., and the William Penn and John Harris senior high schools of Harrisburg.

A "silver service" purchased from the treasury has been added to the entertainment armamentarium of the auxiliary, and was used for the first time at the April meeting. Tea was poured.

The sum of \$25 was sent to the Medical Benevolence Fund of the State Society, to be applied to the Special Flood Relief Fund for physicians who were directly affected by the recent flood disaster. This will in no manner affect the regular contribution to the Medical Benevolence Fund.

Delaware.—At the regular meeting of the auxiliary held in the solarium of the Chester Hospital on Apr. 9, the by-laws, which had been revised, were approved. The speaker was Miss Marian O. Perkins, who talked about the customs of Japan and her life spent in the Orient.

A card party held in the interests of the Medical Benevolence Fund was successfully managed.

The Executive Board was entertained at luncheon on Apr. 21 by Mrs. C. Irvin Stiteler.

Lehigh.—The meeting of the auxiliary was held Apr. 15 at the Woman's Club in Allentown. A word picture of Japanese life was given by Mrs. Clara Bayless. Plans were completed for the annual spring charity card party. Tea was served.

Lycoming.—On Apr. 15, the auxiliary held its regular bimonthly meeting at the Woman's Clubhouse. There were about 70 members present. Mrs. C. W. Prevost, president, presided.

A contribution of \$100 was voted to the Medical Benevolence Fund, and \$50 to the Flood Relief Fund. A report of the local committee who attended the Sixth Annual Health Institute at Philadelphia was given.

Rare films were shown depicting garden scenes of Valley residents and local picturesque settings. A musical program was rendered with spring songs predominant.

Tables of bingo were arranged, and refreshments were served.

Monroe.—The reorganization meeting of the auxiliary was held Apr. 2 at the home of Mrs. Harold B. Flagler, Stroudsburg. The following officers were elected for the ensuing year: President, Mrs. Laurance W. Kinsell, Stroudsburg; vice-president, Mrs. Charles S. Flagler, Stroudsburg; and secretary-treasurer, Mrs. David F. Kohn, Mt. Pocono.

The following committees were appointed: Public Relations—Mrs. David H. Keller, chairman, Mrs. Harold B. Flagler, and Mrs. William R. Levering, all of Stroudsburg; *Hygeia*—Mrs. Charles S. Flagler, Stroudsburg, acting chairman; Publicity—Mrs. David F. Kohn, Mt. Pocono.

Three new members were elected: Mrs. Floyd W. Shafer, Gilbert; Mrs. Malachi W. Sloan, Jr., E. Stroudsburg; and Mrs. David F. Kohn, Mt. Pocono.

Philadelphia.—The Sixth Annual Health Institute, sponsored by the auxiliary, was held Apr. 4, at the Philadelphia County Medical Society building. Mrs. M. Fraser Percival, president, presided. The entire day was very profitably spent in hearing not only how to prevent disaster, but to be more critical of ourselves.

The success of the Sixth Health Institute was due entirely to the interest of delegates from numerous hospitals and organizations. There were 100 out-of-town visitors, 85 auxiliary members, 17 physicians, 10 wives of physicians doing graduate work, 50 town visitors, and 5 newspaper reporters.

Schuylkill.—The first annual Health Institute was held Apr. 14 at the Necho-Allan Hotel at Pottsville. The meeting, in charge of Mrs. Newton H. Stein, opened at 10 a.m. with an address of welcome by Dr. Wm. V. Dzurek, chairman of the Advisory Board, followed by a talk on "Prenatal and Maternal Welfare," by Dr. Wilton R. Glenney. Dr. Harry Logan gave an illustrated talk on "Dental Work."

Luncheon was served at noon followed by an afternoon session. Mrs. W. Burrill Odenatt, of Philadelphia, State Auxiliary president, was unable to attend, but a message from her was read. Dr. Peter B. Mulligan, of Ashland, gave an illustrated talk on "Control of Cancer."

Medical News

Births

TO DR. AND MRS. CLARENCE E. MOORE, of Harrisburg, a son, Apr. 23.

TO DR. AND MRS. JOSEPH RUSSO, of Norristown, a daughter, Mary Elizabeth, Apr. 4.

Engagement

MISS MARGUERITE DI DONATO, of Bywood, Pa., and Dr. Palmer N. de Furia, of Chester.

Marriages

MISS LOUISE BROWN to Dr. Norman R. Ingraham, Jr., both of Philadelphia, Apr. 18.

MISS ALMA DUSTMAN OAKLEAF to Dr. Richard K. Frawley, both of Titusville, Apr. 25.

MISS ROSLYN CARROLL STONE, of New York, to Dr. Irving J. Wolman, of Philadelphia, Apr. 12.

MISS HELEN SCHOFF, daughter of Dr. and Mrs. Charles H. Schoff, of Media, to Mr. Graham Wentz, recently.

DR. HELGA ELIZABETH STREITBERG, of Leipzig, Germany, to Dr. Wolfgang Fritz Justus Vogel, of Huntingdon, Apr. 9.

MISS CATHERINE L. KENDIG, daughter of Dr. and Mrs. H. Evert Kendig, of Philadelphia, to Mr. John W. Clegg, Jr., of Chicago, May 12.

MISS MARGARETTA MCCORMICK ANSPACH, daughter of Dr. and Mrs. Brooke M. Anspach, of Ardmore, to Mr. James Kent Willing, Jr., of Ithan, Pa., May 15.

Deaths

MABEL HARVEY FALK BANCROFT, Philadelphia; Woman's Medical College of Pennsylvania, 1903; aged 54; died Apr. 28, at the Woman's Hospital, Philadelphia, of heart disease. Dr. Bancroft was one of the few women to experience overseas service in the World War. She held the rank of first lieutenant in the Medical Corps of the United States Army and served for 20 months with the American Women's Hospital in France, and was organizer of a baby clinic near Paris which is still in existence. During much of her time in France she served with Base Hospital No. 1 at Paris.

ORLANDO L. COOK, Pittsburgh; University of Louisville School of Medicine, Kentucky, 1911; aged 56; died May 5. He was a member of his county and State medical societies and a Fellow of the A. M. A.

HORACE W. DURNALL, West Chester; Columbian University Medical Department, Washington, D. C., 1878; aged 86; died Feb. 29, of chronic nephritis.

MR. MICHAEL J. GALLAGHER, father of Dr. Charles G. Gallagher, of Hanover Township, Luzerne County, died Apr. 10.

DAVID H. HAIN, Sinking Spring; Jefferson Medical College, 1881; aged 76; died Feb. 21, in the Reading Hospital, of septicemia, as the result of an abrasion on his hand.

OLIVER SLOAN HAINES, Philadelphia; Hahnemann Medical College of Philadelphia, 1882; aged 75; died May 1. Dr. Haines was emeritus professor of materia medica at the Hahnemann Medical College, having retired from active teaching in 1925. He is survived by his wife.

JAMES L. HENDERSON, Osceola Mills; Medical College of Ohio, Cincinnati, 1882; aged 82; died Apr. 20. He was an affiliate member of his county and State medical societies.

JOHN A. HILBERT, Wilkes-Barre; College of Physicians and Surgeons, Baltimore, Md., 1907; aged 60; died Mar. 22. Dr. Hilbert was born in Sugar Notch, Pa., and received his early education in the public schools of Wilkes-Barre. He served an internship at the Mercy Hospital, Wilkes-Barre, and was on the staff of the Nanticoke Hospital until it became a state hospital. He began practice in Pittston and for the past 13 years has been practicing in Wilkes-Barre. He is survived by his wife and a son.

GEORGE AUGUSTUS HOPP, Philadelphia; Hahnemann Medical College of Philadelphia, 1910; aged 54; died Apr. 27. Dr. Hopp devoted his practice exclusively to clinical pathology, and was a member of the American Society of Clinical Pathologists. He was also a member of his county and State medical societies and the A. M. A. He is survived by a wife and a daughter.

JOHN C. HUNTER, Apollo; College of Physicians and Surgeons, Baltimore, 1893; aged 70; was found dead, Feb. 26, of a bullet wound, probably self-inflicted.

ROBERT HARRISON JEFFREY, Uniontown; Jefferson Medical College, 1912; aged 48; died Apr. 23. He was a member of his county and State medical societies and a Fellow of the A. M. A.

MRS. LILAH M. KISTLER, wife of Dr. Seth W. Kistler of Nanticoke, and mother of Dr. Charles J. Kistler of Kingston, Dr. Clarence P. Kistler of West Chester, and Dr. Seth B. Kistler of Nanticoke, died Mar. 23.

ROBERT LAWRENCE PIPER, Tyngone; Hahnemann Medical College and Hospital of Philadelphia, 1892; aged 70; died Feb. 15, of uremia. Dr. Piper was for many years a member of the board of education.

RALPH JACKSON RAYBECK, Pittsburgh; University of Cincinnati College of Medicine, Ohio, 1919; aged 42; died Apr. 27. Dr. Raybeck was born at Selbysport, Md. He was a member of his county and State medical societies and a Fellow of the A. M. A.

ARTHUR JOHN TAYLOR, Hop Bottom (Susquehanna Co.); Jefferson Medical College, 1890; aged 71; died Feb. 17, of senile dementia and arteriosclerosis. Dr. Taylor was a bank president and formerly county coroner. He was a member of his county and State medical societies and the A. M. A.

FRANK LESTER TODD, Pittsburgh; University of Pittsburgh School of Medicine, 1891; aged 75; died Apr. 17, at Myrtle Beach, S. C. Dr. Todd was born in Ohio County, Virginia. He was a member of his county and State medical societies and the A. M. A.

WILLIAM TURNER VAN PELT, Philadelphia; University of Pennsylvania School of Medicine, 1885; aged 71; died in the Chestnut Hill (Phila.) Hospital, Apr. 26, after 7 months' illness with cardiac asthma. Dr. Van Pelt retired from active practice about two and a half years ago. At that time he was on the ophthalmologic staffs of the Episcopal Hospital, Wills Eye Hospital, and St. Joseph's Hospital. He served during the World War as captain in the Medical Reserve Corps, Fort Porter, N. Y. He was a member of his county and State medical societies and a Fellow of the A. M. A., a Fellow of the College of Physicians, Philadelphia, member of the Association of Military Surgeons of the United States, and Houston Post, American Legion. He was also a member of the Board of Managers, Chestnut Hill Hospital. Dr. Van Pelt is survived by a sister.

JOHN WALTERS, Sewickley; University of Pittsburgh School of Medicine, 1897; died Apr. 24. He was a member of his county and State medical societies and a Fellow of the A. M. A.

HORACE EMLIN WESTHAEFFER, Sunbury; University of Pennsylvania School of Medicine, 1875; aged 85; died Feb. 25, in the Mary M. Packer Hospital, of pneumonia.

ELIZABETH ELDRIDGE WRAY-HOWELL, Chester; Woman's Medical College of Pennsylvania, 1896; died Apr. 24, of heart disease. Dr. Eldredge practiced in Philadelphia and Chester and retired some time ago at the time of her marriage to E. A. Howell, an attorney, who survives her. She was a member of her county and State medical societies and a Fellow of the A. M. A.

Miscellaneous

DR. CHARLES I. SHAFFER, of Ralphon, was recently appointed superintendent of the Somerset County Home and Hospital, at Somerset, Pa.

DR. EDWARD A. ARCHIBALD, of McGill University, Montreal, Canada, has been awarded the Trudeau Medal of the National Tuberculosis Association for introducing the life-saving chest operation, thoracoplasty, into America.

THE FIRST ANNUAL BANQUET of the ex-resident physicians of St. Joseph's Hospital, Philadelphia, was held at the Bellevue-Stratford Hotel, Wednesday evening, Apr. 29. Dr. James A. Kelly was toastmaster.

THE BUCKS COUNTY MEDICAL SOCIETY tendered a testimonial dinner, Apr. 30, to Dr. John B. Carrell of Hatboro, in honor of his eightieth birthday, at the Casaconti Cafe, Glenside. Dr. Wilmer Krusen, of Philadelphia, was toastmaster.

AT THE MEETING OF THE Mount Sinai Hospital Residents' Association, Philadelphia, held May 6, the annual Henry B. Shmookler Memorial Lecture was delivered by Dr. Arthur Fishberg of Mount Sinai Hospital, New York City, on "The Circulatory Azotemias."

AT THE MEETING OF THE College of Physicians of Philadelphia held May 6, Dr. Marshall N. Fulton, physician to the Peter Bent Brigham Hospital, of Boston, read a paper on "The Use of Mercury as a Diuretic." Historical aspects and experimental results on mode of action and clinical use were discussed.

AT THE TWENTY-NINTH annual meeting and banquet of the Mount Carmel Medical Society held at Marble Hall Hotel, Mount Carmel, Apr. 28, Dr. Temple Fay, professor of neurology and neurosurgery, Temple University Medical School, gave an address on "Cerebral Problems of Interest to the General Practitioner."

GORGAS ESSAY PRIZE GIVEN.—On May 7, Miss Helen Mae Collettine, a senior student at Messmer High School, Milwaukee, received from President Roosevelt the first Henry L. Doherty prize of \$500 in the seventh annual Gorgas essay contest. The subject was "Gorgas's Control of Transmissible and Other Preventable Diseases."

THE FIRST ISSUE OF THE *Bulletin*, the official publication of the Beaver County Medical Society, was received by the members Apr. 1. The *Bulletin* had been inactive for the past 7 years and has been brought out by Dr. John A. Mitchell, of Monaca, assisted by Drs. George R. Boyd, Daniel B. Suffoletta, Henry C. Thel, and William G. Waddell.

DR. MARY RIGGS NOBLE has been discontinued as chief of the preschool health division in the Department of Health. Dr. Noble entered the State service in 1920 as assistant chief of Child Welfare and was made head of the bureau a year later. She was transferred to her latest post in 1933. Dr. Noble was most co-operative with the PENNSYLVANIA MEDICAL JOURNAL.

THE SIXTIETH ANNUAL CONVENTION of the American Association on Mental Deficiency was held at St. Louis, Mo., the first week in May. The following officers were elected: President, Dr. B. O. Whitten, Clinton, S. C.; vice-president, Dr. Harry C. Storrs, Wassaic, N. Y.; and secretary-treasurer, Dr. E. Arthur Whitney, Elwyn, Pa.

The 61st annual convention will be held in Atlantic City, May, 1937.

THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF PITTSBURGH conducted quite an extensive annual clinic day, May 23, for the graduating class, alumni, and members of the medical profession. Luncheon was served at the University Club. The guest speaker was Dr. John N. Hayes, of Saranac Lake, who delivered an address on "Some Recent Tendencies in the Treatment of Pulmonary Tuberculosis."

AT THE ANNUAL MEETING OF THE Philadelphia Heart Association held Apr. 29 at the College of Physicians Building, the following officers were elected: President, Dr. William D. Stroud; vice-president, Dr. David Riesman; secretary, Dr. Thomas M. McMillan; treasurer, Mr. Morris W. Stroud; directors, Dr. James E. Talley, Dr. Ross V. Patterson, Mr. James Anderson, Dr. Mary Easby, and Mrs. E. Mortimer Newlin.

INSPIRED BY THE success of the Eye Section of the Philadelphia County Medical Society which was organized a year ago, a group of prominent nose and throat specialists within the membership have petitioned the Board of Directors for the privilege of organizing a Section on Otorhinolaryngology of the society to function

in this field, as does the Eye Section in the domain of ophthalmology. This permission has been granted and the new section will be in operation shortly.

THE JOURNAL OF CONTRACEPTION, 17 West 16th Street, New York City, devoted to the biologic and clinical aspects of human fertility and its control, is published monthly. The annual subscription is \$1.00. The *Journal of Contraception* is intended to serve as a medium and forum for those who are interested in the biologic and clinical aspects of human fertility and its control. It will be distributed only to members of the medical and scientific professions.

THE NINETEENTH MELLON LECTURE, under the auspices of the Society for Biological Research of the School of Medicine, University of Pittsburgh, was held in the annex of the Pittsburgh Athletic Association on Apr. 30, at 8:30 p.m.

Dr. Frank C. Mann, director, Division of Experimental Surgery and Pathology, Mayo Clinic, professor of experimental surgery and pathology, Mayo Foundation, and president of the American Physiological Society, spoke on "The Role of the Liver as the Commissariat of the Body."

A TELLING SPEAR-THRUST at state medicine is delivered in 3 crisp sentences by Dr. Oscar H. Bohm in the *Yonkers (N. Y.) Medical News*:

"The complaint in this country is not with the quality of medical care but with the inability of a considerable portion of the population to purchase same. The same difficulty exists with respect to food, clothing, and sanitary housing. Obviously the remedy is to increase the purchasing power of labor rather than lower the standards of medical service and demolish the economic opportunities of the physician."

THE FOLLOWING OFFICERS WERE ELECTED at the annual meeting of the Allegheny County Medical Society, Apr. 21: President, Sidney A. Chalfant; president-elect, William H. Guy; first vice-president, Earl V. McCormick; secretary, George R. Harris; treasurer, Ernest W. Willetts; directors, Herbert S. Arthur, Richard J. Behan, Thomas B. Carroll, John P. Griffith, Marlin W. Heilman; judicial board, Harry G. Noah, Thomas G. Simonton; district censor, David P. McCune; delegates, Richard J. Behan, Henry J. Benz, Frank C. Blessing, John W. Frey, Zoe Allison Johnston, Gomer S. Llewellyn, Curtis C. Mechling, and Grover C. Weil.

THE FIRST INTERNATIONAL CONFERENCE ON FEVER THERAPY is to be held at Columbia University, New York City, from Sept. 29 to Oct. 3, 1936. The subjects to be discussed will include physiologic and pathologic changes as well as the treatment of gonorrhea, both in the male and in the female; gonorrheal and nonspecific arthritis; syphilis in its various stages; neurologic conditions such as multiple sclerosis, chorea, paresis, and tabes; skin diseases, etc. Information regarding this conference may be secured from the General Secretary, Dr. William Bierman, 471 Park Ave., New York City.

HOSPITAL PLANNED FOR ALL AMERICAS.—President Roosevelt gave approval May 7 to a plan for the construction of an \$8,000,000 Pan-American medical school and hospital in New York City where students of all American nations may study and exchange medical information.

Details of the proposals were explained to the President by Dr. Joseph J. Eller, director general of the Pan-American Medical Association.

Plans for the medical center call for an expenditure of between \$7,000,000 and \$8,000,000 for building and equipment. An additional \$15,000,000 will be set aside as endowment for operation, scholarships, and exchange of professors and surgeons.

DR. CHARLES W. BURR, of Philadelphia, was tendered a testimonial dinner on the occasion of the fiftieth anniversary of his graduation in medicine and his election

to the presidency of the Medical Alumni Society of the University of Pennsylvania, at the Union League, Philadelphia, Apr. 25. A feature of the occasion was the presence of 8 of Dr. Burr's classmates, namely, Drs. John F. Culp, Harrisburg, Elliston J. Morris, William E. Parke, Charles J. Hoban, Otto A. Rath, Paul J. Sartain, William H. Teller, and William Zentmayer of Philadelphia. Dr. Daniel J. McCarthy was toastmaster.

THE NATIONAL SOCIETY for the Prevention of Blindness has announced that courses for the training of teachers and supervisors of sight-saving classes will be offered at the 1936 summer sessions of: University of Cincinnati, Cincinnati, Ohio—June 22 to July 28; University of California at Los Angeles, West Los Angeles, California—June 27 to August 7; State Normal School, Oswego, New York—June 29 to August 7; Teachers College, Columbia University, New York—July 7 to August 14.

Details regarding the courses may be obtained from the university or college.

THE TWELFTH ANNUAL MEETING of the American Association of the History of Medicine was held at Hotel Haddon Hall, Atlantic City, May 4. The meeting constituted the Harvard Tercentenary 1636-1936 in honor of the oldest university in the United States. The following Pennsylvanians contributed papers: Dr. Louis H. Clerf, of Philadelphia, "Historical Notes on Foreign Bodies in the Food and Air Passages"; and Dr. Edward B. Krumbhaar, of Philadelphia, "Notes and Impressions on the Tenth International Congress held in Madrid in September, 1935."

The following officers were elected: President, Dr. Henry E. Sigerist, Baltimore; vice-president, Dr. Esmond R. Long, Philadelphia; secretary-treasurer, Dr. E. J. G. Beardsley, Philadelphia.

DR. JOHN M. WHEELER, professor of ophthalmology in the Medical School of Columbia University, and director of the Eye Institute at the Columbia-Presbyterian Medical Center in New York, was presented with the Leslie Dana Gold Medal for "outstanding achievements in the prevention of blindness and the conservation of vision" at a dinner in his honor at St. Louis, Mo., May 9. Dr. Wheeler was selected for the award by the National Society for the Prevention of Blindness in co-operation with the St. Louis Society for the Blind which offers this highly prized mark of recognition annually. The inscription on the medal reads: "Skilled Surgeon—Great Teacher—Understanding and Sympathetic Friend."

THE NEW YORK AMERICAN MAKES AN ANNOUNCEMENT OF GENERAL INTEREST TO BUSINESS AND PROFESSIONAL ASSOCIATIONS.—Effective immediately, the advertising of doctors and dentists, as well as any other medical advertising of a questionable nature, is barred from the columns of the *New York American*, and they consider this to be a long step forward, as it serves a multiple duty.

It will tend to maintain and strengthen further the ethical standards of both the medical profession and the advertising business. And it will increase belief in legitimate advertising, as it is an added protection for the consumer.

The *New York American* is to be congratulated upon the action taken in regard to unethical advertisements.

FUND RAISED FOR CHILDREN.—Dr. C. C. Carstens, executive director of the Child Welfare League of America, Inc., 130 East Twenty-second Street, New York City, has announced that the Commonwealth Fund had allotted \$24,000 to the league to finance a 4-year plan for improving medical programs of child-caring agencies throughout the country.

Dr. Carstens said the sum would enable the league to maintain in the field a pediatrician equipped to direct measures affecting the health of about 250,000 children. He emphasized the need for such supervision and said

the league "constantly finds medical services lacking or not properly organized" throughout the country.—*N. Y. Times*, Apr. 27, 1936.

THE THIRD HARRISBURG ACADEMY OF MEDICINE POSTGRADUATE MEDICAL ASSEMBLY (single day) was held at the Penn-Harris Hotel, May 7; there were no fees and no charges. The following participated: Dr. Thomas Fitz-Hugh, Jr., of Philadelphia, "The Management of Certain Blood System Diseases: Modern Views and Methods"; Dr. Wm. Francis Rienhoff, Jr., of Baltimore, "Carcinoma of the Lung: Diagnosis and Treatment"; Dr. Samuel A. Levine, of Boston, "The Bedside Recognition and Treatment of Cardiac Irregularities"; Dr. Joseph F. McCarthy, of New York, "The Inter-relation of Urology With General Medicine"; Dr. Alan G. Brown, Toronto, Can., "Some Common Errors in Diagnosis and Treatment in Diseases of Children"; and Dr. Chevalier Jackson, of Philadelphia, "Diseases of the Larynx—Benign and Malignant."

OIL MAN LEAVES \$2,300,000 TO AID SICK AND SCHOOL POOR.—Addison H. Gibson, Pittsburgh, a storekeeper's son who became a wealthy oil operator, bequeathed approximately \$2,300,000 to charity in his will, filed for probate Apr. 24. His estate is to be preserved in a trust fund for poor and needy persons requiring medical aid or hospitalization and to pay for the education of deserving youths. The fund will be known as the Addison H. Gibson Foundation.

His will declared: "I have, throughout my lifetime, been impressed by the misfortune of persons in dire need of medical and hospital assistance, but unable to obtain the same because of poverty or limited means. Also by the fact that worthy children of parents who are poor or of limited means cannot obtain the higher education which they crave and which, if they could obtain, might greatly increase their happiness and their usefulness and efficiency."

He also wrote: "I want them (the trustees) to make loans to worthy young men desiring to obtain a college education. I want the loans made to such individuals at a low rate of interest, or, if my trustees see fit, without interest. I realize that such individuals will not be able to give security for their loans. It is my belief that a great majority of the boys given assistance will repay their loans."

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

COMMONER DISEASES OF THE SKIN. By S. William Becker, M.S., M.D.; associate professor of dermatology, School of Medicine, University of Chicago. Edited by Morris Fishbein, M.D. National Medical Book Company, Inc., New York City.

The large number of excellent textbooks on modern dermatology available today makes the appearance of additional ones seem superfluous. This volume, however, can scarcely be considered a textbook. It is rather a dermatologic primer; the more common diseases only are discussed and many of the author's personal and, in some cases, controversial views are presented. The 273 pages are divided into 26 chapters, the last of which is a formulary. Eighty-three excellent photographs illustrate the text. The reviewer is in agreement with the author in stressing neurodermatitis and narrowing the conception of allergy. Necessarily some differences of opinion will present themselves to the reader; he may question considering senile verrucae, multiple epitheliomata, and benign epidermal neoplasm as synonymous terms. The introduction of the term "abdominal hives"

(Continued on page xiv.)

CANNED FOODS AND THE PUBLIC HEALTH

V. FOOD IN THE OPEN CAN

• In September 1935, the facts about food in the open can were presented on this page. It was stated that there was no reason, from the standpoint of food poisoning, why food must be removed immediately after the can is opened. This statement bore the Seal of Acceptance of The Committee on Foods of the American Medical Association.

However, since that time, two incidents have occurred which lead us to present again the facts concerning food in the open can.

First, late last fall, a national organization dedicated to the relief of human distress during war and disaster, issued a list of precautions designed to reduce accidents in the home, in which it was erroneously recommended that food be removed from the can immediately. The Department of Agriculture detected this error and called it to the attention of those responsible for issuance of the recommendations. A correction was made as soon as possible but the damage had already been done. The original safety recommendations had meanwhile been issued in schools and newspapers throughout the country, thus giving further support to this old, unbased prejudice against canned foods.

Second, in the early months of 1936, a release regarding food in the open can was

made by a national press service to newspapers throughout the land. The strong inference was made in this press release that food left in the open can might become hazardous to consumer health.

This dissemination of misinformation, referred to in the two instances cited above, has caused an increase in the number of consumer inquiries concerning the safety of food in the open can. To reply to these requests for reliable information, we can well quote from a recent release made by the Department of Agriculture (1).

(1) U.S.D.A. Press Release, Feb. 23, 1936

"It is just as safe to keep canned food in the can it comes in—if the can is cool and covered—as it is to empty the food into another container. Thousands of housewives are firm in the faith that canned goods ought to be emptied as soon as the can is opened, or at least before the remainder of the food goes into the refrigerator—one of the persistent food fallacies. The question keeps coming to the Bureau of Home Economics in letters from home-makers.

"A few acid foods may dissolve a little iron from the can, but this is not harmful, not dangerous to health. Cans and foods are sterilized in the 'processing'. But the dish into which the food might be emptied is far from sterile. In other words, it is likely to have on it bacteria that cause food to spoil.

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The Seal of Acceptance denotes that the statements in this advertisement are acceptable to the Committee on Foods of the American Medical Association.

BOOK REVIEWS

(Continued from page 754.)

ascribing to them needless operations is an example of numerous thought-stimulating statements. Chapter V on the neurodermatoses particularly commends itself to the reviewer; the author's views are clearly and concisely presented and his therapeutic suggestions logical. The book, although likely to prove of value to any physician interested in skin diseases, should prove particularly valuable to general practitioners wanting a clear, concise, discussion of the symptomatology and therapy of the commoner cutaneous diseases.

A TEXTBOOK OF ROENTGENOLOGY: THE ROENTGEN RAY IN DIAGNOSIS AND TREATMENT. By Bede J. Michael Harrison, M.B., Ch.M., D.M.R.E. (Cantab), F.A.C.R.; director of department of roentgenology, Vancouver General Hospital; roentgenologist to Vancouver Public Health Institute for Diseases of the Chest. Baltimore: William Wood & Company, 1936. Price, \$10.

This book, consisting of 776 pages, is a new departure in textbooks on roentgenology. The approach is from an angle not usually adopted in roentgenologic treatises. The first line of the preface written by Dr. A. Howard Pirie, appropriately and concisely describes the book: "The contents of this book bring the roentgenologist more into the class of consultant than any other book on roentgenology written up to the present."

The first chapter is devoted to a general discussion of basic roentgen-radiation physics, the second on radio-physiology and biology. Following this is a short discussion of technical considerations. The fifth chapter describes inflammation, together with the roentgenologic manifestations of inflammation in various conditions. The next chapter approaches infection from the same angle. Following this, the separate organs of the body are discussed from the angle of roentgenologic examinations and what they may reveal.

The book offers a very satisfactory condensed reference volume, both for the student and practicing roentgenologist. It is quite natural that in a volume of this kind the discussions are sometimes almost too concise, and to the specialist may appear too elementary. All in all, however, the volume is a very happy departure from stereotyped roentgenology textbooks.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M.D., F.A.C.S.; professor emeritus of clinical gynecology, Washington University School of Medicine; gynecologist to the Barnes Hospital, St. Louis Maternity Hospital, and St. Luke's Hospital; consulting gynecologist to De Paul Hospital and the Jewish Hospital; fellow of the American Gynecological Society and the Central Association of Obstetricians and Gynecologists; and Robert James Crossen, M.D., instructor in clinical gynecology and obstetrics, Washington University School of Medicine; assistant gynecologist and obstetrician to the Barnes Hospital, and the St. Louis Maternity Hospital; gynecologist to St. Luke's Hospital and De Paul Hospital; Fellow of the Central Association of Obstetricians and Gynecologists. Eighth Edition. Entirely revised and reset. With 1058 engravings, including one color plate. St. Louis: The C. V. Mosby Company, 1935.

Since 1907, when the first edition was released, this very complete textbook on *Diseases of Women* has enjoyed a very generous popularity. It has now reached its eighth reprinting, each one being completely revised and reset.

The textbook is primarily intended for teaching purposes. It is, therefore, conveniently arranged in a sequence that makes for ready comprehension and ref-

(Concluded on page xvi.)

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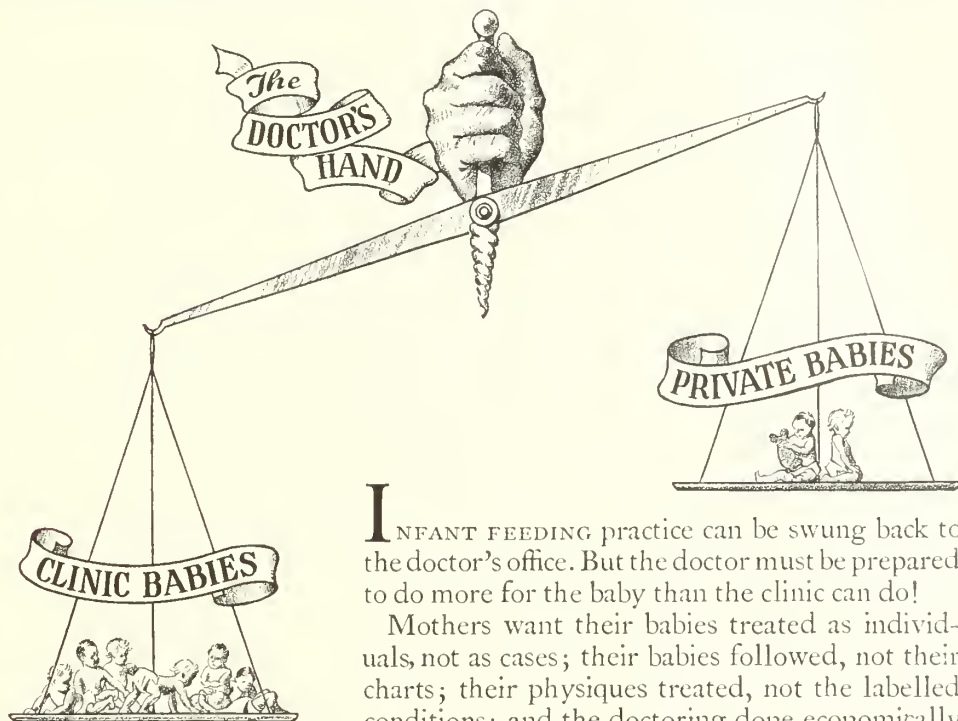
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BOOK REVIEWS

(Concluded from page xiv.)

erence. Chapters I to V deal with anatomy and physiology, gynecologic pathology, gynecologic examination methods, gynecologic diagnosis, and gynecologic treatment methods. Chapters VI to XXII deal with the diseases peculiar to the female reproductive system. The very recent conceptions of endocrinology are clearly presented in a very methodical and practical way.

Although the text stresses diagnosis, symptomatology, and treatment, actual operative technic is but casually described. This is in keeping with the primary purpose of the work. The likelihood of this work encroaching upon the authors' *Operative Gynecology* is also eliminated by this deliberate underemphasis. Of particular interest is the last chapter, which deals with medico-legal points in gynecology.

The volume contains 972 pages and is replete with photographs, diagrams, and illustrations. It is truly a masterful work, delightfully written, and it is especially recommended to medical students and general practitioners who want a most useful reference.

THE PARATHYROIDS IN HEALTH AND IN DISEASE. By David H. Shelling, B.Sc., M.D., the Johns Hopkins University and Hospital, Baltimore. Illustrated. St. Louis: The C. V. Mosby Company.

This book is a critical and thorough review of the history, anatomy, physiology, and pathology of the parathyroid bodies. Much of the book is devoted to a consideration of the clinical findings, diagnosis, and treatment of the pathologic states ensuing from disturbed parathyroid function.

The differential diagnosis of related diseases is also mentioned and serves to clarify a field of therapeutics which has been fraught with confusion. Dr. Shelling's book is also valuable from the standpoint of bibliography, for it offers a complete review of the experimental and clinical literature. The plausible theories of calcium and phosphorus metabolism are considered, and an impartial criticism of their strength and weakness is pointed out. The author has striven to present, in the light of our present knowledge of the parathyroid glandules, the manner in which calcium and phosphorus metabolism functions in health and disease. To this end a concise discussion of the theory of solutions in so far as they relate to calcium and phosphorus in the body fluids is given. At the same time the author shows the relationship to the clinical picture of both health and disease wherein parathyroid function is concerned.

Approximately the last half of the book is concerned with clinical manifestations, diagnosis, differential diagnosis, and treatment of the diseases due to parathyroid dysfunction.

If the author repeats himself in parts, it is to be considered a point of strength rather than weakness, for it adds to a clearer understanding of the problem at hand.

The book reads well and the author has successfully accomplished his purpose of writing a monograph in which may be found all phases of the subject discussed, fortified by an extensive bibliography. It is a book which can be recommended for every doctor's library without reservations.

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THE TREATMENT OF INJURIES OF THE HEAD*

WALTER E. DANDY, M.D., BALTIMORE, MD.

There is an old maxim that reads as follows: "Be not the first to accept the new, nor yet the last to throw the old aside." This is quoted apropos of the modern methods for the interpretation of the condition of the patient following injuries of the head, and also for the treatment of those injuries when treatment is or should be indicated.

Injuries of the head have become so numerous that it is perhaps natural to expect less personal contact with the patient, but that hardly seems fair or necessary. The treatment which has recently come into vogue is very much as follows: A patient coming into the accident ward is immediately transported to a distant part of the hospital for roentgen rays, after which he is sent to the operating room and a lumbar puncture performed, fluid removed, and pressure registered; finally he is returned to the ward. From those observations the physician determines the condition of the patient.

A patient who has a severely injured head is in far too serious condition to be pummeled about in this way; more than all else he needs absolute rest. Furthermore, these exhausting diagnostic methods contribute nothing whatever either in diagnosis or better understanding of the patient's condition; they may, and frequently do, produce actual and at times very serious harm. You may be told that blood was found in the spinal fluid. But what did you expect to find after a severe injury of the head? You are told exactly how much intracranial pressure exists. But if your patient is carefully observed at the bedside, that would add not one iota of information. The roentgen rays help none at all, for you are not concerned with cracks in the skull; you are interested in what happens to

the brain itself, and of this the roentgen rays tell nothing whatever. Such a system is also particularly harmful because, in depending largely upon laboratory tests, the physician loses the close personal touch and careful study which the patient needs. Scarcely any potentially dangerous condition demands more careful and constant study of the patient than that following injuries of the head.

The first and paramount concern in the treatment of cranial injuries is preservation of life; the second, when life is no longer at stake, preservation of function.

What happens within the cranial chamber following cranial injury? Why is life at stake? Exactly the same sequelae occur as when any soft tissues are traumatized. Immediately there is a swelling of the tissues, which is dependent upon two factors: blood and fluids. The combination of these two factors produces a new volume of foreign material within the cranial chamber. And since the skull is a closed and inexpandible box, nature must make adjustments so that this increased volume of fluid and blood can be compensated. There is usually no way of knowing whether all is fluid or blood, or, as obtains in most cases, a variable combination of the two, but as a rule it makes no great difference. Up to a certain point nature has remarkable methods of handling the increased volume of fluids. Following an acute injury, compensation can be made satisfactorily for a volume as large as one's fist. This is done through the cerebrospinal fluid, which circulates in a vascular system of its own. It was for just such emergencies that this system was created. Without it either an increase or decrease of volume of intracranial contents within this closed chamber would be impossible. When cranial transudates (blood and fluid) follow injury to the brain, the normal cerebrospinal fluid begins to diminish by enter-

* Read before the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

ing the blood vessels, thus making room for the traumatic transudates and equalizing up to a certain point its volume.

If all patients with injuries of the head were left to nature to treat in this way, about 70 per cent would recover. The all-important determination for the physician is to know when nature is handling the condition satisfactorily, or when she is failing and can no longer manage the increased intracranial pressure. When the latter obtains, other methods of treatment will save many additional lives—10 to 15 per cent. It is surgery alone—well timed and well executed—that offers this hope. Because of the severity of the injury in approximately 15 per cent of the cases, there is no chance of survival by any means at our command. The best results are and will always be obtained by an intensive bedside study, in which each patient is regarded as a law unto himself. To group all patients together and treat them all alike is medical heresy.

How can you know the patient's condition, and whether or not surgical intervention should come into play, and, if so, when? First and foremost is the state of consciousness of the individual. If a patient is unconscious, common sense tells us that the intracranial pressure is very high. A lumbar puncture with measurement of pressure gives no added information. If during a period of a few hours after the patient's arrival in the hospital the coma is deepening, it is equally clear that nature is losing her defensive battle and that, if this condition continues, death will ensue. If, on the other hand, the state of consciousness is improving, the intracranial pressure is lessening proportionately. Additional efforts toward therapy are then entirely superfluous and may actually be harmful.

The state of restlessness is one of the most important indicators of a patient's condition, and a very serious portent. Restlessness indicates a borderline state, i. e., intracranial pressure that is just beyond the safety zone. It means that nature is calling for help. It is a great mistake to give morphine to a patient who is restless for precisely the same reason that it is dangerous to give morphine to one with abdominal pain; it conceals one of the most important diagnostic signs.

Next in importance are involuntary micturition and defecation. The patient may seem to be fairly conscious but begins to pass urine or feces in bed. The reason for his seeming indifference is that the increasing intracranial pressure has dulled his sensorium.

There are three very important observations referable to the pulse, the temperature, and the

respiration. As long as nature is satisfactorily compensating for the increased intracranial pressure, the pulse is slow, regular, and of full quality. The first break in compensation is frequently manifest in a pulse that is irregular in rate and volume. One moment the pulse may be 80 or 90, and the next moment 40 or 50; the volume will be equally variable—one moment soft, the next full and bounding. When the break in compensation has actually occurred, the pulse rate steadily rises; each additional 10 beats add greatly to the gravity of the situation. After the pulse reaches 140, surgery offers little hope. The time for treatment is in the early stages.

The respiration follows a very similar course, slow and uniform during compensation, and irregular in rate and volume during decompensation. The dangerous significance of Cheyne-Stokes respirations is well known.

The temperature usually is an excellent index of the degree of intracranial pressure. Each degree of fever means an increasing rise of intracranial pressure. When the rectal temperature rises beyond 102° F., the patient is in a dangerous condition.

By recording in curves the frequent readings (every 15 minutes during the period of danger) of pulse, respiration, and temperature, and by correlating these curves with observations on the state of consciousness, restlessness, and sphincter control, the condition of the patient will be determined with far greater accuracy, certainty, and safety than through the use of laboratory methods.

What is the treatment for breaking compensation? There is no treatment worthy of mention except operative, and that is indicated only when death seemingly impends. To determine the necessity of, and the right time for, surgery is a decision requiring thoroughness of study and nicety of judgment. To prevent unnecessary operations requires no less keenness in diagnostic acumen. It sounds very logical and less formidable to advise a lumbar puncture and feel that by the removal of so much cerebrospinal fluid you will reduce proportionately the intracranial pressure, but it is only a mirage. Actually there is a reaction in the opposite direction; for a short time the patient is improved, but soon he will drop back to where he was, usually with a little deeper coma. The puncture has actually increased the trauma to the brain, thereby still further increasing the intracranial pressure.

Another method which has received much recognition is to inject intravenously hypertonic

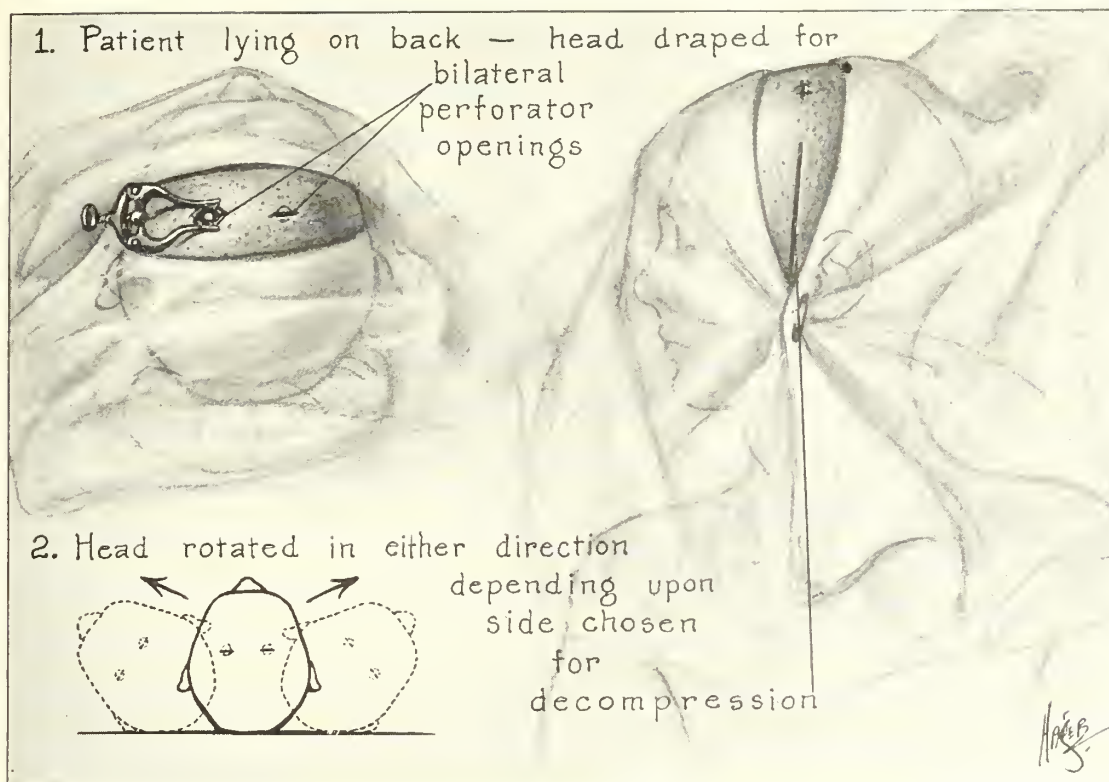


Fig. 1. Method of draping a patient requiring operation for injuries of the head. A perforator opening is made on either or both sides to determine the cause of intracranial pressure, as described in the text. A decompression, if necessary, is made on the side indicated by the findings disclosed through the perforator opening.

solutions of glucose or magnesium sulphate in order to shrink the brain. This is a very beautiful laboratory experiment. The brain is shrunken, but what happens to the patient? It is not long before the concentrated chemicals produce additional injury to the brain. In the case of severe intracranial pressure, recovery is a question of days, not a few hours, and any treatment must take care of the pressure over the required time.

A traumatic lesion that stands out from all others as a pathologic and clinical entity, and demands an entirely different line of treatment, is extradural hemorrhage. It is not common, comprising perhaps 5 per cent of the severe injuries, but with proper treatment at the proper time there should be no loss of life. If not properly treated at the proper time, nearly all cases will be fatal. The occasional survivors are almost certain to have epilepsy for the remainder of life. It is not always possible to diagnose an extradural hemorrhage, but certain signs and symptoms lead us to suspect it very strongly. The degree of trauma is usually not severe. Usually there is a momentary loss of consciousness, then a free interval of consciousness, soon to be followed by coma. The patient

gets up, walks, and 15 to 30 minutes later begins to get drowsy; coma then rapidly develops. In 3 to 5 hours the condition is desperate from intracranial pressure.

The next symptom of an extradural hemorrhage is a convulsion beginning in the face (always in the face) and progressing to the arm and then to the leg; this sequence in the attack is invariable. Very frequently paralysis develops in exactly the same order, namely, the face first, arm next, and finally the leg.

An extradural hemorrhage results because a crack in the bone crosses the temporal region and tears the middle meningeal artery. Once torn, its little branches break off successively with each increase in the size of the clot so that soon there is a vicious circle, i.e., more clot, more branches torn, and soon the hematoma causes coma. There is but one treatment for this condition, namely, to expose and tie or thrombose the middle meningeal artery and evacuate the clot. This is very simply done and entails no risk.

Aside from this group of cases, all must be grouped together under the general heading of intracranial pressure. It is impossible to know whether the fluid and blood are within or with-

out the brain, or whether the increased volume is principally fluid or blood. The operative attack, here suggested, is one that we have been using the last few years. It is simple of execution and in many instances immediately corrects the underlying condition. This treatment is only for those who are passing through or have passed through the period of breaking compensation, i. e., when life is at stake. The accompanying photograph shows the patient draped so that an incision may be made, if need be, anywhere between the tragus of right and left ears, the line being drawn directly across the vertex. All is usually done under local anesthesia although moderate doses of avertin are not contraindicated. If there is no sign of paralysis of one side of the body and no signs localizing the lesion to one cerebral hemisphere, a small perforator opening is first made on the left side, if the patient is right-handed, over the temporal or parietal region. Not infrequently a great quantity of fluid or blood will be found, and its mere evacuation will save the patient's life. If there is no great volume of fluid or blood over or beneath the dura, the release of which can greatly reduce the intracranial pressure, and no evidence of a blood clot, the wound is closed, the head turned to the other side, and a similar opening made on this (the right) side. Frequently, when nothing has been found on the first side, a considerable quantity of fluid or blood will be found on the second side. If neither of those punctures contribute to pressure relief, a right-sided subtemporal decompression is performed. If a clot is disclosed on either side, a decompression is made on that side.

In competent hands a subtemporal decompression is without risk, and it provides the maximum relief of intracranial pressure over the entire critical period. There are, of course, many cases in which the intracranial pressure is so great that nothing will be helpful. These are usually moribund in the first 6 hours.

To recapitulate, the essential considerations in the treatment of acute injuries are: Careful and continuous observation of the patient, keeping him absolutely at rest and avoiding roentgenography, transportation, and lumbar punctures; surgery comes into play only when nature is clearly failing.

The danger to the patient is by no means over when the acute phase of the injury has passed. Many other sequelae can occur subsequently. For example, subdural hematoma are not manifest for several weeks after the accident. The patient may be perfectly conscious, having

perhaps a bradycardia, a little headache, or double vision; you suspect something is wrong because the patient is not entirely well. It is usually necessary to use ventriculography to locate this lesion, which covers much of a hemisphere and to a surprising depth. It is then easily evacuated and the patient cured at almost no risk.

There is also subdural hydroma—exactly the same as the foregoing except that there is a big bed of fluid instead of blood. This merely requires tapping to effect a cure. This condition may be mistaken for an abscess of the brain, for there is usually fever and leukocytosis.

If fissures pass through the base of the skull, meningitis or brain abscess may develop. If cracks extend through the paranasal sinuses, air may enter the brain and pneumocephalus may develop. The air may be forced by coughing or sneezing through a very small opening and become trapped in the brain because the same degree of violence cannot return the air, or there may be a ball-valve action along a sinus tract. Under these conditions the air is retained in the cranial chamber. This condition is cured simply by closing the dural opening with sutures or a transplant of fascia, or the bony opening may be closed with bone wax.

Then there are carotid-cavernous arteriovenous aneurysms producing pulsating exophthalmos. When a basal fissure or a spicule of bone perforates the carotid artery, the blood pours into the cavernous sinus, thence into the ophthalmic vein causing exophthalmos with pulsation, proptosis, a murmur harassing to the patient and plainly audible to the examiner. This condition is usually cured by ligating the internal carotid artery.

One sequel of an accident is more common, and the correct treatment of it is more important to the patient, than all late effects combined, namely, posttraumatic neurosis. Although this is due to a congenital inferior mental setup, it may be improved or made worse by the treatment that is given. Fundamentally it indicates fear and lack of confidence, or it may be due to malingering pending financial settlement. Always they are the most distressing cases to handle. It is very difficult to cure a patient of a neurosis which has continued for a length of time. The time to stop a neurosis is in the very beginning; it is better still to prevent it. The difficulty of cure is in direct proportion to its duration.

Posttraumatic neurosis usually, but not always, follows trivial injuries of the head. The patient usually has a pain at the site of the injury which is constant and radiates from that

point down the neck, shoulders, and back. Frequently there is a sensation of pressure or expansion of the head. The muscles in the neck are usually tight and sore. The patient has phobias, cannot sleep, has nightmares; he is afraid to work, afraid that everything he does intensifies the pain; he becomes a chronic invalid.

A young doctor was perfectly typical of this group. During the winter he had a minor automobile accident in which his head was struck, but he was only momentarily dazed. He at once drove across the snow-covered mountains to Pittsburgh and back. When he reached home another physician said, "You should be in bed." He was carefully—much too carefully—studied in the hospital over a period of many weeks, several incorrect diagnoses were made, and his fears were aroused. It was 3 years before he began working again. His brain had never suffered any injury of note. He had lost his nerve largely by oversolicitous medical attention.

You are all familiar with the mental state of an aviator who falls and does not again go up immediately. He is like the patient with a neurosis. He is through because of loss of nerve. Such neuroses are major problems to the physicians of industrial companies and in a legal way. These patients are perfectly well physically; they have received no permanent injury to the brain; in fact, no organic lesion can cause such symptoms.

After cranial injuries, patients should receive every encouragement but not sympathy; they should get out of bed and become mentally and physically active as quickly as their condition will permit. They should go back to work as quickly as possible. The dangers of fear far outweigh any possible physical harm (there is none). The injury should be minimized, never magnified; the opinions should be unequivocal, never halting and uncertain.

To recapitulate: Our plan of attack after cranial injuries is to perform operations only in cases that we consider so desperate that life is at stake. All other patients are let strictly alone in order that nature's efforts may not be hindered. Late sequelae are treated as the individual lesion demands; usually it is surgical. Psychoneuroses are avoided by getting the patients out of bed and at work as quickly as possible.

Every case of cranial injury should be regarded as a law unto itself; the patient should be carefully and frequently studied at the bedside and not by the laboratory methods. Let nature go as far as she is able; this is adequate in more than two-thirds of the cases. After this, surgery alone can be of help. If the time for operation is carefully chosen by a knowledge of the patient's condition, operative intervention when skillfully done will add nothing to the risk and will save many additional lives. If surgery comes too late, it is merely meddling.

Johns Hopkins Hospital.

THE RATIONALE OF ELECTROSURGICAL OBLITERATION OF THE GALLBLADDER*

A Clinical Study of 213 Consecutive, Unselected Cases without Mortality

MAX THOREK, M.D., CHICAGO, ILL.

One or 2 per cent is the average immediate operative mortality in classical removal of the gallbladder by competent surgeons. A different picture unfolds in complicated cases in patients over age 40. Here the mortality is about 10 per cent; Enderlen and Hotz reached these conclusions based on a study of 12,144 cases of biliary tract disease treated surgically by various competent operators. In this series the immediate (global) operative mortality was 9.28 per cent. Verbrycke, quoting Lyons, states that in a review of a series of his cases in which operation was performed by first-class surgeons the immediate mortality was 10 per cent, and there

were serious hospital complications in 33 per cent.

Table I offers a bird's-eye view of the mortality up to 1932.

Deaths and complications following classical cholecystectomy and surgery of the biliary tract are usually due to peritonitis, shock, hemorrhage, pulmonary embolism, pneumonia, or cholemia. The first 4 enumerated are by far the most common causes and seem to be more or less inseparable from any form of scalpel surgery. They are directly traceable in most instances to biliary seepage, especially from the bed of the gallbladder. The time-honored belief that biliary leakage following cholecystectomy is due in most cases to the giving away or cut-

* Read at a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

TABLE I

MORTALITY STATISTICS IN GALLBLADDER OPERATIONS FROM 1908 TO 1932

Year	Surgeon	No. of cases	Mortality per cent
1908	Cotte, M.	Not given	Males 33 Females 18
1921	Davis, B. B.	563	8.17
1923	Enderlen and Hotz	12,144	9.28
1923	Brentano	280	Males 36.78 Females 17.29
1925	Villard	131 cholecystostomies	Males 34 Females 21
1926	Duclos	Global mortality	Males 36 Females 23
1927	Boutin	18 cases complicated by perforation	Males 71.43 Females 27.21
1928	Davis, B. B.	160 cases	3.75
1929	Cattell, R. B.	311 cases (complications, 55 cases)	Males 9.1 Females 6.8
1930	Sanders, R. L.	18 series of cases garnered from the literature totaling 60 cases	15
1927	Verbrycke	169 patients operated on by 23 surgeons; 1 surgeon in this series had 10 cases; another surgeon in this series had 20 cases	8.8 28.5 15
1932	Tixier, Clavel, and Chabannes	11 males 149 females	Males 36.38 Females 16
1910 to 1932	Thorek	649 cases 138 males 511 females	Males 16.8 Females 9.4

ting through of the ligature on the cystic duct has been proved untrue by clinical experiences and necropsy examinations. The contrary is a fact. The vast majority of leakages issue from the gallbladder bed and only rarely from the cystic duct. The reason for this becomes obvious when we consider that the gallbladder bed contains not only bile capillaries (often dilated) but also bile ducts of considerable caliber in from 15 to 25 per cent of individuals (Figs. 1 and 2). During the removal of the gallbladder with the knife, these bile passages are injured and bile seepage results. Another important point: Surgeons of experience know that it is not always possible to cover with peritoneum the denuded surface of the gallbladder bed in a classic cholecystectomy. It is also a fact that bile, sterile or not, acts as a true chemical poison in the peritoneal cavity. Drainage invites bile seepage which is a source of serious trouble, the importance of which has been underestimated and the source of which has been misconstrued. It is significant in this connection that Bakes observed bile issuing from the wound 230 times in 346 cases of simple cholecystectomy. He and his co-workers were impressed by the postoperative appearance of bile in the dressing "in nearly all the cases."

The evils and dangers of drainage are too well known to require further emphasis. Briefly, they are bile seepage (biliary peritonitis), hemorrhage (arrosion of vessels), cardiac embarrassment (particularly in the aged), acute dila-

tation of the stomach, pneumonia (usually right lobar), fistulae, hernias, evisceration, stenosing sequelae, etc.

It would seem, theoretically at least, that a dry field and a tightly closed abdomen would be ideal; however, a scalpel cholecystectomy with completely satisfactory peritonization can be accomplished only in a minority of cases. On the other hand, it must be ever remembered that in certain conditions drainage of the biliary tract is a *sine qua non*, particularly in cases of obstruction of the common bile duct, jaundice, progressive septic cholangitis, inability to peritonize the gallbladder bed, and the like.

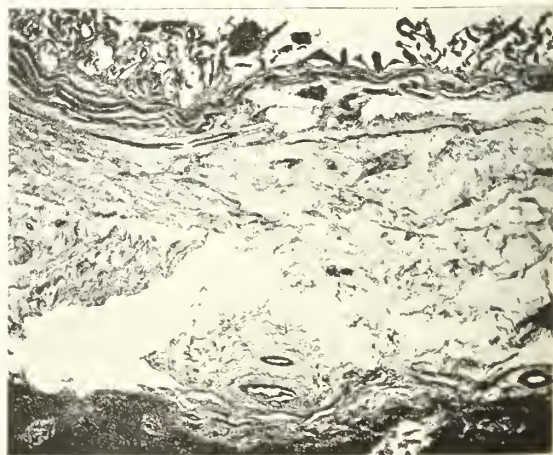


Fig. 1. Gallbladder bed showing bile passages marked xx—at low magnification.

The answer to the question of how to circumvent the evils of drainage is to be found in (1) omitting drains if possible, (2) so protecting the gallbladder bed that no bile leakage results, and (3) eliminating the infected gallbladder.

To put it more tersely, the raw surface resulting from a scalpel dissection of the gallbladder from its bed appears to be the *bête noire* in cholecystectomy. This being the case, elimination of seepage from the gallbladder bed seems to be the keynote to the solution of the problem.

Experimental studies have shown that, by electrocoagulating the entire thickness of the posterior wall of the gallbladder and even the gallbladder bed, bile seepage may be avoided. Electrocoagulation results in an occlusion (by coalescence) of the walls of the capillaries and bile ducts and in the formation of a dry, sterile layer of inert tissue (Fig. 3)—quite in contrast to the seeping, bleeding, raw, gaping surface in the gallbladder bed area following the dissection of the gallbladder with the scalpel. It should be emphasized that electrocoagulation must not be confounded with electrocauterization or thermocauterization. These are 2 entirely different processes having different effects. Unlike electrocoagulated surfaces exposed to the air (face, etc.), such areas within the abdomen, in the absence of infection, do not slough, do not bleed, but become encapsulated and finally resorbed. Electrocoagulation permits destruction of tissue to any depth desired, simultaneously sealing lymphatics, blood vessels, and biliary canaliculi and giving rise to a dry, sterile, impervious surface tending to agglutination with serous surfaces.

In patients seeking relief from symptoms of gallbladder disease, the surgeon often finds the gallbladder macroscopically normal in appearance, yet its removal frequently relieves these patients of their complaints. Histologic scrutiny of such gallbladders often reveals diverticula, foci of infection, intramural abscesses, or intramural calculi. The mucosal infoldings (Rokitansky-Aschoff sinuses; Luschka, 1863; Aschoff, 1905) frequently harbor cholesterol concretions (stones), and islands of round cells surrounding these diverticular outpouchings are commonly observed.

According to Schmiedheiny, "in all forms of cholecystitis the so-called liver bed is almost always affected." The pathologic processes transgress the tunica fibrosa and, encroaching on the subserosa and serosa, frequently invade the contiguous liver parenchyma.

Electrocoagulation provides an efficient meth-

od of eradicating such foci. It does not cause thrombosis in the blood capillaries and smaller vessels; the possibility of embolus is thus greatly minimized.

It has been shown (Kuntzen and Vogel) that electrocoagulated areas of the liver in guinea pigs and dogs tend to prompt adhesions between the omentum, the covering of the intestines, or any contiguous serosal surface. Adhesions thus formed were dense at the height of the reparative process but later tended to regress, and after some months "only a few fine strands connected the coagulated area with the omentum." I had occasion to substantiate these observations in some of my experimental studies on dogs and macacus rhesus (Fig. 4).

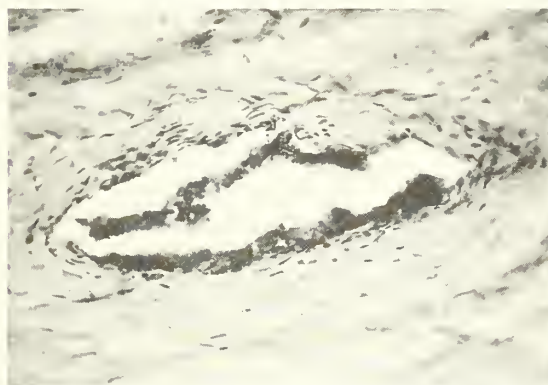


Fig. 2. Same as preceding section showing bile duct in gallbladder bed—at high magnification.

Electrocoagulated areas on the surface tend to extrusion, whereas in the abdomen there result agglutination, encapsulation, and absorption.

Hemostasis as a result of electrocoagulation does not ensue by reason of thrombosis but by coalescence and fusion of the walls of the vessels. Coagulation thrombosis is in sharp contradistinction to true thrombus formation (Aschoff). Secondary hemorrhage does not occur because of the pressure exerted by the sequestered, coagulated mass against the connective tissue capsule. Also, a coagulated depth of 3-5 mm. is not limited to that depth but actually to about 2-3 cm.

The periportal connective tissues respond to the electrocoagulating current with development of young fibroblasts. Studies were carried out (dogs, macacus rhesus, and macacus leoninus) in which obliteration of the gallbladder wall attached to its bed was done. The coagulated surface was covered with the freely dissected, pedicled, or nonpedicled falciform ligament and drainage entirely omitted. The animals recovered. The method was then extended to hu-

mans and gradually the following technic was evolved:

TECHNIC OF OPERATION

Step 1.—General or spinal anesthesia, preferably the latter when trained assistants are available. The patient is placed in the Mayo-Robson position with the lower thorax and upper abdomen elevated by sandbags, inflated cushion, or elevators attached to the operating table. The patient rests on a flat indifferent electrode (buttocks or back).^{*} An ampule of pitressin administered subcutaneously half an hour or so before the operation tends for better exposure by keeping the contiguous hollow viscera contracted. Ample exposure is essential.

Step 2.—The falciform ligament is freely detached from its moorings on the anterior abdominal wall. It may be left attached by a pedicle above; a tongue-shaped flap thus results, which is composed of areolar and adipose tissue. Of late I detach the falciform ligament completely because following the operation some patients occasionally complained of pulling sensations along the ligament. Since the ligaments have been completely detached, these complaints have ceased. Some small vessels bleed occasionally where the ligament has been detached from the parietal peritoneum; these must be secured by ligatures.

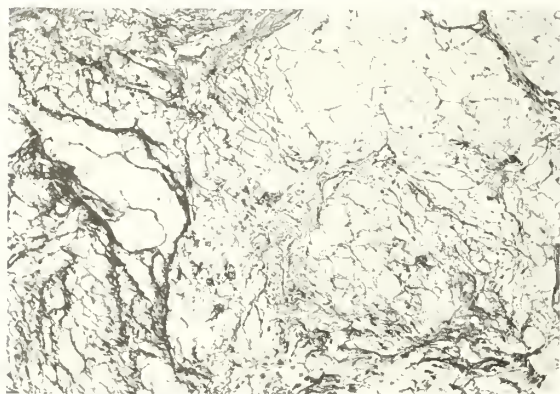


Fig. 3. Note hyaline-like structure resulting from electrocoagulation of the gallbladder wall.

Step 3.—Presently the ligament, if pedicled, is returned to the abdominal cavity; if completely detached, it is placed in a small basin of warm salt solution or wrapped in a moist lap sponge. The viscera are packed out of the way with moist, warm lap sponges. Morison's pouch must be packed off with lap packs. Proper retraction exposes the field of operation. The hepatoduodenal ligament, the foramen of Winslow (if patent), the extrahepatic biliary pas-

sages, the contiguous structures, and the appendix are thoroughly explored. Be on the lookout for abnormalities of the ducts or vessels (present according to Flint in 70 per cent of cases).

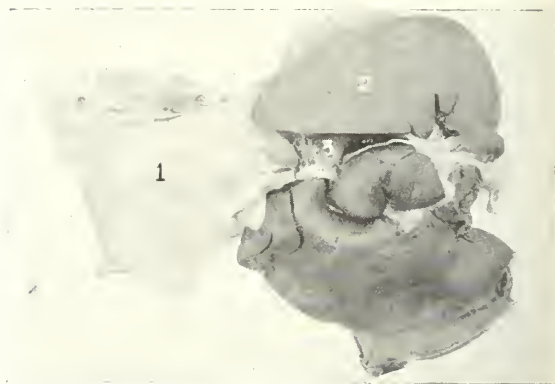


Fig. 4. Results of cholecystelectrocoagulectomy with falciform ligament implantation in a police dog. Specimen removed 7 weeks after operation: (1) Falciform ligament; (2) lobe of liver; (3) gallbladder bed; (4) ligated cystic duct. Fine adhesions between falciform ligament and gallbladder bed; firm union of lower end of falciform ligament with stump of ligated cystic duct.

Step 4.—Grasp the fundus of the gallbladder with a pair of forceps. Aspirate the gallbladder contents. An aspirating device consisting of a 2-way arrangement which permits the contents of the gallbladder to be aspirated and ejected into a receptacle without disengaging the trocar from the gallbladder is now being used. The aspiration of the gallbladder contents is followed by the introduction through the trocar, still in situ, of some antiseptic solution (hexylresorcinol, iodine, or alcohol). The accessible extrahepatic biliary passages are explored. In view of the fact that opening the common duct increases the mortality (5 to 7 per cent), exploration as a routine, unless definitely indicated, is not done. The fact that bile harbors pathogenic micro-organisms in about 5 per cent of cases is the reason for the introduction of the antiseptic fluid.

Step 5.—The cystic duct and its artery are encircled with a No. 1 iodized catgut ligature cut short. Above this, another ligature is introduced and treated similarly. Although any needle may be used, I prefer the needle carrying the ligature to be blunt pointed.

Step 6.—A curved clamp is placed above the second ligature, and the cystic duct and the cystic artery are divided between the clamp holding the neck of the gallbladder and the ligature with a pair of fine, long-handled dissecting scissors which have been dipped in iodine solution.

Step 7.—A nonspilling bile receptacle (Fig. 5) is introduced into the operative field. Its

^{*} Of late I have been using short-wave currents with entire satisfaction.

cover is opened and placed in such a manner that the lower end of the detached neck of the gallbladder projects into it. The forceps clamping the lower end of the gallbladder is removed and the contents of the gallbladder are permitted to escape into the receptacle. The cover of the receptacle is closed and removed from the abdomen. With a pair of rubber-covered artery forceps, the opened gallbladder is grasped.

Step 8.—Electrocoagulation of the entire thickness of the gallbladder wall attached to its liver bed is done. A thorough knowledge of the problem involved is essential (Fig. 6). Electrocoagulation is begun at the neck of the gallbladder by snugly applying the electrode to the mucous membrane. Judgment as to how deep to coagulate will be acquired by attention to detail. It must be remembered that in this procedure the heat is not brought by the electrode to the surface acted upon but is generated within the patient's body (750,000 to 3,000,000 oscillations per second are developed depending upon the type of apparatus used; Fischer's Model H diatherm outfit is used). Carbonization is avoided by snug application of the electrode thus preventing a dielectricum. Coagulation will be manifest by a greenish-yellow discoloration of the tissues. A strip of tissue corresponding to the attachment of the gallbladder to its underlying bed is thus coagulated proceeding from below upward or, if convenient, from above downward. It must be remembered that, for each mm. of coagulated surface, there is approximately one-half cm. of lateral and deep coagulating effect on the tissues acted upon.

Step 9.—The gallbladder wall is resected on both sides of the coagulated zone, leaving only a ribbon of coagulated tissue attached to the gallbladder bed.

Step 10.—The edges of the coagulated zone are approximated by interrupted or continuous catgut sutures (No. 0 or 1). Tie the suture embracing the lowermost point of the electrocoagulated ribbon in the middle, leaving them of equal length. They are put aside for the moment.



Fig. 5. Author's nonspilling bile receptacle.

Step 11.—The gloved hands are rinsed. The field of operation is dried. The detached falciform ligament is delivered. The ends of the lowermost suture of the coagulated ribbon left long are picked up. Each end is armed with a curved needle. A free margin of the detached falciform ligament is grasped with a pair of Ailis forceps. Pick up first one, then the second needle of the ligature left long, and pass each through the lower third of the ligament. The suture is tied. This will bring the approximated coagulated zone in direct contact with the serous surface of the ligament. A peritoneal protection is thus formed. The free upper border of the ligament is attached to the upper end of the coagulated (now sutured) surface. It will be seen that the falciform ligament in its new position prevents the stomach, duodenum, or large

Electrocoagulation of hepatic
wall of gall bladder

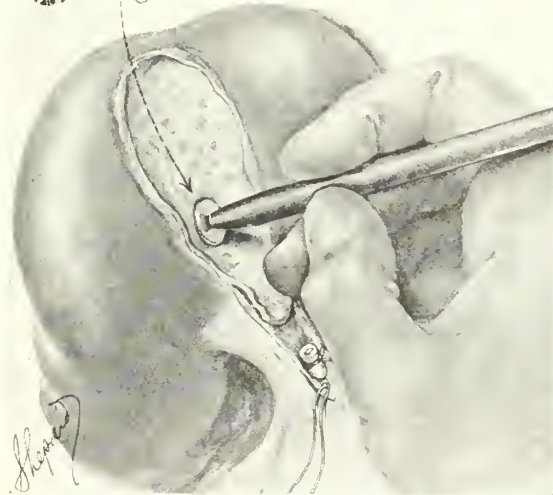


Fig. 6. A strip of tissue extending from the neck of the gallbladder to the top, corresponding to its attachment to the gallbladder bed, is electrocoagulated.

bowel from adhering directly to the coagulated surface (Fig. 7). In my earlier operations the second ligature was left long on the cystic duct and the free end of the duct was implanted into the lower part of the falciform ligament. Since transient jaundice occurred in some cases, which was due to kinking of the common duct brought about by a pull on the cystic duct, this step was abandoned and the ligated cystic duct is now left free and simply in contact with the lower end of the falciform ligament to which it apparently soon becomes adherent.

Step 12.—The retractors and lap sponges are removed. The elevator on the operating table is lowered, thus relaxing the abdominal wall, which is completely closed in layers. No drains are used.

7. An understanding of the currents used is essential. L. W. Whitaker (Boston) used fulguration with drainage with a mortality of 18.75 per cent.

850 Irving Park Boulevard.

ABSTRACT OF DISCUSSION

JAMES F. PERCY (Los Angeles, Calif.): Surgeons as a rule are not familiar with this method of controlling hemorrhage in and about the liver. This expedient is also very valuable in partial resections of the pancreas. My major experience has been with the actual cautery although I have had 4 years continuous practical work with surgical diathermy and electrocoagulation.

The surgeon who has not employed either one of these in and about the liver has missed something valuable both for his patient and for himself. How to make an incision into or a partial resection of the liver without hemorrhage with either the electrosurgical knife or the actual cautery is something worth knowing. A liver biopsy or a partial resection can be done and the abdomen closed, and the hepatic wound will take care of itself.

Three years ago a young woman, age 17, had an

extensive, apparently primary carcinoma of the lower right lobe of the liver. Through a vertical incision in the right rectus muscle, I tipped the liver upward, bringing the mass outside the abdomen, and fastened the parietal peritoneum to the apparently normal part of the organ above the malignancy. The wound along the peritoneal stitched area was packed with strips of washed iodoform gauze for 3 days. Following this, the presenting abnormal mass was resected with the actual cautery knife followed by infiltration of heat into the walls of the liver that remained until they were, as advised by the late Dr. John Byrne of Brooklyn, N. Y., "like horn or leather." This left a great crater in the lower part of the body of the liver which gradually contracted and pulled the hole in after it, if I may be permitted so unsurgical a term. There was no hemorrhage and consequently no shock or other untoward experiences. She had her usual breakfast the next morning. The patient did well for 3 months and then developed symptoms of generalized body metastases from which she died.

I want to emphasize the point the essayist made that, in the process of coagulating the tissues that are left, it should be done slowly to permit the infiltration of heat especially if malignancy is an important part of the surgical problem.

MODERN METHODS OF PREVENTING MEASLES*

JOSEPH S. BAIRD, M.D., AND LLOYD W. PUMPHREY, M.D., PITTSBURGH

There appears to be very little natural immunity in human beings to measles. Approximately 90 per cent of the population contract the disease. In 1917 C. Herman stated that infants under 2 months of age are absolutely immune; he believed the immunity was established through the placenta. This immunity gradually becomes less absolute and is apparently lost around 8 months of age.

TUNNICLIFF ANTISTREPTOCOCCUS MEASLES SERUM

An antitoxin from the green-producing streptococcus was isolated by Tunncliff in 1917. The serum should be given intramuscularly in 5 c.c. doses as a rule. If more than 3 days has elapsed since exposure, the dose should be doubled. The chief value of immune goat serum is for checking epidemics in hospitals and institutions. It does not confer a permanent immunity. The advantage of the immune goat serum over human convalescent and whole blood is due to the ultimate possibility of its general availability.

Tunncliff immune goat serum, if given within 3 days of exposure, apparently is a reliable measles prophylactic. Modification of the mea-

sles attack usually occurs if given later. Serum rash appeared in 13 per cent with no associated serious reactions. Protection, if the serum is given not later than the fifth day of exposure, seems to be around 90 per cent. Passive immunity is endured from 2 to 4 weeks. Our investigation indicates that it is being used very little at the present time.

CONVALESCENT HUMAN SERUM

Convalescent serum for measles, taken from 5 to 7 days after the return to a normal temperature, ordinarily protects the recipient if given during the first 3 days after exposure. Given later, it either prevents or favorably modifies the disease. From 6 to 10 c.c. is given

TABLE I

MEASLES PREVENTION WITH PLACIMMUNIN—
JUNE, 1934

Patient	Age	Placimmunitin	Days after exposure when injected	Results
1	9 months	5 c.c.	4	No measles
2	17 months	5 c.c.	4	No measles
3	22 months	5 c.c.	4	No measles
4	2 years	5 c.c.	4	No measles
5	3 years	5 c.c.	8	No measles
6	3 years	5 c.c.	8	No measles
7	3 years	5 c.c.	8	No measles
8	4 years	5 c.c.	8	No measles
9	4 years	5 c.c.	8	No measles
10	4 years	5 c.c.	8	No measles
11	6 years	5 c.c.	8	No measles
12	6 years	5 c.c.	8	No measles
13	7 years	5 c.c.	8	No measles
14	8 years	5 c.c.	8	No measles

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

subcutaneously, depending on the age of the child. When given in larger amounts after symptoms have started, it seems to help some. Protection lasts from 1 to 3 months. Its use is urged in infants and sickly older children who have been exposed, but not in healthy older children.

Pooled serum is more desirable than that from one patient convalescing from measles. Serum preserved in 0.5 per cent phenol and kept on ice in ampules loses much of its value after 3 months. Serum or whole blood from those who have had measles some years previously is dependable and, because of the ease in procuring it, is more practical than the convalescent serum. Convalescent serum gathered and prepared under ordinary conditions can be made available only when the time for its usefulness has largely gone by. Between 65 and 88 per cent are protected if the serum is given early and in sufficient doses.

ADULT NORMAL BLOOD SERUM

The difficulty encountered in securing sufficient doses of convalescent measles serum led investigators to try the value of adult serum or whole citrated blood. Discrimination in selection of donors is advised. If choice is possible, older children of the family who have had measles or adults who have had the measles not more than 10 to 15 years previously should be selected. Thirty c.c. of whole blood, 15 c.c. in each buttock, is suggested as an arbitrary dose, but much less blood from a good donor may be sufficient. The sero-attenuation and the seroprevention from whole blood apparently is nearly a duplication of convalescent serum so far as results are concerned. Of these 3 methods, the injection of whole blood from selected donors represents the easiest, least objectionable, and most practical means of preventing measles, particularly at the onset of an epidemic.

IMMUNE GLOBULIN (HUMAN)

During the period from April, 1934, to July, 1935, there were 13,272 cases of measles reported to the Pittsburgh Department of Public Health. Measles being so prevalent, it was inevitable that there would occur crossed infections of this disease in the pediatric wards of many of the hospitals in the city during this time.

At the Municipal Hospital, as these crossed infections occurred on the non-measles wards, it was decided to follow up the work of Charles F. McKhann and F. T. Chu, and Charles F. McKhann and H. Coady by the use of placental

extract in the prevention, modification, and treatment of measles. This presentation will touch only upon the results obtained therewith in prevention and modification.

None of our patients so treated had a history of measles according to the past personal history as obtained from the parents. They were all patients convalescing from scarlet fever or diphtheria. Some were in fairly good condition; others were quite toxic as a result of the infections.

The first groups were treated with the experimental material which was supplied to us by E. R. Squibb & Sons under the name of Placimminin. The name was changed to Immune Globulin (Human) when it appeared on the market several months later. The dosage of Placimminin was 5 c.c. as preventive and 6-7 c.c. as a therapeutic measure. All injections were made intramuscularly.

Regarding intimacy or degree of exposure, it is safe to assume that all measles-susceptible cases were definitely exposed to the disease once it developed on a particular ward. Due to limited isolation bathing facilities, it has always been the experience in previous years that, under such circumstances, all measles susceptibles were infected.

Control patients developed measles in several instances. These were mostly unintentional cases and occurred as a result of incorrect personal histories concerning measles obtained from the parents.

Table I indicates the results obtained on 14 cases with the first lot of Placimminin in June, 1934. This lot contained the whole or unfractionated bulk of the placental extract and shows perfect protection, although 10 of the cases did not receive the 5 c.c. injection until the eighth day following exposure. In this group there were 2 control cases in which prevention was attempted with 20 c.c. and 30 c.c. of fathers' whole blood given on the fourth day of exposure. Both of these children developed modified measles 26 days after exposure.

Table II shows results with a second lot of Placimminin. This lot was fractionated, not whole bulk of the placental extract. Prevention was less efficient here as 31 per cent developed modified measles. Note, however, the prolonged incubation period and the fact that the severity of this modified disease was about the same as an attack of rubella with no complications.

The material became commercially available in November, 1934, under the name of Immune Globulin (Human). This was said to be a refined and concentrated material but was frac-

TABLE II
MEASLES PREVENTION WITH PLACIMMUNIN—JULY TO OCTOBER, 1934

Patient	Age	Placimmudin	Days after exposure when injected	Results
15	4	5 c.c.	2	No measles
16	4	5 c.c.	3	No measles
17	3	5 c.c.	4	No measles
18	5	5 c.c.	4	Modified measles in 27 days. Duration 3 days. No complications
19	2	5 c.c.	5	No measles
20	2	5 c.c.	5	No measles
21	2½	5 c.c.	5	No measles
22	3	5 c.c.	5	No measles
23	1½	5 c.c.	7	No measles
24	2	5 c.c.	7	No measles
25	2½	5 c.c.	7	No measles
26	3	5 c.c.	7	Possible measles in 30 days. Duration 3 days. No complications
27	2½	5 c.c.	8	Modified measles in 21 days. Duration 3 days. No complications
28	3	5 c.c.	8	No measles
29	4	5 c.c.	8	No measles
30	6	5 c.c.	8	Modified measles in 21 days. Duration 3 days. No complications
31	6	6 c.c.	10	Modified measles in 26 days. Duration 3 days. No complications

TABLE III
MEASLES PREVENTION IN HOME CASES WITH IMMUNE GLOBULIN (HUMAN)—JANUARY TO APRIL, 1935

Patient	Age	Immune Globulin (Human)	Days after exposure when injected	Results
32	3	2 c.c.	3	No measles
33	3½	2 c.c.	3	No measles
34	2	1½ c.c.	5	Measles in 13 days. Acute otitis media, right, for 1 week
35	6	1½ c.c.	5	Measles in 13 days. Septic sore throat with marked cervical adenitis
36	4	2 c.c.	3	Modified measles in 12 days. No complications
37	6	2 c.c.	3	Modified measles in 12 days. No complications
38	5	2 c.c.	3	Modified measles in 15 days. No complications
39	7	2 c.c.	4	Modified measles in 18 days. No complications
40	1	2 c.c.	3	Modified measles in 21 days. No complications
41	5	2 c.c.	4	Modified measles in 12 days. No complications

TABLE IV
MEASLES PREVENTION WITH IMMUNE GLOBULIN (HUMAN)—JANUARY TO APRIL, 1935

Patient	Age	Second preparation of Immune Globulin (Human)	Days' exposure	Measles incubation period	Temperature	Days' duration	Complications
42	16 months	2 c.c.	5	None	...	..	....
43	19 months	2 c.c.	1	None	...	..	....
44	20 months	2 c.c.	5	None	...	..	....
45	1 year	2 c.c.	1	None	...	..	....
46	2½ years	2 c.c.	4	17	102	3	None
47	2½ years	2 c.c.	1	None	...	..	....
48	2½ years	2 c.c.	1	25	102	2	None
49	2 years	2 c.c.	1	None	...	..	....
50	2 years	2 c.c.	1	None	...	..	....
51	3 years	4 c.c.	1	44(?)	102	2	None
52	4 years	3 c.c.	3	15	102	2	None

TABLE V
MEASLES PREVENTION WITH IMMUNE GLOBULIN (HUMAN)—APRIL, 1935

Patient	Age	Second preparation of Immune Globulin (Human)	Days' exposure	Measles incubation period	Temperature	Days' duration	Complications
53	9 months	2 c.c.	4	16	101	2	None
54	2 years	2 c.c.	4	None	...	..	....
55	3 years	2 c.c.	4	14	100	2	None
56	3 years	2 c.c.	4	18	103	4	None
57	3 years	2 c.c.	4	18	103	3	None
58	3 years	2 c.c.	4	15	104	4	None
59	3 years	2 c.c.	4	18	103	5	None
60	3 years	2 c.c.	4	14	102	5	None
61	3½ years	2 c.c.	4	18	102	7	None
62	4 years	2 c.c.	4	25	103	8	None
63	5 years	2 c.c.	4	19	103	5	Bilateral broncho-pneumonia with mitral endocarditis. Recovery
64	6 years	2 c.c.	4	None	...	..	....
65	6 years	2 c.c.	4	16	102	3	None
66	7 years	2 c.c.	4	None	...	..	....

tionated and not the whole placental bulk. The suggested preventive dosage was 2 c.c. Table III shows results of the use of this material in 10 home cases such as one meets in private practice.

Results with the first lot of the commercial

product were less satisfactory than formerly; the disease was prevented in only 20 per cent. Very mild attacks occurred in all except Nos. 34 and 35. The smaller doses, together with a severe bronchitis preceding exposure, may have influenced these unfavorable results.

Results with a second firm's product of Immune Globulin (Human) are shown in Table IV. Effectiveness in prevention in the use of this particular fractionated material was 64 per cent.

In April, 1935, 14 cases of scarlet fever were treated with Immune Globulin (Human) and results are shown in Table V. Failure to prevent measles occurred in 80 per cent. Although there was a lengthened incubation period on the whole, the modification was less marked than previously observed. Although there were no fatalities, results in this series were less beneficial than in those previously noted.

Reactions following the injections were studied in 57 cases, as shown in Table VI.

TABLE VI
REACTIONS FOLLOWING INJECTION OF IMMUNE
GLOBULIN (HUMAN) IN 57 CASES

Reaction	Number of cases	Per cent
Induration	17	30
Erythema	21	36
Tenderness	11	20
Temperature over 100° F.	10	17

Twenty-four hours following injection, the local reactions of induration, erythema, and tenderness were present in a minority of cases. No reaction persisted longer than 48 hours except in 1 or 2 instances, and no case was followed by any abscess formation. General reactions were of no importance, except fever which disap-

peared within 48 hours in all cases. Many had no fever at all, and in only one case did it reach 103° F.

SUMMARY

Of the 66 cases (average age, 4 years) in which prevention of measles was attempted with placental extract, it was successfully prevented in 58 per cent and modified the attack, generally speaking, in the remaining 42 per cent, with an average incubation period of 18 days.

The striking feature of the study, however, would appear to be in the 100 per cent prevention attained in Table I (14 cases) with the whole or unfractionated bulk of the extract. Obviously, fractionation is desirable if it is possible in the interest of refinement and concentration of the material, but the results with the several different protein fractions as shown in Tables II, III, IV, and V show that in this group only 46 per cent were prevented. This appears to agree with McKhann's observation that the fractionated preparations, i. e., those containing only euglobulins or pseudoglobulins do not have the same measles antibody potency as the whole bulk extract.

It is hoped that a method will speedily be found by which the antibody potency of the whole placental bulk will be made available. It is this material which, as shown in our experience, gave perfect measles prevention.

Municipal Hospital.

THE APPLICATION OF THORACOPLASTY TO THE TREATMENT OF PULMONARY TUBERCULOSIS*

JOHN B. FLICK, M.D., AND JOHN H. GIBBON, JR., M.D., PHILADELPHIA

The results of thoracoplasty in the treatment of pulmonary tuberculosis are affected to a great extent by 2 factors—the selection of the patient and the type of operation performed. The indications for the operation have been clarified in recent years although individual differences of opinion and judgment persist. Briefly, the patient who has unilateral chronic fibroid tuberculosis with cavities, who has tubercle bacilli in the sputum, and who is unable to undertake even moderate activity is a suitable case for thoracoplasty. Usually in such a case all other methods have failed to secure economic rehabilitation. Patients with thin-walled cavities present less

than a year should not be operated upon as the cavities may disappear spontaneously or heal following artificial pneumothorax. Thoracoplasty is indicated in those cases of tuberculous empyema with extensive disease of the underlying lung. More recently the indications for thoracoplasty have been extended to include fibrous cavities at both apices. Bilateral partial thoracoplasty limited to the upper 3 or 4 ribs has given excellent results in these cases.

The operation of thoracoplasty has undergone a gradual evolution since its inception. The procedure of removing relatively short posterior segments of 11 ribs within a few centimeters of the transverse processes of the vertebrae on the affected side, regardless of the position or the type of lesion to be dealt with, has given place

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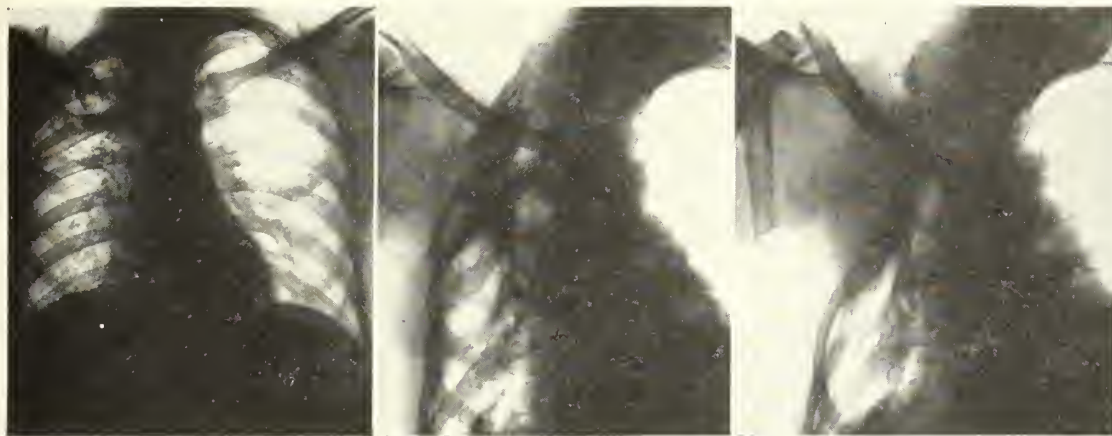


Fig. 1, Case 1.—(a) April, 1932—before operation; (b) April, 1933—before reoperation; (c) June, 1933—after reoperation.

to a more careful selection of the procedure to suit the individual problem. As Jessen¹ says, "Practically in no case of lung collapse is it possible to control the totality of the infection. Nor is this necessary, because the purpose of all treatment is the deliverance of the organism from the main focus of specific or secondary intoxication, and this main focus is generally a cavity or system of cavities." It is possible in certain cases to collapse a large apical cavity and to obtain complete relief of symptoms by removing a few upper ribs and their costal cartilages in their entirety from the transverse process of the vertebra to the sternum. Such a procedure enables the natural reparative forces of the body to deal more successfully with the main focus of the disease and, this accomplished, the lesser areas of involvement tend to show a concomitant improvement. Partial thoracoplasty, in contrast to artificial pneumothorax and the older type of operation, conserves the respiratory function of the rest of the lung. On the other hand, if the entire lung is hopelessly diseased and riddled with small cavities, a very complete operation carefully graded in stages is required. In tuberculous empyema it is usually necessary to remove segments of the upper 11 ribs, the lengths resected varying with the extent of the disease.

In studying the summary of the results obtained in 39 patients it should be borne in mind that many of the earlier patients were operated upon before the necessity of extensive resection of rib in certain cases was appreciated. Table I is a compilation of the results in our series of 39 patients placed beside the combined results in a series of 3700 patients collected by C. A. Hedblom and W. Van Hazel. We have followed Hedblom's classification of results, which he adopted from Bull. The qualifications of

each group as given below the chart were rigidly followed in classifying our patients as clinically cured, improved, or unimproved. The results of the smaller series correspond very closely to those of the larger group. There are only 2 partial thoracoplasties in our series. The remainder represent complete posterior thoracoplasties with or without anterior resection of rib. Six patients were reoperated upon because of failure to obtain complete collapse of the affected lung and arrest of symptoms. Two of these 6 patients died within 8 weeks after operation. All 6 were far-advanced cases of tuberculosis, yet 2 could be classified as clinical cures and 2 as improved after resection of regenerated ribs.

The high immediate mortality in our cases is due to the inclusion of the early operations. Five of the deaths in the first 8 weeks, as well as all 3 late deaths, occurred in the first 19 patients—a total mortality of 42 per cent. There were only 3 deaths in the last 20 patients—a mortality of 15 per cent. One of these 3 deaths followed an operation for the resection of regenerated ribs.

TABLE I
RESULTS OF THORACOPLASTY

	AUTHORS' SERIES (39 patients)		HEDBLOM'S COL- LECTED SERIES (3762 patients)	
	Number	Per Cent	Number	Per Cent
A. Clinical cure	16	41	35.3	
B. Improved	6	15	22.1	
C. Unimproved	6	15	5.5	
D. Not traced	..	..	3.5	
E. Died in first 8 weeks	8	21	....	
F. Died later	3	8	33.6	

A. No tubercle bacilli in sputum, practically symptom-free, able to work.

B. Tubercle bacilli in sputum occasionally or persistently, some symptoms, able to do some work.

C. Not fit to work, tubercle bacilli in sputum.

The following case histories are given in detail to illustrate certain points. The first case is an example of the persistence of symptoms after inadequate rib resection, followed by a clinical cure after further resection of rib. The second case illustrates the excellent result that can be obtained by a partial thoracoplasty if a large apical cavity exists with little disease elsewhere in the lung.

CASE REPORTS

CASE 1.—P. M., a marble worker, age 32, was admitted to the Pennsylvania Hospital in April, 1932. His illness began in 1920 with influenza which lasted 6 months. Following this he had a chronic cough with occasional acute exacerbations. In 1928 a diagnosis of tuberculosis was made, and he entered a sanatorium where he remained for 4 years with the exception of one period of 6 months at home. He had been expectorating 4 to 5 ounces daily for 4 months and had lost 16 pounds in 8 months. An unsuccessful attempt to produce a pneumothorax on the right side had been made.

On admission, roentgen-ray examination showed a large cavity 6 x 6.5 cm. with a fluid level in the right upper lobe and increased density throughout the remainder of the right lung. The interspaces were narrower on the right, but the heart and trachea were not displaced. The left lung did not appear to be involved on physical and roentgen-ray examination. The fingers were clubbed.

The first stage, a right upper posterior thoracoplasty, was performed Apr. 8, 1932, under spinal anesthesia supplemented with nitrous oxide; 52 cm. of the upper 6 ribs were resected. Two weeks after operation there was an increase in temperature and pulse rate associated with vomiting, abdominal pain, and diarrhea. There was some tenderness in the right lower quadrant of the abdomen. This upset subsided in one week. A postoperative roentgen-ray film showed a flattened cavity 6.5 x 3.5 cm. with a persistent fluid level and no involvement of the opposite lung.

The second posterior stage was performed May 6 under spinal anesthesia; 44.5 cm. of the seventh, eighth, and ninth ribs were resected. There was a moderately severe postoperative reaction which subsided in 2 days. The sputum varied between 1 and 4 ounces daily. The third posterior stage was performed June 13 under local anesthesia supplemented with nitrous oxide; 21 cm. of the tenth and eleventh ribs were resected. There was little reaction after the operation. The cavity measured 6.5 x 3 cm. and still showed a fluid level on roentgen-ray examination. The patient, with a brace, was discharged to a sanatorium.

He was readmitted to the hospital in April, 1933, because of persistent cough and expectoration. He had gained 22 pounds in weight since discharge. The expectoration was 2 ounces daily. Roentgen-ray examination showed the cavity in the right upper lobe measuring 5 x 2 cm. There was no fluid level. The rest of the upper lobe was atelectatic. The right lower lobe was clearer than before. The resected ribs had completely regenerated. The left lung appeared normal on roentgen-ray examination, but a few crepitant râles could be heard over the left lower lobe posteriorly. The temperature was normal and the pulse rate 80. Tubercle bacilli were still present in the sputum. Because of the persistence of the cough and expectoration with

tubercle bacilli in the sputum, more extensive resection of rib was advised.

A right upper anterior thoracoplasty was performed Apr. 24, 1933, under avertin anesthesia supplemented by nitrous oxide. The first and second ribs and cartilages were removed from the point of previous section to the sternum, a total length of 25 cm. There was little postoperative disturbance. The cavity was flattened and measured 5 x 1.5 cm. The second stage anterior thoracoplasty was performed May 8 under avertin and nitrous oxide anesthesia; 36 cm. of the third and fourth ribs and cartilages were removed. Following this the cavity measured 4.5 x 1.5 cm. but the daily sputum continued to amount to 2 ounces or more and contained tubercle bacilli at times. On May 29 under avertin and nitrous oxide anesthesia the upper 3 regenerated ribs were resected posteriorly. This produced a marked increase in the collapse of the right upper chest. The outer margins of the thorax were now about on a plane with the transverse processes of the vertebrae. The cavity could still be seen as a narrow band of decreased density measuring 2.8 x 0.5 cm. The patient was discharged in June, 1933, with a daily temperature not above 99° F. and an expectoration of 1 to 2 ounces daily.

In December, 1933, the patient was re-examined. He was still wearing a thoracic brace, and rib regeneration had not yet occurred. He was afebrile and felt fine. He had gained 37 pounds since his last operation, and weighed 153 pounds. There was no cough. A letter in June, 1934, stated that he had no cough. Periodic sputum examinations had failed to show tubercle bacilli since August, 1933. He was not working but was leading an active life and felt able to do light work. A roentgen-ray examination in August, 1934, showed a good collapse of the right side of the chest and no evidence of a cavity. A letter in May, 1935, stated that he was working 4 hours every day and felt fine. In August, 1935, he reported that he had no cough or expectoration. Sputum examinations had consistently failed to show tubercle bacilli. His weight remained constant at 153 pounds. He was continuing to work and was free of symptoms.

CASE 2.—D. J., a salesman, age 31, was admitted to the Pennsylvania Hospital in November, 1933. In September, 1926, he developed cough and expectoration with pain in the chest and fever. The cough persisted and a diagnosis of tuberculosis of the right apex was made. He entered a sanatorium where a right pneumothorax was induced and maintained. He developed a right pleural effusion 3 months after the pneumothorax was started. After 6 months in the sanatorium he was discharged as cured and began to work. The disease apparently remained quiescent during 1929 and 1930, but a roentgenogram in 1931 showed an increase in the size of the cavities at the right apex. He refused sanatorium care at that time, but restricted his activities. In February, 1933, he spent a month in bed with a right-sided pleurisy and fever. He finally entered a sanatorium in October, 1933, where he remained until his admission to this hospital. At the sanatorium he had repeated hemoptysis, night sweats, and fever.

On admission his left lung appeared normal on both physical and roentgen-ray examination. A roentgenogram of the chest revealed 2 cavities in the right upper lobe measuring 4 x 3.5 cm. and 2.5 x 2.5 cm. There was some involvement of the right lower lobe and thickening of the right pleura. The sputum amounted to 2 ounces daily and contained large numbers of tubercle bacilli.

On Dec. 4, 1933, a right upper posterior thoracoplasty was performed under avertin and nitrous oxide anesthesia; 40.5 cm. of the upper 4 ribs were excised with small portions of the adjoining transverse processes. The periosteum and rib stumps were painted with 10 per cent formalin in an attempt to prevent too rapid regeneration of the ribs. A severe wound infection developed. The temperature reached 103.3° F. on the fourth day and then fell gradually to below 99° F. on the twelfth day. Hemolytic streptococci were cultured from the wound and anemia developed—hemoglobin, 48 per cent; red blood cells, 2.6 million. Hyperesthesia and some flexor weakness of the fourth and fifth right fingers developed after the operation. These symptoms gradually disappeared. The wound was completely healed by the middle of January, 1934. The hemoglobin was 93 per cent; red blood cells, 4.8 million. The cavities were markedly reduced in size.



Fig. 2a. Case 2—November, 1933—before operation.

On Jan. 22, 1934, a right upper anterior thoracoplasty was performed under nitrous oxide anesthesia. All of the remaining portions of the first and second ribs and all of their cartilages were excised. A small portion of the third costal cartilage was also excised to allow the third rib to drop inwards. A total of 20 cm. was removed. There was very little postoperative reaction. Cough and expectoration disappeared. No sign of the cavities could be seen on roentgen-ray examination. He was sent back to the sanatorium in February with a brace for his chest.

In April he was examined by us. His improvement had continued. He had been allowed slightly more activity at the sanatorium, had no cough or expectoration since operation, and had gained 6 pounds in weight. No cavity could be seen on the roentgen-ray film. In November, 1934, he was again examined. He was allowed out of bed all day, was taking some exercise, and had continued to gain weight. There was no cough. Monthly sputum examinations since operation had all been negative for tubercle bacilli.

In September, 1935, he was examined by his physician and reported by letter that he was in good condition. There was no cough or expectoration. He had left the sanatorium early in the spring of 1935 and had been teaching golf as a professional all summer. He remarked that the operations had not interfered with his swing at all. He accepted a position as teacher of mathematics and science in a school, to begin in the fall of 1935. A roentgenogram in August, 1935, showed no sign of cavities.

CONCLUSION

The improper selection of a patient or an inadequate surgical procedure will vitiate the satisfactory results which can be obtained by the use of thoracoplasty in the treatment of pulmonary



Fig. 2b. Case 2—February, 1934—after partial thoracoplasty.

tuberculosis. Excellent results will be obtained if the proper indications for operation are present and the pulmonary tissue most severely affected by the disease is permitted to contract by the adequate resection of the overlying ribs.

REFERENCE

1. JESSEN, H.: "Thoracoplasty in Bilateral Cavernous Tuberculosis," *The Journal of Thoracic Surgery*, 4:1 (Oct.) 1934.

1608 Spruce Street.

ABSTRACT OF DISCUSSION

JOHN B. FLICK (Philadelphia): The results of thoracoplasty in the treatment of tuberculosis will be affected to a great extent by the selection of the patient and the type of operation performed. In the series of cases just reported, we have included the good chronic, the slipping chronic, and cases of tuberculous empyema. We have declined to operate upon

patients who obviously have had little resistance against the disease. Even so, some of our earlier cases probably should not have been operated upon, and in some the thoracoplasty should have been done in a greater number of stages. As for the latter, experience has taught us that it is safer to make haste slowly by taking out a few ribs at a time and to use some chemical agent to retard rib regeneration. It has also taught us that large apical cavities require the removal of great lengths of rib from the upper chest, often the entire rib and cartilage if a complete collapse of the cavity is to be secured. Some of our failures have been due to an incomplete operation, others to the reformation of the bony framework of the chest wall before contraction of the diseased pulmonary tissue has occurred. In a number of these cases reoperation has brought about a clinical cure.

HARRY R. DECKER (Pittsburgh): Skepticism still prevails about the value of surgical procedures, particularly thoracoplasty, in the treatment of tuberculosis. No one needs to go beyond the figures presented today to prove the erroneous view that thoracoplasty is not a satisfactory curative procedure. Considering that these patients are otherwise doomed to die an early death and that they may infect other people, if we

can restore a certain percentage of them, we have accomplished much.

In our work at the Tuberculosis League Hospital in Pittsburgh, of 67 patients who have had thoracoplasty, 15 have stood the test of work for several years. There are 30 still in the curative stage; at least half of them should ultimately be restored to work. The failures that occur would come anyway from the disease. There is a mortality of 5 or 10 per cent directly attributable to the operation.

Thoracoplasty is an invaluable method of treating pulmonary tuberculosis.

MOSES BEHREND (Philadelphia): The State of Pennsylvania is rather backward so far as surgery of the lung is concerned. It is not quite as advanced as some of the other states, but we have had remarkable results from collapse surgery since we have utilized the operation of thoracoplasty and the other methods.

At the Philadelphia General Hospital a bilateral thoracoplasty was performed on a patient who had been an invalid for years. He is now up and about and able to take exercise.

I should like to emphasize that there is something valuable in surgery on the tuberculous lung.

CLOSED INTRAPLEURAL PNEUMOLYSIS AS AN AID TO ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

GEORGE WILLAUER, M.D., PHILADELPHIA

Artificial pneumothorax is the most widely used form of compression therapy in the treatment of pulmonary tuberculosis. Success of therapy by this means depends upon whether anything interferes with compression of the diseased area in such a manner as to prevent the closure of cavities and putting the lung at rest. In approximately half of the cases of artificial pneumothorax, adequate compression is not secured because pleural adhesions suspend the diseased area from the chest wall. The clinical picture of a patient with pneumothorax having an unsatisfactory collapse following induction of air is usually as follows: There is a reduction in cough and amount of expectoration; signs of toxemia are less marked; but the sputum is still positive, and roentgen-ray examination demonstrates a persistent cavity held open by one or more pleural adhesions.

Following the initial pneumothorax the patient is given refills frequently enough to maintain maximum collapse compatible with negative pressure and the clinical course is observed for a period of from 3 to 6 months. The mere presence of adhesions is not always an indication for operative interference, but if the sputum re-

mains positive, irrespective of the presence or absence of toxemia, we believe that they prevent adequate collapse and should be sectioned.

In the selection of suitable cases, roentgen-ray examination gives the most information. Its greatest help is that it clearly outlines the amount of space in the pleural cavity and whether or not it is sufficient to permit the introduction and maneuvering of instruments.

From the roentgen-ray study alone, cases cannot be accepted or rejected with finality. The last decision rests on direct inspection with the thoracoscope.

The operation is called pneumolysis and may be done by the so-called closed method or the open method. The open method may be dismissed briefly by saying that patients tolerate it less well and it is followed by more complications than the closed method.

Indications and Contraindications.—The indications for closed intrapleural pneumolysis are unsuccessful pneumothoraces, due to various forms of pleural adhesions. Contraindications are the presence of (1) massive effusions, either serous or purulent, these effusions being due to diffuse involvement of the pleurae, and the character of the effusion being merely a matter of degree of the underlying pathology; (2) far-ad-

* Read before a Joint Meeting of the Section on Medicine and the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

vanced disease in the contralateral lung with obvious respiratory embarrassment. Laryngeal and gastro-intestinal complications need not be considered contraindications.

Operative Procedures.—Our choice of procedure lies in the use of a thoracoscope and the cutting electrode through separate openings. The increased maneuverability of the separate instruments far offsets the supposed advantages of the combined instrument. This is particularly true in the presence of multiple adhesions. The interspaces to be chosen for the thoracoscope and the electrode must be determined after a roentgen-ray study of the adhesions has been made. Generally, the thoracoscope is passed through the sixth or seventh interspace in the midscapular line and the cutting electrode through the fourth or fifth interspace in the midaxilla. These sites are chosen because most adhesions are posterior and above the intralobar fissure.

Inspection.—Following introduction of the thoracoscope, a general inspection of the thoracic cavity will indicate whether or not pneumolysis can be safely done. Frequently inspection alone will determine the key adhesion or adhesions, the release of which is all that will be required, the remaining ones playing no part in the compression picture. It is not uncommon to see a spread of infection from the visceral to the parietal pleura by direct extension along the adhesions. In the presence of demonstrable tubercles, particularly in the region of the attachment of the adhesion to the chest wall, some form of compression therapy other than pneumolysis is indicated. (Massive postoperative pleural effusion, very likely purulent, follows intrapleural interference in the presence of diffuse pleural pathology.) Likewise adhesions are frequently seen that have been torn by excessive pressure within the pleural cavity. All that I have seen had ruptured on the lung side; in 2 instances, areas of caseation were present. If the tear is extensive, gross soiling of the pleural cavity results with subsequent grave complications.

The observations of the rôle which adhesions play in the spread of infection and the fact that they usually tear on the lung side should be strong evidence against continuing an incomplete pneumothorax indefinitely and a warning to forego the desire to stretch them by increasing the intrapleural pressure.

Anesthesia.—Anesthesia is 1 per cent procaine infiltration of the skin and the interspaces, with preliminary medication of sodium amytal in nervous patients. Basal anesthesia with avertin

can be used with satisfaction in those patients whose co-operation cannot be obtained.

Rope, string, translucent band, and fan-shaped adhesions are sectioned at about 1 cm. distance from the chest wall. Sectioning at this point is without pain. The short dense adhesions are freed from the chest wall by cutting away a portion of the parietal pleura. The cutting is done under direct vision through the thoracoscope by means of the high frequency current through a special electrode.

The operation is well tolerated and there is no need for haste.

Postoperative Management.—The main features of the postoperative management lie in the control of the cough and the maintenance of the degree of compression secured at the time of operation provided that this degree is compatible with respiratory comfort. In some patients daily refills of air are necessary. Following operation, there is a rise in pulse, temperature, and respirations, usually subsiding in 72 hours. The patient is encouraged to lie on the operated side if comfortable and to resume full diet as soon as possible. Some degree of subcutaneous emphysema is frequently present when cough is not controlled, but this is of no importance clinically.

Complications.—The most common complication is effusion. It is usually small in amount, a few ounces at the most. It is clear, sterile, and disappears in a few weeks. Massive effusion of course may occur, and it may remain sterile or become purulent. Hemorrhage is another complication, happily very rarely encountered. Complications can be minimized by exercising scrupulous surgical technic and the avoidance of as much trauma as possible during operation.

CONCLUSION

Sectioning of pleural adhesions has converted a great many unsuccessful pneumothoraces into successful ones, thereby overcoming to a large extent the danger of spread of infection and securing an earlier cure. The time of hospitalization in a successful pneumothorax case is much less than that of the unsuccessful one. Although pneumolysis as an aid to pneumothorax is not a cure-all, the degree of success attended by its use justifies its inclusion in present-day treatment of pulmonary tuberculosis.

1930 Chestnut Street.

ABSTRACT OF DISCUSSION

ROYAL H. MCCUTCHEON (Bethlehem): Dr. Willauer did not especially stress the importance of pneumothorax treatment in tuberculosis. The greatest advance made in the past 25 years has been the use of artificial pneumothorax therapy in the treatment of pul-

monary tuberculosis. Only about 5000 tuberculous patients are now in institutions, probably 40,000 being treated at home under the care of general practitioners. So widely has collapse therapy been used that today nearly 50 per cent of all sanatorium patients are found suitable at one time or another for its induction.

The fact that 40 per cent of the failures of this treatment are due to pleural adhesions, and that at least 70 per cent of those failures may be corrected by intrapleural pneumolysis has given this latter operation a well-deserved prominence in chest surgery. Pneumothorax which is incomplete, which does not close cavities, and which does not result in a negative sputum is little better than no pneumothorax. Unless the incomplete collapse is made complete by judicious severing of adhesions, the patient is not receiving the most that medical science has to offer.

The roentgen ray is the best single indicator to determine the cases suitable for operation. It certainly is not perfect. Some cases that appear very discouraging by roentgen-ray examination are found to be entirely suitable when examined by the thoracoscope; the opposite is likewise true.

The biggest problem is to decide how long to continue the pneumothorax when adhesions are present which prevent complete compression of the lung. Pneumothorax in the presence of a cavity that cannot be collapsed is of relatively slight value, and unless something else can be done the patient will not be helped very much. It is true that some of the very thick-walled cavities presumably held open by adhesions may not be collapsed after the adhesions are cut. Certainly many string-like adhesions are stretched sufficiently by

pneumothorax to obtain satisfactory collapse with complete closure of small cavities. Yet if they are stretched too much, there is danger of spontaneous collapse of the lung, which is the most serious accident that can happen in these cases. It is practically impossible to tell which ones will be compressed by pneumolysis and which ones will not.

One danger of carrying on pneumothorax too long is that there may be bronchogenic spread to the rest of the lung and hemorrhage. In hanging cavities suspended by adhesions, there is always the danger of rupture with resulting spontaneous pneumothorax. Certainly all such adhesions should be severed promptly. It is very difficult to give a rule, but each case must be judged on its own merits. To be conservative we should try pneumothorax long enough to be sure that we cannot stretch the adhesion safely. If this is impossible, then pneumolysis is the operation of choice. There is also thoracoplasty, but that is a much more serious operation and often pneumolysis alone will take care of the situation perfectly well. In some cases, especially those with apical or diaphragmatic adhesions, phrenic nerve operation will permit relaxation of adhesions to accomplish collapse.

O'Brien recently reported a series of 250 consecutive pneumothorax cases, and he found that 20 of them had cavities that could not be compressed. In my experience that is a very small proportion. After following them for several months he found that only 6 were advised to undergo pneumolysis. Probably 40 per cent of our failures are due to these adhesions, and it is likely that 70 per cent of the failures in pneumothorax can be corrected almost entirely by pneumolysis.

THE CONSERVATION OF VISION IN THE CHILD*

GEORGE E. DE SCHWEINITZ, M.D., PHILADELPHIA

This is a subject of importance and properly finds a place on the program of this meeting of the Pediatric Section of The Medical Society of the State of Pennsylvania.

I began my medical career as an intern, in the Children's Hospital of Philadelphia, and for many years was closely associated with its activities both from the general and ophthalmologic standpoints. Naturally, my practical interest in this matter has not declined.

This essay will concern itself briefly with various conditions which jeopardize the preservation of children's vision and with their prevention and treatment, with the detection and management of refractive errors in early life, with congenital amblyopia, and with certain ocular muscle anomalies and their consequences.

Successful conservation of vision in children's eyes depends upon the co-operation of the general physician, the pediatrician, and the ophthal-

mologist, and in one highly important condition upon the co-operation of the obstetrician.

Remember this striking fact, namely, if it were possible to examine critically 100,000 blind people, including children, in any given country, we should find that about one-fourth of the number had lost their sight by some infection or affection which might have been checked. No additional words should be required to emphasize the importance of the work concerned with early visual conservation.

CORNEAL DEFECTS AND THEIR ORIGIN

Ophthalmia neonatorum or conjunctivitis of newborn children is familiar to all of us. Twenty-five years ago the specific variety of this disease, including the adult type, due to the gonococcus, was responsible for 8 per cent of the total number of blind persons in this country. Now it is comparatively uncommonly encountered even in hospital practice. For instance, in 1929 only 1 applicant among 21,888 outpatients came for treatment at Wills Eye

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

Hospital; but 15 years earlier, among 13,840 patients seeking help, there were 17 cases of this type of conjunctivitis.

A striking record is the one published in graphic form by the National Society for the Prevention of Blindness which depicts the blindness due to ophthalmia neonatorum in new admissions to United States schools for the blind at 28.2 per cent in 1907, and a steady decline from 1921 to 1929, when the percentage was only 9.3, representing, therefore, a 22-year decrease of 66.3 per cent.

These statistical facts are quoted from a previous publication in order to accentuate the value of organized prevention of this disease in maintaining the conservation of the child's vision.

The abatement of this affection is due to prenatal care of patients, hospitalized in most instances, and the use of Credé's preventive method immediately after the head is born, as follows: The lid surfaces being carefully cleansed, 2 drops of a 1 per cent solution of nitrate of silver are instilled into each eye and not neutralized, followed for 2 weeks by daily irrigation of the eyes with a boric acid solution.¹

Prophylactic drops should be used whenever the birth canal is infected or the presence of infection cannot with certainty be eliminated, and these drops should be Credé's nitrate-of-silver preparation and not argyrol or protargol, which are employed as a routine measure by some obstetricians. They are valuable remedies in many conjunctival affections, but are not satisfactory as preventive agents with respect to gonococcic conjunctival infection.

Quoting from a previously published paper: "The use of a prophylactic by physicians and midwives is required by law or regulation in many states of this country. But there is much difference of opinion whether such unrestricted compulsory use of a prophylactic is desirable, and it has not always received the endorsement of organized medical associations or of many physicians with large influential obstetric practices whose clients receive every prenatal care and caution. They (these physicians) demand that they shall be the judges as to whether a strict Credé technic shall be employed."

1. Credé's original recommendation, published 55 years ago, was that the nitrate-of-silver solution should have a strength of 2 per cent (10 grains to the ounce of distilled water), and that the lids after their surfaces had been washed should be parted and the drop introduced, and at the expiration of a brief period (a few minutes) the fluid should be neutralized. But experience has shown that a 1 per cent solution is sufficient and need not be neutralized after employment. A distressing error, of which I have seen 3 examples, is for the attending physician to use, instead of a 2 per cent solution (10 grains to the ounce), a 10 per cent solution (50 grains to the ounce)—a caustic preparation which in the cases referred to was productive of disastrous conditions.

Be that as it may, Credé's prophylaxis used in proper circumstances and with the aid of a proper technic, improved prenatal treatment, judicious publicity, education, and compulsory notification has accomplished great things with respect to one conspicuous cause of preventable blindness. Evidently we as physicians should continue to urge the employment of this prophylactic method.

In many of these cases the conjunctivitis of the newborn and an ulcer which may complicate it produce minor corneal scars (*nebula, etc.*), but even these may create an irregular corneal astigmatism of serious import when the afflicted children reach school years.

It is not the purpose of this paper to discuss detailed records of therapeutic measures, but one deserves especial mention, namely, the importance of foreign proteins in the treatment of specific or gonococcic ophthalmia neonatorum, preferably whole boiled milk.

Although irrigation of the eyes with suitable antiseptic lotions, promptly and persistently used, is usually sufficient to bring about a satisfactory result, as a recent writer has said: "One can never tell which will turn out to be an unusually severe case, and it is probably safest to use milk injections from the beginning of the attack."² These references are made in order again to emphasize the importance of preventing even the slightest corneal complication and the resulting scar; otherwise, the conservation of the child's vision is compromised.

But not all cases of ophthalmia neonatorum are due to gonococcic infection; other bacteria are also etiologic factors—generally the pneumococcus, which may cause a decided conjunctivitis. Hence, if possible, pus noted on the lid margin of the newborn babe should be bacteriologically examined (easy enough in hospital practice and usually readily arranged for in private practice) as a guide to remedial agents and to prevent corneal complications.

Naturally children are liable to the ordinary forms of conjunctivitis, for instance, catarrhal conjunctivitis, which generally yields readily to treatment. Occasionally a corneal ulcer forms as a complication; hence, the need of carefully inspecting the corneal surface in all these cases. If detected early, these ulcers are amenable to the usual remedies and applications and leave only faint scars.

Slight ulcerations can always be found with the aid of vital staining, for instance, a drop of

2. Sanford Gifford recommends 1 c.c. as the initial dose, to be increased to 1.5 to 2 c.c. according to the reaction produced.

fluorescein solution, which turns any abrasion of the corneal epithelium a bright green color. This is a useful test for eyes that are persistently red and irritable.³

PHLYCTENULAR KERATOCONJUNCTIVITIS

One affection of the cornea and conjunctiva requires more than passing notice, namely, phlyctenular keratoconjunctivitis. This ocular disorder, more commonly seen in so-called scrofulous children in the period between the first year of life and puberty, is often associated with eczema, is tainted with tuberculosis (although not ordinarily due to it), is clearly dependent upon septic tonsils and sphenothymoiditis, and is closely related to an imprudent dietary, especially overindulgence in rich foods, sugars, sweets, and the like.

One or more bleb-like bodies form on the cornea, especially at the margin. Turning into ulcers, they may creep across the cornea and result in the usual scars and defective vision; photophobia and blepharospasm are often intense.

This disease and its complications are probably more often than other maladies responsible for interfering with children's vision in the manner to which reference has been made. Phlyctenular keratoconjunctivitis is typically an affection in which the pediatrician, the general practitioner, and the ophthalmologist should cooperate.

Defective vision in adults is sometimes due to the scars of this childhood affection—a rather sad index of imperfect treatment of the patient's eyes in his early years.

LACRIMAL OBSTRUCTION (DACRYOCYSTITIS)

This condition is not very uncommon in young children. It is easily detected by pressing the finger tip over the lacrimal sac and noting the mucous discharge from the canaliculi. It is usually readily relieved and cured by massage over the sac and irrigation through the canaliculi; operation is rarely required. Mention is made of this disorder because it is so often not detected, the slight discharge being attributed to a mild conjunctivitis. But this lacrimal discharge is rich in bacterial content, usually pneumococci, and may be the cause of a corneal ulcer

and all its consequences in upsetting the conservation of the child's vision. I have seen this too often to avoid its mention in this connection.

REFRACTIVE ERRORS

A most important problem in ocular examination is the refraction of the eye.

An optically normal eye, emmetropic to use the technical term, is rare, only about 2 per cent of properly examined eyes being considered as such. The remainder of the eyes are either hyperopic (farsighted) or myopic (nearsighted); also many eyes, indeed the majority, either hyperopic or myopic, are more or less astigmatic.

With comparatively few exceptions, eyes at birth are hyperopic, their visual axes being shorter than the focal length of the focusing apparatus.

Myopia is rarely congenital. It usually begins between ages 8 and 10, i. e., during the early school period; the hyperopia previously present gives way to the myopia by a lengthening of the axes of the eye.

Myopia tends to increase up to about age 25. In certain types of myopia, sometimes called malignant or pernicious, not only does the refractive error increase, but the eyeground reveals gross defects—choroiditis, areas of atrophy, posterior staphyloma, *etc.*—and the process of visual conservation is greatly involved.

Astigmatism, either myopic or hyperopic, may be simple, compound, or mixed—simple if one corneal meridian is normal and the other hyperopic or myopic; compound if both meridians are either hyperopic or myopic, but the one more optically defective than the other; and mixed if one meridian is hyperopic and the other myopic.

These facts with respect to the refractive errors of the eyes in early life are generally known, and the question so often asked by an anxious but wise mother, "When should my child's eyes be examined?" is a perfectly natural and proper one. The answer often is, "The child is too young; wait until he reaches the school period or until he has 'learned the letters.'" But why should the mother wait; she has found out about the tonsils, adenoids, intestinal tract, *etc.*—why not about the eyes?

The whole object of the examinations suggested at this early period is to anticipate trouble—to find out if the child's eyes are as they should be or if there are defects, refractive or structural, which should receive attention.

3. One form of corneal involvement in these types of sluggish, irritable, and congested eyes consists in fine, dot-like abrasions of the corneal epithelium, in fact, a punctate keratitis, which is readily exposed by vital staining. This type of keratitis usually yields to aseptic irrigations and a 2 per cent holocaine lotion, associated with treatment of the nose, throat, tonsils, *etc.*, leaving no trace. But occasionally a number of the point-like abrasions coalesce and form a shallow ulcer which, if not promptly controlled, will leave delicate corneal nebulæ and their consequences.

When the school period arrives, usually about age 6, ocular examination is obligatory, and this is now universally recognized by the school authorities. It should be remembered that eye stress in young children interprets itself by a number of general symptoms—not only by headache but by nervousness, nausea and dyspepsia, lassitude, night terrors, habit chorea, and a variety of functional nervous disorders.

You whose work is chiefly concerned with the regulation of the health of children are entirely familiar with these facts; you know how important in your delicate and often difficult work ocular examination is, and how necessary for the child's welfare is the conservation of vision.

All of you constantly observe the amazing general improvement in a child after removal of the tonsils and adenoids. Exactly the same improvement may be witnessed after removal of eye stress. This fact is also well known and would not be dwelt upon were it not that often we wait too long. In many instances, efforts directed toward the conservation of vision should be begun prior to the school years.

Such early examinations do not necessarily lead to the measurement of refraction, but if the examination indicates that eye stress is a factor in the child's imperfect nutritional development, it can be estimated by an objective test—the shadow test. Such an adjustment, which should be most accurately carried out, is much more important than the adjustment of a brace to support a weak ankle. The glasses should be made of nonshatterable glass.

SIGHT-SAVING CLASSES

Mention must now be made of an important educational technic related to the conservation of the eyes of those young children who are partially sighted. This means that they have not enough vision to carry on in the ordinary educational work of children, and that the required glasses are not able to raise this vision to a satisfactory standard. Fortunately, largely owing to the efforts of Edward A. Allen in 1913, sight-saving classes have been organized, in association with the ordinary public school system, where these children can be taught and where the curriculum is so arranged that they are capable of carrying on quite satisfactorily in spite of their handicap. Although many of these sight-saving classes have been established, more are required. It should be our duty to help in every way possible this admirable educational technic.

STRABISMUS

A consideration of strabismus refers to a concomitant nonparalytic ocular muscle disturbance.

Very rarely children are cross-eyed at birth or shortly afterward; usually the defect is first noticed at age 3 or 4; it may be delayed until a later period.

With rare exceptions, the refractive error of these squinting eyes is hyperopia, often of high degree, and generally there is inequality of vision, one eye being amblyopic, which in addition to proper glasses requires a special form of treatment.

Not infrequently the mother of a child who occasionally squints (i. e., is cross-eyed) will be quite unwilling that this should be considered more than a temporary affair. "My child's eyes are perfectly good, but occasionally he crosses his eyes when he is tired," is a common expression. But this is the beginning of an ocular muscle deviation which will soon be permanent, and the refractive error of the eyes should be carefully corrected. By the use of the correcting glass, future ocular muscle defects may be prevented and the conservation of vision improved.

Curiously enough, it is not uncommon in taking the history of a child with squint to elicit the fact that the mother has been told by the attending physician that the child will outgrow this muscle defect. It is scarcely necessary to emphasize how unfortunate such advice is. The earlier the refractive error which is an important factor in the development of strabismus is corrected, the better the future of the child's vision will be and the better the conservation of sight will be maintained. As soon as the squint is noted, a complete ocular examination is indicated and suitable glasses should be ordered.

It is often said that very small children cannot wear glasses. They can, and with great advantage, even as young as age 3 or 4. Even younger children may wear glasses with great advantage, not only so far as the eyes are concerned but with respect to the general well-being.

Practically always the vision of the usually squinting eye is defective—amblyopic. Correcting glasses will help, but they are not sufficient. Such eyes, in addition to a careful measurement of the refractive error and the constant wearing of glasses, should be submitted to what may be called educative treatment.

The sound or fixing eye is covered with a shade or bandage, and it must be completely covered so that the child cannot see beneath the occluding pad. Thus fixation is promoted and

the habit of suppression of the image checked. The amblyopic eye is made to work. If this treatment can be continued for a long period of time, weeks and even months, fairly good results are achieved in visual improvement and fixation ability. It is often difficult to carry out the details, however, and if the long occlusion of the better eye upsets the child's physical equilibrium, the eye may be occluded for 10 or 15 minutes several times a day. Such a technic is better than nothing, and visual improvement may be obtained.

In recent years this type of training amblyopic eyes has received a great deal of attention, and instruments of precision have been designed to assist in the educative process. In ophthalmologists' offices arrangements for carrying out this treatment are comparatively easily made.

In many hospitals special clinics have been established for the educative treatment of the amblyopic eyes of patients with strabismus. This admirable arrangement indicates that waking up the amblyopic eye of squinting patients is not to be regarded as a luxury treatment for those who can afford to have it, but is equally available for others who are not so fortunately situated. Naturally the earlier this treatment is begun, the better the result.

I shall not discuss those diseases of the eye which result in permanent visual disabilities and which, when the eyes are quiescent, may be helped by certain types of glasses now available and also by what are known as contact glasses. A description of these conditions and their relief must be left for another occasion. They are mentioned so that you will be familiar with the progress which is being made along these lines and will have information on which to base recommendations.

SOCIAL SERVICE

All properly equipped hospitals maintain as a highly important adjunct of their activities a social service department. Among the many admirable activities of such departments are those which pertain to conserving the eyesight of children. Their workers see that the recommendations of the physicians who have examined the children's eyes in dispensary practice are carried out, and that children in the homes they visit, whose eyes are defective but neglected, receive proper care.

The debt we owe to the social service departments is a large one, and not the least of this indebtedness is the help they have given in advancing the conservation of the eyes.

CONCLUSION

Details of treatment which belong to the ophthalmologist have been avoided. It is the duty of general practitioners and pediatricians, if they observe various abnormalities which pertain to the eyes and their nerve connections, to refer the patient for expert examination, just as it is the duty of ophthalmologists to call in a physician if the conditions require that type of examination. Thus we work "in perfect sympathy and uncontending equity."

1705 Walnut Street.

ABSTRACT OF DISCUSSION

D. HARTIN BOYD (Pittsburgh): Eyestrain is frequent in childhood but is often overlooked. It is the pediatrician and the general practitioner who follow children from infancy through their school life. They are the ones responsible for the early detection of any disturbances of the eye, and their guidance and direction under such circumstances constitute an important factor in the conservation of vision.

The proper function of any organ is essential to the usefulness and general health of the individual. Conversely, it is important to study carefully the general hygiene and to advise proper food, sufficient vitamins, and plenty of rest and fresh air in an effort to develop a healthy eye. A healthy eye can exist only in a healthy body.

There are certain signs which suggest disease in the eye. Dimming of the vision, pain in the eye, persistent redness of the eyes, a discharge from the eyes—all are danger signals which should point to special examination of the eye. The aim is to prevent disease if possible, and early attention to even minor symptoms is certainly the best prevention as well as the quickest cure.

We have considered that about 85 per cent of the pre-school age children have normal vision, yet Dr. de Schweinitz states that a mathematically normal eye is rare, only about 2 per cent of eyes examined being normal.

Defects in visual acuity lead to eyestrain, and this in turn leads to headache, anorexia, nervousness, and fatigue which react detrimentally on the child's health. The child with defective vision is handicapped at sports and tends to withdraw from outdoor life and play, which are essential to his well-being and development. He becomes a bookworm or a recluse, and this affects his posture and general health.

Also, these children have difficulty in keeping up with their school work. They become discouraged, sometimes cease to try, exhibit changes in personality, and occasionally develop an inferiority complex, all of which can be overcome entirely by correction of a visual defect.

Progressive nearsightedness with its tendency to increase requires special hygienic care. School tasks should be decreased both as to time and amount. No extracurricular work, such as sewing, music, and special studies, should be imposed on children who are nearsighted. Good print in the book, proper light, and proper posture are important. Seats and desks in the school room should be adjusted to the height of the children so that the erect sitting posture may be maintained and tilting of the head avoided. Light should be sufficient in quantity, free from glare, evenly dif-

fused, and properly directed, i.e., from the left and behind.

If there has been no reason for visual examination before the school age, certainly at the school age and at the beginning of each subsequent year the eyes should be tested as a matter of routine. Lacrimal obstruction (dacryocystitis) has been mentioned, and I should like to emphasize the frequency of its occurrence in pediatric practice. Certainly a large percentage of infants in the early weeks of life show varying degrees of lacrimal obstruction. This should be recognized and treated early, as suggested by Dr. de Schweinitz.

In regard to crossed eyes, I should also like to emphasize the importance of referring the patient to the ophthalmologist as soon as the squint is noticed. Parents should be watchful for certain evidences of oncoming squint. Does the child tilt his head to one side while looking at objects? Is he in the habit of closing one eye when he looks at objects or when he tires? Does either eye wander from the midline when he becomes tired or sleepy? When there is squint in one of several children in the family, the other children should be examined for the possible masked existence of the same condition.

XANTHOMATOSIS*†

Hand-Schüller-Christian's Disease

HYMAN A. SLESINGER, M.D., WINDBER, PA.

Hand-Schüller-Christian's disease is a form of generalized xanthomatosis which manifests itself chiefly by defects in the membranous bones, diabetes insipidus, and exophthalmos.

HISTORY

The disease was first described by A. Hand in 1893. He thought that he was dealing with a tuberculous condition. T. W. Kay, in 1905, reported a case of acquired hydrocephalus with atrophic bone changes, exophthalmos, and polyuria; this was evidently also a case of generalized xanthomatosis. Arthur Schüller reported 2 cases in 1915. Henry A. Christian reported a case in 1919. He believed that it was primarily a pituitary disturbance. Since then numerous cases have been reported and considerable work has been done in an attempt to learn the nature of this syndrome. R. S. Rowland made an exhaustive study of this condition; in 1928 he collected 14 cases, including 2 of his own. In a more recent paper, Rowland stated that he was able to collect records of more than 60 cases until September, 1932. Since then approximately 40 additional cases have been reported, making the total number of cases approximately 100.

The terminology has been confusing. The various names which have been applied include: Schüller-Christian's disease, Hand-Schüller-Christian's disease, Schüller's disease, Christian's disease, xanthomatosis, lipid histiocytosis, and lipid granulomatosis.

ETIOLOGY AND PATHOGENESIS

The disease is essentially a form of generalized xanthomatosis and is analogous to several

other xanthomatous conditions. It is closely allied to Niemann-Pick disease, Gaucher's disease, and Tay-Sachs' disease, as well as to the common forms of xanthelasma, xanthoma diabeticorum, and xanthomata of tendon sheaths. It is generally conceded that this disease is a disturbance of lipid metabolism. It is not to be considered as an actual new growth, but rather as a reaction of the reticulo-endothelial system to an excess of lipoids in the blood stream. This causes irritation of the vessel walls, whereupon a perivascular cell infiltration takes place and the diffuse lesions are produced. In Hand-Schüller-Christian's disease the cholesterol lipoids are the offending factors, and in Gaucher's disease there is a kersasin disturbance.

The disease is essentially one of early childhood. A few cases in adolescents and young adults have been reported. There is no relationship to race. More cases have been reported in males than in females.

SYMPTOMATOLOGY

The onset is insidious. The initial symptoms vary. Localized swelling in some portion of the skull is a common early symptom. Swelling of other membranous bones may occur. Other early symptoms are otorrhea, soreness of the mouth, loss of teeth, and skin eruptions. Later on polyuria, polydipsia, and exophthalmos may occur. There is retardation of growth. The symptoms are dependent upon the location of the involvement. In our case, swelling of the mastoid region was the only symptom at the time of admission.

Physical examination may vary from showing merely a localized swelling in some bony region to the characteristic picture of an emaciated child presenting exophthalmos and numerous

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† From the Pediatric Service of the Berwind Clinic, Windber Hospital.



Fig. 1. Primary location of lesion.

palpable defects in the bones, particularly of the skull.

ROENTGEN-RAY FINDINGS

Roentgen-ray examination is important. It shows defects in the bones of the skull, giving a moth-eaten appearance to the skull.

LABORATORY FINDINGS

The only positive laboratory finding is an increase in the blood cholesterol content. There is usually no change in the blood picture.

PATHOLOGY

The essential pathology is generalized xanthomatosis or lipid histiocytosis. Grossly, there are proliferative lesions involving practically every organ in the body. Necropsy records include involvement of the cranial bones, long bones, dura mater, liver, lymph nodes, spleen, thymus, etc. Macroscopically, the tissue is rubbery and has a yellowish tinge. Microscopically, a typical structure is seen. There is a proliferation of reticulo-endothelial cells, some of which form the characteristic foam cell. It is a large polyhedral cell loaded with fat droplets. When treated with ordinary fixing agents, the cell ap-

pears foamy or vacuolated. Sometimes giant cells are found. There is a proliferation of connective tissue and much round cell infiltration. The intercellular spaces contain fatty crystals.

PROGNOSIS

The prognosis is poor. Most of the authentic cases that have been reported have resulted in death. In some instances a spontaneous remission may occur. Other cases seem to improve following roentgen-ray treatment.

TREATMENT

Treatment has been unsatisfactory. Many therapeutic measures, including diet, medication, and roentgenotherapy, have been tried. A diet containing a low lipid content has been recommended. Viosterol, calcium, and parathyroid extract have been used. M. C. Sosman reported favorable results in 6 cases treated with roentgen ray. Rowland also recommends roentgenotherapy. Our patient did not seem to respond to deep roentgen-ray therapy.

CASE REPORT

History.—A. G., a white female child, age 3, was admitted to the Windber Hospital Outpatient Department on Feb. 2, 1934. The chief complaint on admission was swelling in the left postauricular region.

The patient had always been in good health, was a full-term baby, and was breast-fed for 10 months. She did not have any of the childhood diseases. About 7 or 8 months before admission to the hospital, some form of localized swelling developed in the right shoulder that had the appearance of being an abscess. This was incised by the family physician. However, it required about 2 months for this lesion to heal. At the time of admission to the hospital, there was only a small scar at the site of this lesion.

About 6 months before admission, a small lump appeared in the left postauricular region. It would remain for a few weeks and then disappear. This would recur at frequent intervals. There was no pain, no history of discharge from the ear, and no history of trauma. About 2 weeks before coming to the hospital,

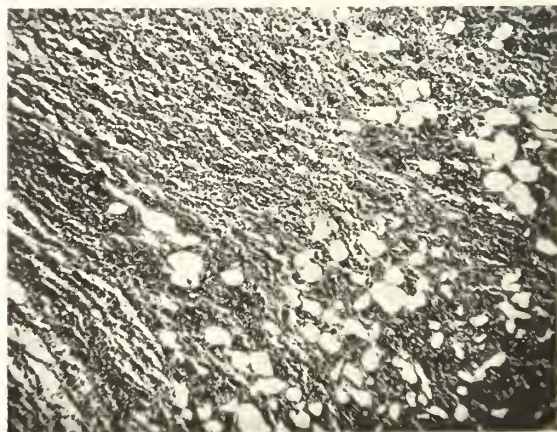


Fig. 2. Low-power magnification.

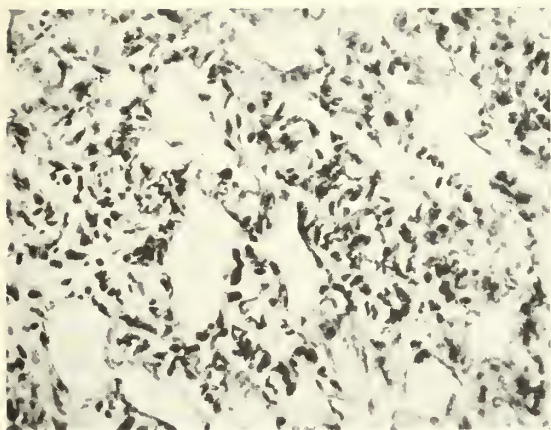


Fig. 3. High-power magnification.

the swelling reappeared. There were no other symptoms.

Physical Examination.—The patient was a well-nourished female child in no apparent discomfort. There was a swelling in the left postauricular region about the size of a lima bean. Both ear drums were normal. The teeth were good. The tonsils were moderate in size. There was no cervical adenopathy. Lungs and heart were normal. Temperature and pulse were normal.

Laboratory Findings.—Urinalysis was negative. The blood count did not show any significant changes: Red blood cells, 3,670,000; white blood cells, 8000; hemoglobin, 68 per cent; polymorphonuclear cells, 77 per cent; small lymphocytes, 23 per cent; eosinophils, none.

Roentgen-ray Examination.—A roentgenogram of the skull showed no necrosis.

Progress.—A biopsy was performed on Feb. 3, 1934. Sections showed a peculiar form of granulation tissue with many polyhedral cells that had the appearance of being histiocytes.

The lesion failed to heal, and on Feb. 21 a large amount of granulation tissue was removed with the electrocautery. Histopathologic study of this tissue showed a xanthomatous structure. The tissue was composed essentially of densely packed cells alternating with clear spaces. The cells showed marked pleomorphism, varying from large polyhedral cells to elongated or spindle-shaped cells. The nuclei were round and eccentric. There were a few mitotic figures. Many giant cells were present. There were many blood vessels scattered throughout the tissue. At the periphery there were many fibroblasts. The entire section showed considerable infiltration. The appearance of the tissue was essentially that of a lipid histiocytosis.

Deep roentgen-ray therapy was used, but there did not seem to be any response to the treatments.

Roentgen-ray examination on Apr. 2 showed a defect in the left mastoid region of the skull.

On Apr. 2, 40 mg. of radium were implanted in the lesion for 12 hours. This caused a remarkable healing, and the postauricular lesion was completely healed within 3 weeks.

However, on Apr. 27, involvement of the left anterior and posterior cervical lymph nodes occurred. Biopsy of the lymph nodes showed a more proliferative

stage of the same type of lesion as was obtained from the mastoid region. There were many mitotic figures in the nuclei.

Deep roentgen-ray therapy was continued and radium needles were implanted in the neck. Some improvement again followed the use of radium, but the patient continued to become worse.

On June 28 examination revealed involvement of the left parietal region and of the right knee. There was also some lymphadenopathy in the right inguinal region.

About this time polyuria and polydipsia occurred. At no time was there exophthalmos. A blood count on June 11 showed 10,200 white blood cells.

The condition gradually became worse, and she died on Aug. 28, 1934.

COMMENT

This patient presented a group of symptoms which would fall into Group 3 of Henschen's classification of xanthomatosis, i. e., xanthomatosis with skeletal changes and diabetes insipidus but without exophthalmos.

An interesting feature of this case is the remarkable response to radium as compared with lack of any noticeable change following high voltage roentgen-ray therapy. Twenty-four hours after the use of radium in the postauricular region the lesion was reduced to less than one-half of its original size. Later, however, the involvement became so generalized that it was impossible to use radium on the lesions.



Fig. 4. Roentgenogram of skull showing defect in temporal region.

Microscopic examination of the tissue from the patient did not show many characteristic foam cells, but showed rather a hyperplasia of the reticulo-endothelial cells, simulating a reticulum-cell sarcoma. K. K. Merrit and B. H. Paige, in a detailed pathologic study of this disease, found reticulo-endothelial hyperplasia in the spleen, lymph nodes, and bone marrow. In their case the thymus gland was the only organ that showed many typical foam cells.

SUMMARY

1. A case of generalized xanthomatosis or Hand-Schüller-Christian's disease has been presented.

2. There was no improvement with deep roentgen-ray therapy.

3. Radium caused a temporary improvement.

Windber Hospital.

MACULAR DYSTROPHIES*

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An earnest attempt to understand macular diseases from the extensive literature of the past decades leads only to confusion. It does, however, produce a conscious realization of the great complexity of the subject—its various manifestations, the artificial nature of the prevailing classifications of macular affections with their many gaps, and the comparative paucity of histopathologic studies of some of the well-known macular syndromes. Coupled with this is the confusing custom of using a variety of names to denote one and the same morbid entity. By way of illustration and emphasis, consider the condition known as "family cerebral degeneration with macular changes" (Batten-Mayou), which has been described under the following titles: (1) "Maculocerebral degeneration—familial" (Oatman), "progressive familial macular degeneration" (Darrier), "late infantile and juvenile form of amaurotic family idiocy" (Vogt, Spielmeier, Bielschowsky), and other similarly confusing names. Hence, the aim of this paper is to review briefly the domain of macular lesions with the view in mind of simplifying, if possible, the conception of macular disease.

EMBRYOLOGIC, ANATOMIC, AND PHYSIOLOGIC ASPECTS OF THE MACULA

For the sake of a better understanding of macular affections, mention should be made of the developmental, structural, and functional phases of the macula. The region of the posterior pole above and to the temporal side of the disk may be considered as the phylogenetically oldest portion. Quite early in embryonic life, differentiation here is more advanced than elsewhere in the retina. Since the macula lutea represents the highest stage of development reached by any part of the human eye, it appears on an *a priori* basis more likely to develop as a final stage in the region which is from the beginning more specialized than the rest. The region of the macula shows the most rapid differentiation of the whole of the retina until the

third month of fetal life; thereafter it lags behind the rest of the retina in development, and a state of retardation prevails until the eighth month. Subsequently differentiation proceeds apace along characteristic lines, and, although the rest of the retina has almost attained its final arrangement by the ninth month, the central region continues to differentiate until at least 16 weeks after birth. This region is destined to subserve the highest visual acuity. To bring this about, the cerebral layers of the retina are spread apart and the blood vessels which accompany them are lacking so that the light can travel without hindrance to the receptive elements. Moreover, the neuro-epithelium itself becomes eminently specialized and contains cones only, but these are so delicate and attenuated that they show many points of resemblance to rods. Owing to their length, the layer is unusually thick and relatively closely packed. They are arranged in oblique rows, and their long fibers curve around in S-shaped fashion from the center of the fovea to run almost parallel to the surface, thus producing the appearance of almost horizontal striations called the fiber layer of Henle. Following the direction of the cone fibers, the sustentacular fibers of Müller are also obliquely curved.

A consideration of the embryology, anatomy, and physiology of the macula emphasizes the probable factors responsible for the vulnerability of the macular region, namely:

1. Its highly structural and specialized functional qualities, thus emphasizing the truth of Edinger's dictum "that a high degree of functional activity involves an increased morbidity."

2. Its avascular nature, a prominent factor responsible for its low resistance to injury and great susceptibility to degeneration.

3. The oblique course of Henle's layer and of Müller's supporting fibers, which further enhances the vulnerability of the macular region to edema, effusion, necrosis, cyst, and hole formation rather than to inflammatory processes.

The macular susceptibility does not, however, explain some of the macular diseases and their

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variable clinical and ophthalmoscopic types. Equally unsatisfactory and unscientific is the widely accepted theory of abiotrophy or of inherent low hereditary vitality which becomes manifest during periods of stress in the life of an individual. The lesions are therefore seen at the transition between intra-uterine and extra-uterine life (congenital), at the second dentition (ages 6 to 8), at puberty (age 14), at the end of the growing period (age 20), at the beginning of senile regression (age 50), and at senility.

Turning now to embryology for enlightenment, we learn that the 4 sensory motors (archipallial projection system) from the olfactory, and the neopallial system from the visual, acoustic, and somatic areas are the first to become differentiated among the various pallial cortical areas. The time at which the fibers connected with these areas receive their myelin sheaths represents the final phase in the development of the hemispherical wall and indicates the time at which they become functionally active. Myelination of these fibers begins at about the time of birth and continues until the beginning of puberty and probably later. Since the completion of myelination of the projection fibers marks their active functional phase, is it not justifiable to aver that delayed or imperfect myelination of the various parts of the nervous system, or a combination of both factors, could explain the protean manifestations of macular disease? This premise seems to be borne out by histochemical studies of the lipoids found in Tay-Sachs' disease by J. G. Greenfield and S. Nevin, who state that "from the histochemical point of view the lipoid is to be regarded as composed of chemical substances allied to those entering the formation of normal myelin." These findings harmonize with the conclusions of Pick, Bielschowsky, Hurst, and others. Clinically, this hypothesis may possibly explain why macular dystrophies are more extensive and typical in their manifestations and more fatal in their course, the younger the patient is at the time of the onset of the affection, since in infancy defective or incomplete myelination of the nervous system is more likely to prevail than in similarly affected older individuals. Thus a pathologic basis for the classification of some of the macular dystrophies may be utilized, which is more scientific than the criterion of age or that of the location of the lesions (clinical or ophthalmoscopic) of a macular entity.

Adhering to the above scheme, the following classification of macular dystrophies is submitted. The term dystrophy, as herein used, implies degenerative disturbances of function or of structure which have an hereditary basis.

CLASSIFICATION OF MACULAR DYSTROPHIES

- I. General involvement of the ganglion cells of the central nervous system—Tay-Sachs' disease or amaurotic family idiocy or lipoid histiocytosis
 1. Infantile type
 2. Late infantile variety—Pelizaeus-Merzbacher disease
 3. Juvenile form—Batten-Mayou or maculocerebral type
 4. Adolescent type—Stargardt's disease
- II. General involvement of the tissues of the entire body
 - A. Niemann-Pick disease
 1. Infantile form
 2. Juvenile form
 - a. Hand - Schüller - Christian syndrome
 - b. Laurence-Moon-Biedl syndrome
 - B. Gaucher's disease
 1. Infantile type
 2. Juvenile type
 3. Adult form
- III. Local confinement to the retina—heredomacular dystrophies
 1. Infantile variety
 2. Congenital form (Best)
 3. Adult type
 4. Presenile type
 - a. Doyme's familial choroiditis
 - b. Tay's guttate choroiditis
 5. Senile form

GENERAL CONSIDERATION OF MACULAR DYSTROPHIES

Macular dystrophies are hereditary and may be met with in several different generations. They may begin at any age and in forms which are progressive or stationary. The time of their onset and the mode of their course is the same for all the members of the same family affected with the disease, thus producing particular types, such as congenital, infantile, juvenile, presenile, and senile. Exceptions to this are very numerous, for hereditary diseases often occur at an earlier age in the children than in the parents whereas those of the same generation frequently become affected at about the same age. The lesions in these dystrophies are usually bilateral, remarkably similar in both eyes, like mirror images, and in none of them in which pathologic investigations have been made do they suggest the presence of inflammation, but are such as to indicate dystrophy in certain definite groups of

cells. The subjective and objective symptoms consist of amaurosis or merely lowered central visual acuity, eccentric fixation, nystagmus, a central scotoma for red with a normal peripheral field, and color sense disturbances of variable degree. The younger the patient, the more profound is the mental deterioration, resulting even in imbecility, and the more complete is the motor paralysis. The ophthalmoscopic picture varies from the typical cherry-red spot, surrounded by a broad grayish-white area, to atypical dirty grayish-yellow spots with a scant sprinkling of fine pigment granules. The general health in practically all cases has been good.

TYPES OF MACULAR DYSTROPHIES

Tay-Sachs' disease:

1. The infantile form of Tay-Sachs' disease occurs at ages 3 to 6 months; it is race selective (Hebrew). It is characterized by visual disturbances, macular changes (cherry-red spot) leading to blindness, mental manifestations leading to idiocy, and motor disturbances leading to paralysis and death under age 2. It is generally conceded that in this affection the ganglion cells in the retina and throughout the central nervous system are affected. Chemically, an increase of simple protein and a decrease in the nucleoproteins have been found in the brain tissue. Pathologically, this condition has been described by Bielschowsky, Pick, and Niemann as a manifestation of a lipid histiocytosis. This lipid metabolism disturbance is the basis for grouping Tay-Sachs' disease with Niemann-Pick disease, Gaucher's syndrome, *etc.*, which, at first glance only, appear as unrelated affections.

2. The late infantile variety comes on between ages 1 and 4, and is rarer in its incidence. The children live longer than in the Tay-Sachs' type and may attain adult life. There are optic atrophy and blindness, but no cherry-red spot, and cerebellar atrophy pathologically. Recently Pelizaus described a condition called aplasia axialis extracorticalis or Pelizaus-Merzbacher disease, which exemplifies the late infantile variety of amaurotic family idiocy. It is probable that the late infantile cases should be regarded as transitional forms between the main groups rather than a clinical group possessing distinctive features.

3. The juvenile form of Tay-Sachs' disease is neither race nor sex selective. It is well represented by the maculocerebral type, also known as Batten-Mayou disease, Vogt, Spielmeyer, Oatman, Bielschowsky, and others. In this variety both retina and brain are affected by the pathologic process, resulting in failure of vision com-

bined with failure of intellect, followed by epileptic crises, multiple paralyses, and death. The onset of the disease is between ages 5 and 7—the period of dentition. The macular changes consist of a diffuse pigmentation, which extends more or less into the surrounding retina. The disk is of a grayish-white color, with vessels a little less than normal. Mayou believes that the primary change is in the ganglion cells, and that the disappearance of the cones and neural elements is a secondary result. It is, however, generally held that the primary change is in the neuro-epithelium itself.

4. The adolescent type of Tay-Sachs' disease, or the pure macular type, or Stargardt's disease, shows retinal involvement without cerebral affection. Hence, there is lowered visual acuity with an early relative and a subsequent absolute central scotoma for red and green. The onset of this variety is between ages 14 and 20—the age of puberty. The macular region remains negative for a certain length of time, followed by the appearance of a darkening of the macular district with abolition of the normal reflexes. The only other ophthalmoscopic manifestations are small yellowish foci, drusen of the lamina vitrea, at the level of the fovea and between the vessels of the perimacular region. At times the macular region is the seat of an abnormal pigmentation of one-half to 5 disk diameters in extent. Some authors, under Stargardt's disease, have also included cases of peripheral chorioretinitis and retinitis pigmentosa because of the similarity of the lesions which are situated in the tapetum nigrum, according to Leber. Loss of muscle power is another characteristic feature of Stargardt's disease. The latter is not fatal.

General involvement of the entire body:

Niemann-Pick disease, also known as lipid histiocytosis, lipid splenohepatomegaly, xanthomatosis (Rowland), or lipoidosis (Pick) is a congenital familial constitutional disease affecting predominately female infants at about age 5 months. It shows a particular predilection for individuals of the Hebrew race.

1. It manifests itself in the infantile form by enlargement of the spleen and the liver, extreme cachexia, and retardation in mental development. The typical picture seen with the ophthalmoscope is a yellow nerve head and a brownish-red macula which is well defined and clear-cut. The tissue around it is gray. Niemann-Pick disease is rapidly fatal; the vast majority of the patients die before age 4. In this as well as in the juvenile and adult forms of lipid histiocytosis, a complex lipid, principally a phosphatide, is stored in all parts of the lymph-hemopoietic

system, and no organ or tissue is immune to the deposits.

2. The juvenile form of Niemann-Pick disease may manifest itself in the Hand-Schüller-Christian syndrome, which is a congenital, familial constitutional disease occurring predominantly in the Hebrew race and in the male sex. Its onset may take place at any age, although it may begin in the second year of life. It is characterized by bone defects, especially of the skull, exophthalmos, dwarfism, and diabetes insipidus. The eyegrounds are usually normal with the exception of Wheeler's case, in which slight congestion of the retinal vessels and slight edema at the disks, but no measurable elevation, were found. It is a progressive disease which is frequently fatal in from 2 to 5 years. The lipid deposit found in this disease consists mainly of cholesterolin—fatty acid esters.

Sometimes Niemann-Pick disease manifests itself in the Laurence-Moon-Biedl syndrome, which is characterized by adiposity, genital dystrophy, polyuria, polydactylism, mental deficiency, and a central nystagmus. The eye findings are similar to the cerebromacular dystrophies of the Tay-Sachs', Spielmeyer, and Vogt types; to retinitis pigmentosa; to retinitis punctata albens; and to certain reported cases of atypical retinitis pigmentosa associated with acromegaly or cretinism. The most striking pathologic fundus changes observed in these cases are the atrophy of the pigment layer of the retina and the contracted caliber of the retinal and choroidal vessels.

3. Rowland believes that in adult life Niemann-Pick disease finds expression in widely diversified, slowly developing symptoms of either splenohepatomegaly and diabetes mellitus, icterus and certain liver disorders, or kidney affections.

Gaucher's disease is a constitutional familial affection with infantile, early childhood, and adult forms well correlated, resulting from a primary disturbance of lipid metabolism. In this disease, a lipid, principally a sphingogalactoside—kerafin, is stored in the reticular cells of the lymph-hemopoietic system, but limited to the spleen, liver, lymph nodes, and bone marrow. Gaucher's disease shows a predilection for individuals of the Hebrew race, but it is not strictly racial. About twice as many cases occur in females as in males. The disease may lead to death in infancy. The symptoms are those of a rapidly progressing cachexia, though the main symptoms may be cerebral with spastic paralysis and psychic disturbances. The enlarged spleen and liver may be noticed as early as the first

months of life. Early signs to be noted are the characteristic pigmentation of the skin, hypochromic anemia, thrombopenia, and a leukopenia, due to infiltration of the bone marrow by foam cells and to hemolysis. The typical picture seen with the ophthalmoscope in the infantile form is a diffuse milky-colored macular area with a red foveal spot. The older juvenile and adult types are familial and much slower in development, but closely related pathologically to the infantile form. Sections through the macular area show swollen foamy cells, apparently storing lipoids.

Local confinement to the retina:

1. The infantile variety of heredomacular dystrophies begins between ages 1 and 8. It is usually bilateral and is characterized by a gradual diminution of visual acuity without such symptoms as metamorphopsia, glittering or misty vision. A marked nyctalopia is usually noted. Ophthalmoscopically, a chorioretinal focus of variable size is present. The size and the gravity of the focus depend upon the age of the process. In the recent lesions pigmentary changes are barely noticeable, while the nerve head shows a temporal pallor, not very marked. In the older lesions intensive pigmentary proliferation, with shifting of the pigment and optic nerve atrophy, as well as pupillomotor disturbances and a small central scotoma for red and green are observed. The general health is good.

2. The congenital form of Best occurs between ages 7 and 14. It is manifested by bilateral macular lesions consisting of a well-defined light-reddish focus with a scantily pigmented border or a central chorioretinitis, associated with amblyopia, hemeralopia, color-sense disturbances, nystagmus, slight microphthalmia, astigmatism, strabismus, and posterior polar cataract.

3. The adult type usually comes of a family of low-grade myopes. The myopia occurs in several generations of the same family and is stationary in type. Occasionally the myopia is of the malignant variety. The vision remains good until about age 20, followed by a gradual impairment of central vision. The vision then remains stationary. Parallel with the fluctuations in the vision, the ophthalmoscopic findings are negative at first; then hyperemia of the nerve head and finally a central chorioretinitis make their appearance.

4. The presenile form is well represented by Doyne's honeycomb family choroiditis. It may appear in early adult life. At first it gives rise to no disturbance of vision and its progress is exceedingly slow, so it is frequently impossible to fix the exact time at which it does commence.

The 2 eyes are always involved, and the disease, having once started, steadily and slowly progresses. It is hereditary, affecting several members of the same family in different generations. The ophthalmoscopic manifestations consist of light-colored patches in the neighborhood of the optic disk and macula, sometimes with and sometimes without any pigmentary disturbance. In course of time the patches become larger and join with one another as they extend in the macular region, so the vision becomes more and more affected. Microscopically, a new formation of hyaline substance is formed between the retina and the choroid, the inner surface of which presents nodular elevations with depressions between them. In places the hyaline material is covered by a single layer of pigment epithelial cells; in others it is devoid of any such covering, while here and there, in the recesses between the nodules, heaped-up masses of pigment cells are seen. The only changes to be found in the retina and choroid are such as can be accounted for by the pressure of the hyaline mass, which is evidently of primary formation, attributable to some hereditary dystrophy in the pigment epithelium. Doyme's choroiditis is very similar to Tay's guttate choroiditis or central senile guttate choroiditis, and more accurately as senile hyaline infiltrations of the retina. It differs, however, from it, beginning much earlier in life, in the size and steady enlargement of the patches, and in being hereditary.

5. The senile variety of heredomacular dystrophies is, according to Behr, a familial hereditary disease which usually attacks both eyes. It is slowly progressive and leads to grave visual disturbances, without causing blindness, though the changes in the eyeground amount to no more than a light or dark mottling, consisting of irregularly round or oval, yellowish or yellowish-red spots with or without pigmentation. Drusen are frequently found in the neighborhood of the papilla. They are recognized by their circular outline, yellowish-white brilliant color, and subvascular location. The rest of the fundus is normal except possibly for some senile discoloration of the disk or slight pigmentation at the periphery of the retina in the form of black dots arranged in rows or irregular groups. Metamorphopsia is a common symptom, but not at all conspicuous in the early stages, and, indeed, it may be absent. Central relative blue or blue-yellow blindness, properly sought for, may be detected early. Behr advanced the interesting suggestion that senile macular disease may be regarded as a specific type of hereditary dystrophy, depending upon a congenital predisposi-

tion to premature death of the macular retinal elements.

PROGNOSIS

In the very young the prognosis is hopeless as to recovery or life expectancy. In the older patients the outlook becomes somewhat brighter relative to life only. At best, it is a life in a world of reduced sight.

TREATMENT

No treatment seems of much avail, since no known therapeutic measure appears to alter the condition once it has started. However, removal of any source of toxemia, local or constitutional; general hygienic measures; iodides, mercury, and arsenic seem the soundest line of therapy.

SUMMARY

Attention is called to the lack of a comprehensive classification of macular dystrophies. The factors responsible for macular vulnerability are emphasized for a better understanding of macular disease. An hypothesis for the pathogenicity of macular dystrophies is offered, based on embryologic facts and physicochemical studies, namely, imperfect or delayed myelinization of the nervous system. A classification of macular syndromes with a brief discussion of same is submitted. Mention is made of the hopeless prognosis and the negative therapy.

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ABSTRACT OF DISCUSSION

LUTHER C. PETER (Philadelphia): The subject of macular dystrophy is much involved and little understood. This is due in part to a defective classification and also to the multiplicity of terms employed by different authors to express and describe the same entity. Faulty and inaccurate classification is largely responsible. If the order of the author's classification is reversed, a greater simplification is achieved. By omitting the subheadings of each group his arrangement would read as follows:

1. Dystrophy confined to local changes in the macula and surrounding tissues.

2. Dystrophy which is secondary to or part of a much larger syndrome in which the macular changes and fundus pathology are associated with a generalized involvement of the central nervous system.

3. Dystrophy which is secondary to disease of other parts of the body in which endocrine disturbance may be an underlying factor.

In groups 2 and 3, in which the greatest confusion exists, macular and other ocular disturbances are secondary to or predicated upon central nervous dystrophies, or possibly faulty endocrine balance. In both the ophthalmologist is profoundly but secondarily interested.

The first group is one which essentially and primarily is an ophthalmologic problem, and the one to

which the term macular dystrophy can most aptly be applied.

In searching for the etiologic factors, Dr. Gouterman believes, most properly, that certain phases of the development, structure, and function of the macula play important rôles. The early differentiation of the macula followed by a period of arrest, and renewed development in the eighth month of intra-uterine life continuing postnatally in development for 16 weeks, suggest the reasons for a possible morbidity which may have a bearing upon true macular dystrophy. Add to these developmental influences the comparatively low blood supply and the high structural differentiation of the macula to meet the functional demands of this part of the retina, and the conditions are created which may lay the foundations for congenital and hereditary dysfunction with and without gross macular changes.

Abiotrophy should not be excluded either in this group or in the other 2 as a possible etiologic factor. It is problematic and not in the truest sense a factor, but rather an inherent condition into which certain types of dystrophies logically fall, because no other tangible cause can be given.

The presenile cases and senile varieties of the strictly local dystrophies are in all probability cases which may be grouped as abiotrophies, or they may be forms of delayed retinal degenerative processes rather than dystrophies. The familial character of Doyme's choroiditis, of Tay's guttate choroiditis, and of the senile forms of so-called familial macular dystrophies does not preclude the theory of abiotrophy if they are dystrophies, nor does it eliminate degenerations even though they may be hereditary. The fact that the retinal disturbance is not limited to the macula suggests a degenerative form of disease in late adult life in which faulty nutrition and toxemia may play stellar rôles. At any rate, they are different in type from those which occur in the young and to which the term dystrophy is most applicable.

The suggested rôle which delayed myelinization may

play as an etiologic factor in macular dystrophies is interesting and worthy of serious consideration. The theory is fascinating, but even in the second group, in which the central nervous system is involved, it would be difficult to prove whether it is *post hoc* or *propter hoc*; and, if the latter, just what relation it might bear to the macular disease is debatable. In the essential group of pure local dystrophies, the theory does not seem to be adequate to explain the condition.

Although treatment is of little avail, it should be stated that in the cases which occur early in life, as well as in some of the senile forms, complete blindness rarely is observed. Most cases have serious loss of macular vision, but in many instances even useful macular vision can be preserved.

GEORGE F. GRACEY (Harrisburg): Amaurotic family idiocy and Tay-Sachs' disease mean nothing; but when we say that a patient has a macular dystrophy caused by general involvement of the ganglion cells of the central nervous system, it replaces a medical tombstone with a more or less scientific term and gives a secure pathologic background and a means of differentiation from all other conditions. Medical and ophthalmic literature is filled with diagnostic terms of little meaning, and this paper is a step in the direction of their elimination. Correct nomenclature means correct thinking, and correct thinking may in time lead to early diagnosis of some of these obscure conditions and an attempt toward their arrest.

This paper might well be followed next year by another dealing with the other more familiar macular conditions. It is my belief that macular lesions are becoming more and more numerous; either that, or I am becoming more acutely conscious of their prevalence and am keener in discovering them. There is scarcely a day that does not present some such condition as hemorrhage in the macula, exudate in the macula, hole in the macula, senile macular degeneration, or some focal process centering in the macular region and impairing vision.

SPOROTRICHOSIS*†

LAWRENCE G. BEINHAUER, M.D., PITTSBURGH

The relative infrequency of sporotrichosis in Pennsylvania prompts the report of this case. The disease is of comparatively recent date. The first report in the United States was by Schenck in 1898, and since that time numerous cases have been reported in this country and throughout the world.

Sporotrichosis is an infection caused by one of several species of the genus *Sporotrichum*, a fungus of the class fungi imperfecti of the conidia-bearing group. The disease is not an etiologic entity as many species have been isolated,

the most important species being *S. schenckii* and *S. beurmanni*, the former most common in America and the latter in Europe. It is an aerobic fungus pathologic to animals as well as man, but man rarely contracts the animal infection. Meyers has definitely proven the infecting organisms present in equine and human sporotrichosis are identical, but in spite of this fact reports of contact infection from animal to man are exceedingly few in number. The difficulty in properly classifying these organisms is recognized and will not be included in the scope of this paper. Its habitat is widely distributed in nature; it is commonly found on shrubbery, grain stalks, and other forms of vegetation. Handling of rotten logs and stumps in virgin land are reported causing the infection. Beside

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† From the Department of Dermatology of the Western Pennsylvania Hospital, Pittsburgh.

the human infection, it has been observed in rats, mules, horses, dogs, and fowl.

It grows on ordinary culture media but thrives best on glucose-containing media. As a rule, it is difficult to find directly in sections or from pus of the lesions, but it can be recovered readily by culture from the deeper portions of unruptured nodules or from biopsy material. After several days in culture, a delicate fringe is noted, consisting of radiating fine lines projecting at right angles from the margin of the growth. Later the surface becomes corrugated, and the marginal radiation becomes more pronounced. At first it presents a white creamy to dull gray color which later develops into a brown or black hue. By hanging drop, branched mycelia with oval spores are found attached singly by a pedicle or arranged in cluster or bouquet formation. The mycelium is divided at irregular intervals by septa, between which small refractile granules are seen. The spores vary in size and shape from 3 to 5 microns in length and from 2 to 3 microns in width, and appear oval or oblong in sections.

CASE REPORT

E. B., female, age 9, was admitted to the hospital Oct. 26, 1934, for treatment of 2 ulcerations of the lower right leg. The mother stated that 5 weeks prior to admission the patient complained of a pruritic papule above the ankle which rapidly enlarged, broke down, and formed an ulcer. Two weeks later a similar lesion developed proximal to the ulcer but had not ulcerated. The mother further stated that she believed the leg was infected while the girl was horseback riding during a vacation, contacting an ulceration on the right shoulder and neck of the horse, which had died during the interim. This apparent contact preceded the initial lesion by 2 weeks. Unfortunately we were unable to verify the type of lesion or the cause of death in the suspected animal.



Fig. 1. Lesion on Nov. 24, 1934.

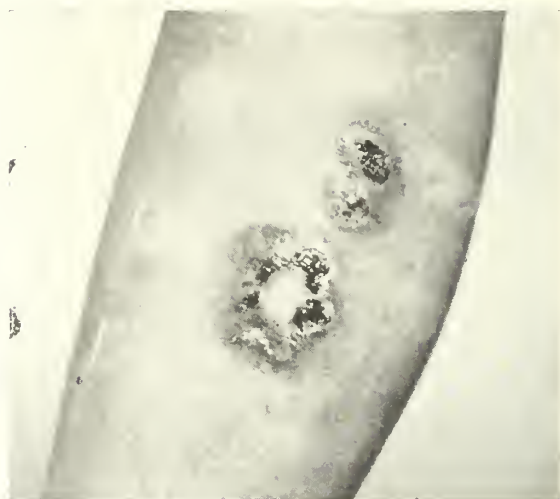


Fig. 2. Lesion on Dec. 22, 1934.

The patient's family history was positive for tuberculosis. The past history was negative. The physical examination was essentially negative.

The dermatologic examination revealed 2 lesions on the inner middle aspect of the right leg. The lower and larger lesion presented a stellate, bluish-red, indolent-appearing ulceration 4 cm. x 3 cm., consisting of an outer, firm, raised verrucose border surrounding a fenestrated honeycomb-like area studded with numerous minute pus-filled cavities which had healed in the central portion leaving a bluish hypertrophic scar. The upper and smaller lesion consisted of a firm nodule of a dusky reddish-blue hue, painful to the touch, about 1.5 cm. x 1 cm., elevated about 5 mm. above the skin surface, and extending deep into the subcutaneous tissue. At its upper pole a recent ulceration was noted. Although this lesion was separated from the normal skin by a border similar to that present in the larger lesion, there was no evidence of inflammation in the surrounding skin.

No regional adenopathy was present. The blood pressure was 112—88. The urine analysis and Kahn test were negative. The red blood cell count was 4,390,000. The white blood cell count was 9400. The differential count was as follows: Polymorphonuclear cells, 62 per cent; small lymphocytes, 24 per cent; large lymphocytes, 12 per cent; transitional cells, 2 per cent. The hemoglobin was 85 per cent. Examination of direct smears stained by the Gram method revealed many bacteria, chiefly gram-positive staphylococci. No mycelia or spores were present. Culture from a biopsy section gave a slow growth after several days which was identified as typical *Sporotrichum schenckii*.

The most obvious changes in the prepared section were found in the cutis and subcutis. The epidermis was relatively unchanged. There were scattered throughout the corium, especially in the deeper portions, many foci of dense polymorphonuclear accumulations, many of which had undergone complete destruction. These foci, in many places, formed a core for an epithelioid type of cell proliferation and scattered giant cells. Mitotic figures were numerous in many of the large mononuclear tissue cells. Surrounding this zone a marked fibroblastic proliferation was present, giving the corium a rather dense hyalinized appearance which was closely woven in many places. In addition,

a marked edema, diffuse leukocytic infiltration, and capillary proliferation were present. Many of the vessel walls were greatly thickened and surrounded by a dense perivascular infiltration consisting of mononuclear and plasma cells with relatively few polymorphonuclear leukocytes. Eosin, methylene blue, and Gram stains failed to reveal the presence of mycelia or micro-organisms. The pathologic diagnosis of a chronic infectious granuloma suggestive of sporotrichosis was made.

While the disease usually appears as a cutaneous manifestation, it is by no means exclusively confined to the skin. Four clinical varieties are recognized:

1. A localized cutaneous form with a definite primary lesion, i. e., a sporotrichic chancre, together with an ascending lymphangitis and localized lymph adenopathy.

2. A disseminated, gunnmatous form in which multiple subcutaneous nodules appear consisting of firm, small, hard, painless lesions which later soften, forming cold abscesses. As a distinguishing feature, there is a lack of ulceration.

3. A disseminated ulcerative form characterized by multiple polymorphic lesions resembling cutaneous tuberculosis, ecthyma, furunculosis, or syphilis.

4. The extracutaneous type, localized in the joints, kidneys, lungs, bones, muscle, mucous membranes, synovial linings, mouth, and tongue. The nasopharynx is rarely involved.

The diagnosis of sporotrichosis of the skin usually offers difficulty, and the final diagnosis can be made only after the recovery of the suspected fungus by culture. No reliance can be placed upon fresh smears in the majority of the cases because the organism is rarely demonstrable in this manner. Agglutination tests of 1:2000 or more dilution when positive may be strong evidence of the infection. Animal inoculation does not eliminate it as it is weakly pathogenic to laboratory animals but this method does not exclude tuberculosis. The histopathologic picture may be suggestive but not diagnostic, and the final diagnosis rests upon the outcome of cultural results which always should be taken from material obtained from unopened nodules. A diagnosis is important because of its close resemblance to other skin granulomas, from which it must be differentiated for therapeutic purposes.

Clinically the diagnosis should be brought to mind by the history of abrasion or trauma followed by a lesion resistant to ordinary surgical treatment, or the development of one or more subsequent painless circumscribed cutaneous or subcutaneous nodules or abscesses along the

course of the lymphatics, especially if the inflammatory aspects and regional adenopathy so typical of streptococcal cellulitis are absent. Rarely is there regional adenopathy in clinical sporotrichosis. The viscid, grayish-yellow discharge is characteristic. It must be differentiated from blastomycosis, bromoderma, tuberculosis, syphilis, carcinoma, coccidioidal granuloma, and tularemia.

In blastomycosis the lesions have a characteristic border which slopes more or less abruptly from the elevated roughened surface to the normal skin from which it is sharply defined, and which is closely set with a large number of minute abscesses. Microscopic examination of the contents of the abscess readily reveals the organism, and the histopathologic picture is diagnostic.



Fig. 3. Lesion on Jan. 26, 1935—almost completely healed.

In bromoderma an absolute diagnosis is not easy either clinically or histologically. The eruption occurs as a single or multiple, unilateral or bilateral, irregular, raised, painful, granulomatous plaque, varying in size from a silver dollar to the palm of a hand. The margins are raised, doughy, dull red, and sharply defined. The follicles are filled with caseous plugs or purulent exudate. It is differentiated by negative bacteriologic findings, the presence of pain and tenderness, the history of drug ingestion and the recovery of the drug in the urine, plus the therapeutic test as outlined by Wile.

In verrucose tuberculosis the resemblance is so close that a histopathologic examination of the tissue, culture examination, and guinea-pig inoculation may be necessary to establish the diagnosis. However, the slow onset, gradual



Fig. 4. Culture.

development, limited involvement, and ropey type of scarring may be of clinical value.

In syphilis the vegetative type is the most confusing. The asymmetrical localized type of lesion involving the deeper tissue, later the arcuate or polycyclic configuration, appearing most frequently during the third to fourth years of the disease which may resolve by absorption or produce a punched-out ulceration, may both leave a fine soft tissue-paper-like scar with peripheral pigmentation having the contour of the original lesion. The history of infection and positive serology are corroborative.

In carcinoma the age of the patient, the history of the lesion, and the appearance, with a rolled pearly border early in the disease and later an ulcerative process which may be proliferative with everted edges and eroded hemorrhagic base and glandular involvement, are useful in establishment of the clinical diagnosis, which should be confirmed by biopsy and histopathologic study.

In coccidioidal granuloma the infection is usually systemic. It may be primary or secondary with no clear-cut clinical picture. It is usually fatal. The diagnosis depends upon the recovery of the organism *Coccidioides immitis*, which is differentiated by cultural differences, absence of

budding, multiplication by endosporulation, tendency to glandular enlargement, and failure of response to therapy necessary to eradicate sporotrichosis.

Tularemia may resemble the primary form and the secondary type which follow the lymphatics. The presence of constitutional symptoms, history of contact with rodents, adenopathy, and a specific immunologic test should readily differentiate the diagnosis.

The prognosis in cutaneous sporotrichosis is good; fatal cases are not often reported. Local sporotrichosis rarely involves the general health. If untreated, the course is indefinite. In long-standing cases the blood stream may be involved. Potassium iodide is generally a specific, and when combined with roentgen-ray therapy it is curative as in the case reported. In blood-stream cases the use of potassium iodide is less efficacious. It is advisable to continue the iodide medication periodically for a period of time after the cutaneous lesions have involuted to eradicate any fungus which might remain in the tissues.

5026 Jenkins Arcade.

ABSTRACT OF DISCUSSION

EARL D. OSBORNE (Buffalo, N. Y.): Sporotrichosis is occasionally an industrial dermatosis. We have had

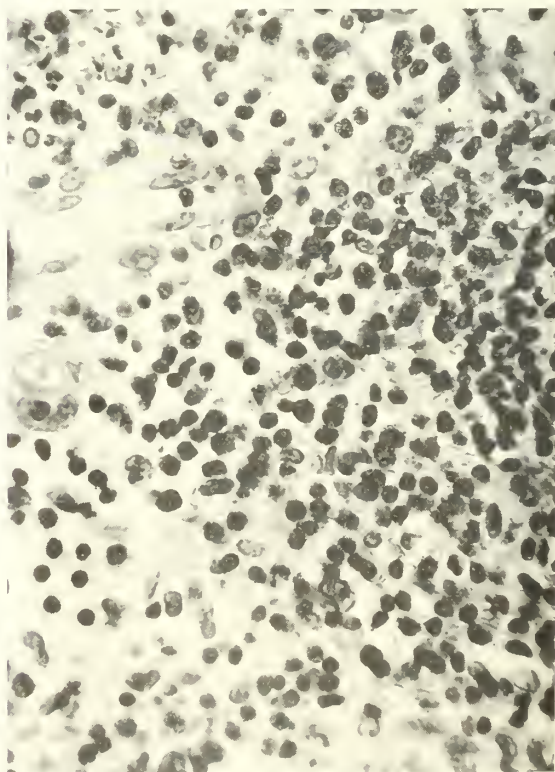


Fig. 5. Histopathologic study.

3 such cases in the past 4 years. One was in a workman on a large farm. Infection took place during threshing. The other 2 cases occurred in the milling industry.

There is a definite clinical differentiation in the type of sporotrichosis due to *Sporotrichum schenckii* as compared to that due to *Sporotrichum beurmanni*. In the latter type the lesions more commonly occur on the face. In our cases all of the lesions occurred on the face. In each case there was lymph-gland involvement, usually the preauricular gland, within 2 or 3 weeks after the onset of the condition. The primary lesions appeared as deep vesicles and with glass pressure simulated the apple-jelly nodules of lupus vulgaris. For several weeks the lesions appeared as a low-grade, papular dermatitis with slight crusting. This clinical

picture is to be differentiated from that occurring in infection with *Sporotrichum schenckii*, in which case the lesions form nodules in the skin and there are also subcutaneous lesions which rapidly break down, leaving an ulcerating, discharging sinus.

VAUGHN C. GARNER (Philadelphia): Some years ago, when in general practice, I had as a patient a young man who claimed that he had cut his finger while trimming a hedge surrounding an office building. He presented 5 deep, heavily encrusted, granulomatous nodules on the extensor surfaces of both elbows. I completely missed the diagnosis, but with the help of a dermatologist from Hartford who cultivated the *Sporotrichum*, the case was definitely proved to be gummatous sporotrichosis. I subsequently learned that it was the first case recognized in the New England States.

THE TREATMENT OF THE CHRONICALLY INFECTED PROSTATE*

LORENZO F. MILLIKEN, M.D., PHILADELPHIA

In discussing treatment of the chronically infected prostate, we shall consider the gland which has been the seat of chronic inflammation for months or years and which has been subjected to the usual routine office treatment without cure or satisfactory improvement.

While we may admit to ourselves and to each other the apparent futility of treatment in many of these cases, it is scarcely prudent to admit as much to our patients. Thousands of the afflicted have made this discovery for themselves after having been massaged, as Owsley Grant puts it, "with a persistence that is highly laudatory to their courage and patience." There is plenty of reason for the pessimism of Keyes when, with remarkable candor, he says: "A prostate showing pus in its discharge will probably show pus forever." And again he reflects the experience of urologists in general by remarking: "Chronic prostatitis is often not curable. The effort to free the prostatic secretion from all pus is in vain." This probably voices an almost universal opinion based on the results of the widely employed and time-honored routine of prostatic massage and urethrovaginal irrigation.

A paper on this subject would hardly be acceptable unless it could point to ways and means of attack on this problem more hopeful of unvarying and complete success than those which have just been mentioned. We should like to feel some of the assurance with which we must necessarily imbue our patients.

In this presentation of some of the most promising ideas that have been advanced during

the last few years, no attempt will be made to give a complete review of the literature or to give exact references. Infection of the seminal vesicles must be assumed as nearly always concomitant with chronic prostatitis and to be treated at the same time. Whatever may have been the origin of the infection and regardless of what particular organism may be demonstrated in the secretions, the treatment is the same.

Any form of treatment, in order to produce the best results, must be supplemented by measures calculated to improve the general health. Tonics, proper exercise in the open air, avoidance of the sedentary life, and the eradication of all discoverable foci of infection are important aids to any other form of treatment. The intravenous injection once a week of 0.3 to 0.45 gm. of neoarsphenamine has seemed to be of definite value in some cases. Any moderate form of exercise which improves the circulation of the perineum and pelvic organs is desirable; walking, especially as exemplified in golf, is probably the best. A sedentary occupation, long sessions at the card table, and prolonged automobile or train rides are certainly not conducive to a cure. Many cases disappear far more rapidly after an infection in tonsils or teeth has been eradicated.

A word should be said about the value of stock and autogenous vaccines, serums, foreign proteins, and the intravenous injection of various chemical antiseptics. It cannot be denied that any or all of these may have some supplemental value in certain cases, but none of them give results at all commensurate with the cost or the time involved.

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

One form of intravenous medication which we have used rather extensively during the past few months and which seems of somewhat better promise is the injection of a dilution of 1:1500 hydrochloric acid. This solution has been used in various infections, and its efficacy has been highly lauded by some writers and minimized by others. The best article on its use in urologic conditions is by C. W. Shropshire of Birmingham, Ala. We prepare the solution by adding 1 minim of chemically pure hydrochloric acid, measured in a tuberculin syringe, to 3 ounces of sterile distilled water. Ten c.c. of this is injected every day for 5 days, then every other day until 10 more doses have been given. In some of the cases there has been a marked lowering in the number of pus cells in the prostatic drop, especially after the first few doses, and the patients have reported a sense of increased well-being. But in some of these cases there has been an increase again in the number of pus cells while the patient was still under treatment. We have not had any reactions or untoward symptoms from these injections, and since the cost is negligible it may be used routinely for what it is worth.

No matter what other form of treatment may be employed, massage must remain our anchor in attempting to cure this stubborn and vexatious infection. First of all, the diagnosis of chronic prostatitis must be based on the presence of pus cells in the prostatic drop under the microscope and the drop must be procured by massage. The benefit of treatment by any method must be evaluated by the same means, and progress or cure decided by it. It is, moreover, a valuable and necessary adjunct to any form of treatment since it is the only way in which regular drainage of the gland can be secured other than by so-called sexual hygiene.

Too early, too frequent, and too vigorous massage after gonorrheal infection of the gland may be the cause of many persistent cases. To be effective in the chronic case, massage must be firm and thorough. In order that there may be complete recovery from whatever reaction is induced, intervals of 5 to 7 days, or in some cases even longer, are better than shorter ones. The cure of chronic prostatitis cannot be hurried by frequent frantic massage. The amount of tenderness in the gland must indicate the degree of firmness in massage that can be used with safety and benefit. Filling the bladder with a mild antiseptic solution brings the seminal vesicles into better position for massage. An occasional rest period of a few weeks is sometimes advisable.

Other methods of local treatment that seem most logical are direct injection of the gland with 1 per cent mercurochrome solution, drainage of the prostate by transurethral resection, and direct application of heat to the gland by any means available.

Owsley Grant is the sponsor of direct injection of the prostate for the cure of chronic prostatitis. With a finger in the rectum as a guide, he passes a 6-inch needle through the midline of the perineum into the prostate, carefully avoiding both the rectum and the bulb of the urethra. A locktite syringe is then attached to the needle and 10 to 20 c.c. of freshly prepared 1 per cent solution of mercurochrome is injected into various parts of the gland. The prostate is then gently massaged to cause more complete diffusion of the antiseptic. He has treated a large number of cases in this way and reports that the immediate and end results are excellent. The few cases that we have treated by this method have to an extent corroborated Grant's report.

Davis, Thompson, Cook, and others have reported drainage of the infected prostate by transurethral incision of the posterior vesical lip with the Collings knife, or by exposing infected areas of the gland by means of the wire loop or punch. This method should obviously be of value in those cases of infection in which there are definite cavities in the prostate as indicated by depressed areas after massage. We have not tried this method except where there has been infection in addition to obstruction; but while drainage of any cavities might thus be facilitated, it is not likely that the prostatic drop would be free of pus as the result of such treatment unless all infected acini could be removed by resection, and this would not be feasible.

It does not seem possible that all infected areas of the prostate can always be sterilized by direct injections into the gland, nor that they can all be eradicated by transurethral approach. Neither has any other method of treatment, local or constitutional, been found which will certainly cure chronic infection of the prostate. The only possibilities remaining are extracapsular removal of the gland, which in some instances would no doubt be advisable, and the improvement of the circulation to the point where complete resolution of the inflammation might occur.

The circulation of the prostate is normally poor, and there appears to be practically unanimous concurrence that the direct application of heat is the best method of improving it. It is of unquestionable benefit in both acute and chronic prostatitis, and if there is any disagreement it is concerning the best way of employing

it. A satisfactory electrode has not yet been devised for the treatment of prostatitis by electrical diathermy. Considering the variously shaped and sized prostates, the probability of properly generating heat in the gland with any electrode on the market is questionable. The degree of heat cannot be definitely estimated, for a thermometer in the electrode cannot register correctly temperature in the tissues. Long ago I discarded electrical diathermy in the treatment of any stage of prostatitis.

The use of hot solutions in the rectum remains the only means of applying heat successfully. There is no doubt of the value of properly applied and controlled heat in chronic prostatitis, for it inhibits, attenuates, or destroys infective organisms, promotes secretion and drainage, speeds the absorption of inflammatory infiltrations by improving the circulation, and relieves pain and irritation. Hot water or saline solution have been used as small enemata which are retained for a few minutes, then expelled. It has also been used through the metal psychrophore, through various rectal tubes with recurrent flow, and in the Elliott apparatus, which circulates hot water at constant temperature through a rubber bag in the rectum.

I have had made a double rubber bag, or rather 2 fused bags, each with inlet and outlet tubes of small caliber, the inflow tube being somewhat larger than the other to insure complete filling of the bag. The posterior bag is slightly larger than the anterior one which contacts the prostate and seminal vesicles. The bags are fused around the circumference, but not in the middle, leaving a socket into which an obturator can be placed for inserting the bag into the rectum. There is some difficulty in inserting the Elliott bag.

The construction of this bag makes possible the application of any degree of heat desired to the rectal side of the vesicles and prostate, while tepid fluid circulating in the posterior cavity protects the normal rectum against possible ill effects of heat. If it is believed that heat will not injure the rectum, then only the anterior bag need be filled and there will still be 3 layers of rubber to protect the posterior wall of the rectum. Two irrigating reservoirs and a receptacle to collect the return flow are needed. The temperature of the hot water can be taken occasionally in the reservoir and as it returns from the rubber bag and thus can be adjusted to any degree desired. This will require a little time and attention, but there should be compensation in being able to apply any degree of heat to the whole prostate and the seminal vesicles and in

the possibility of applying safely a higher degree of heat than has heretofore been used.

This bag can also be employed for the alternate use of hot and cold water which alternation will stimulate the circulation more effectively than heat alone. The cold water may be secured by putting ice in the reservoir. First, the use of cold water for 15 minutes, then of the hot (120 to 130° F.) for the same period, repeating alternately so that treatment will be continued for one hour, is the method selected until experience suggests variation.

Each case of chronic prostatitis must be treated individually as the judgment of the experienced urologist may suggest. By judicious management and proper use of the means available many cases can be cured, or the amount of pus in the drop rendered negligible, and this is a most gratifying achievement especially in a case of long standing.

The infected tonsil is a somewhat analogous condition and the prostate is far less accessible to local treatment than the tonsil, for which local treatment has been practically discarded, so it seems unreasonable to expect any method of treating chronic prostatitis, short of complete removal of the gland, to be infallible. In the cases that cannot be completely cured, massage at intervals gives symptomatic relief and is entirely justifiable as long as the patient is willing to co-operate.

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ABSTRACT OF DISCUSSION

JOSEPH BIRDSALL (Philadelphia): Many patients afflicted with chronic prostatitis sooner or later, after many weary months of treatment, become discouraged with their progress and finally discharge themselves. On the other hand, there are many patients who, thoroughly regretting their past indiscretion, have a most conscientious fear of harboring and disseminating infection; consequently, they are determined to get rid of every vestige of infection and will continue their treatments until that object is accomplished. That type of patient presents a problem which is not easily solved. It may then be necessary to make a thorough investigation of all the various forms of treatment and even give each a trial in order to judge properly its efficacy.

Fads are as common in medicine as in other fields. A certain type of patient demands every new form of treatment, or he goes elsewhere. The new 6-meter radio-ultra-short-wave machine has been extensively exploited and purported to cure every type of infection. Even *Liberty* had the daring to publish an article which extolled the wonderful merits of this form of therapy and mentioned many diseases in which cures could be obtained by its use, and even intimated that it could make the old, young again; in other words, it provided a veritable new elixir of life and rejuvenation. We were actually compelled, on account of the many

inquiries, to try out this new machine, and we gave it a most thorough trial in all types of infections, including epididymitis, seminal vesiculitis, prostatitis, synovitis, and arthritis, even exposing suspensions of organisms to its supposedly deadly rays. After exhaustive study we were unable to obtain the slightest improvement in a single case. It had not the slightest bacteriostatic effect upon the exposed bacteria, as they grew just as luxuriantly after their exposure as before.

In a study of 100 cases of chronic prostatitis, J. H. Hill at the Brady Institute found organisms by stained smears in only 40 per cent of the cases, while the cultures were positive in 70 per cent. The gonococcus is cultured with difficulty; the secondary invaders and, in cases of nonspecific infections, the organisms are more readily obtained by cultural methods.

Piersol described the prostate as a gland of the tubo-

alveolar type. Its glandular tissue consists of 12 to 20 or more distinct tube systems, each drained by an independent duct which opens into the urethra. Throughout the greater part of their course the wavy ducts are beset with saccular and tubular diverticula, simple or compound, that give the canal an irregular lumen and constitute what has been termed the duct alveoli as distinguished from the terminal alveoli, the latter 60 or more in number, forming a series of irregularly branched tubular and saccular spaces, illustrating well the great difficulty which has to be surmounted in eradicating infection from such formidable recesses.

Dr. Milliken has aptly stressed the forms of treatment which give the best results. Suffice it to say that complete eradication of the infection in many cases has been accomplished as determined by repeated examinations of the prostatic secretion.

THE USE AND ABUSE OF METHODS INTENDED FOR THE CURE OF GONORRHEA*

EDGAR S. EVERHART, M.D., HARRISBURG, PA.

It is a poor germicide that fails to get an endorsement as a cure for gonorrhea from aspiring urologists! The older ones shake their heads dubiously, but the younger crop of specialists often fall for anything that is offered in that line. In a spirit of fairness it must be said that some of the testimonials are given in good faith.

In the final analysis, fault probably should not be found so much with the remedies themselves as with the manner of their use. This applies to old and new remedies alike. Many a good drug goes into the discard on account of improper use.

Remedies may come and they may go but the permanganate of potassium and the salts of silver, both old and new, stay on forever. If, for example, the nitrate has fallen into desuetude, that condition has come about not because of the lack of therapeutic qualities of this older salt of silver. Like the newer salts its mode of action probably is wholly misunderstood by those who roundly condemn it. In many instances the nitrate surely has done more damage to the tissue than to the germs for whose destruction it was intended. The number of strictures which have resulted from an unwise application of this chemical is beyond computation. The phrase "fuel added to the flame" is applicable in the case of many a patient whose urethra has been grossly insulted by this misused but nonetheless valuable agent. This is an example of poor application of a good drug.

Strong solutions of chemicals as germicides are valueless. Proof of this has been forthcoming in the course of the many instances in which exceedingly strong germicides have been applied unintentionally to infected urethras. Following such accidents there results intense tissue reaction. There also results the birth of myriads of gonococci. Strong germicides do have one striking characteristic in respect to germs—they tremendously increase their number. They open up countless avenues for infection. They change a poor soil into one of great fertility.

If germicides are not germicidal, of what benefit are they? In weak solution they may be soothing. If not employed too strongly, they help tissue to discourage germ life. Tritely stated, they raise bodily resistance. The tissue, having been transformed from a rich to a poor culture medium, is no longer capable of supporting plant life. As a consequence the disease dies. Too often this happy state comes only after all medication has been stopped, the syringe has been thrown away, and the patient has returned to a normal way of living.

Obviously the general practitioner is not expected to be a urologist in all that the word implies. However, a knowledge of the fundamentals of gonorrheal infection and of the manner in which it is treated should be part of his medical equipment. I take issue with the committee of the New York Academy of Medicine which recently reported that the treatment of syphilis properly is in the hands of the specialist. Where will this so-called specialism stop? It is

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

assumed that this committee would hold the same opinion in respect to gonorrhea. If general practitioners are not to be trusted with the treatment of syphilis and gonorrhea, what diseases are they to be permitted to treat? Apart from a regard for the interests of the general practitioner, how are these diseases ever to be reduced in number if not by the united effort of medical men? A few specialists will never be capable of getting near to a solution of the problem. The general practitioner is sadly in need of a better understanding of both diseases. The field of education, however, is another matter. In due time that phase of the subject will be attended to.

Those who undertake to treat a case of gonorrheal infection should know that above all else gentleness is the outstanding qualification. If gentleness is the rule of the physician; if meticulous care is exercised in giving minute instructions; if a real effort is made to impress upon the patient the necessity for strict observance of simple rules of conduct, success should attend the undertaking. Unless the physician is prepared to follow the same rule of procedure in caring for the patient who suffers with gonorrhea as with other infectious diseases, it will be far better for his reputation if the patient is referred to another practitioner. It will be infinitely better for the patient.

The physician who has the ability to impress his patients with the serious effects of alcohol and of sex indulgence in the presence of acute gonorrheal infection will go far toward bringing about a successful termination of this troublesome disease. Refusal to follow the advice should result in prompt dismissal of the case. This in the best interest of the physician.

The advice on alcohol and sex indulgence must be imparted to some patients time and time again and always in language which cannot be misunderstood. That is a cogent reason for a close and careful follow-up of the patient. Some patients must be seen every day for a varying time; some may be seen at longer intervals. Upon the ability of the doctor to keep his patient on the right track in great part depends the success of the undertaking.

There are 2 essentials for success: Gentleness in treatment and abstinence from alcohol and from sex indulgence. There are other rules of conduct, but—important as they are—they are secondary.

The statements of many doctors that they never treat gonorrhea or that they would not be bothered with it are only 50 per cent complete. They should say that they do not treat gonor-

rheal infection because they have had more failures than success. Let the rank and file of doctors learn more of the fundamentals of gonorrhea; let them learn when tissues should be soothed and when they should be gently stimulated; finally let them know when to draw the line on treatment altogether. When they understand these simple facts, there will not only be a decrease in the much-abused drugstore prescribing, but there will also follow a corresponding increase in the income of the profession.

Many urethras would be in far better condition had they been left severely alone. The remarkable recuperative powers of a mucosa which has been cruelly insulted by a strong germicide is something to be marveled at. It is surprising how many good physicians who hold inflamed throats in the greatest respect lose all sense of the fitness of things when they deal with inflamed urethras.

For some reason many physicians have an unwarranted fear of gonorrheal infection, ascribing to it qualities that are not possessed by this disease. Other diseases seem not to engender a similar uneasiness. That explains in part the use of strong germicidal solutions. They should think less about the disease and more about the patient.

When this disease is regarded in the same manner as are other infections; when harsh methods have yielded to gentle treatment which, instead of breaking down, increases tissue resistance, then much will be gained in the minimizing of a widespread and serious infection.

In theory the patient is not capable of administering his own treatment. In treating the huge mass of gonorrheal infections it is not theory but fact that we face. The specialist quite properly is prepared to administer treatment himself or to direct its administration by a trained attendant; the general practitioner obviously is unable to do so. In this as in other matters the practical physician makes use of those things that are at hand. In spite of the statements in the books, which are written by the specialists, self-treatment does work. It is the only practical method for use in the large mass of gonorrheal infections that prevails today. It works, however, only when the doctor takes the trouble to follow the rules of proper procedure. To hand a patient a urethral syringe and some medicine, which may or may not suit his particular case, and then to forget him for a week is not exercising reasonable care.

Unquestionably there is virtue in some of the synthetic general antiseptics which during the past decade have been introduced for the treatment of urinary tract infection.

In the course of the disease when the stationary period arrives, the use of a stock vaccine may result in marked improvement. As Percy S. Pelouze rightly points out, "Overwhelming quantities of antigenic substances check antibody formation." Therefore, with this as with everything else, caution must be used in order that tissue resistance is not destroyed. It would be well to confine the dose of vaccine to one-fourth that which is recommended generally and to limit it to 4 doses.

In addition to vaccines, slight increase in the strength of local solutions may be in order. These are measures designed to give the slight stimulation that is often needed. If stimulation is proved not to be the proper procedure, probably rest from all forms of treatment is the crying need.

I am told that even now the strongly medicated bougie is still used by some physicians.

The manufacturers and the glib-tongued salesmen who not so many years ago persuaded some physicians to use the remedy called diathermy have a lot to answer for. I mention it only to condemn it. A sound is a sound. Whether hooked up with an electrical apparatus or used alone, a sound when introduced into an acutely inflamed urethral canal is capable of doing untold injury. There are no short cuts to the cure of gonorrhea, but there are many ways of prolonging the infection.

The ignorance that surrounds gonorrhea is inexplicable. Actually there are some physicians who believe that this disease is more to be dreaded than syphilis. How that fetish has arisen is a mystery. Whatever its explanation, it is time for those who have misapprehensions on the subject to awaken to the realities. A disease which rarely attacks a vital organ and which in due time will cure itself, if left alone, cannot by any stretch of the imagination compare with one which invariably involves the innermost recesses of the bodily structure.

It is to be hoped that soon there may be developed a plan whereby there will result a closer co-operation between the private physician and the public health agencies—a real "tie up" that will be productive of an effective supervision over infected individuals who are known to disregard the rights of others.

Every person who is infected with a disease like syphilis, in the interest of society, should be treated to an extent that makes it impossible for him to transmit the infection to others. The accomplishment of this desired end should be the aim of those who are interested in the welfare of mankind. Society should demand nothing

less. Private practitioners are sympathetic with this statement and they are willing to give whatever aid is possible to its accomplishment.

I want to take this opportunity to bear witness to the generosity of many members of this society in caring for infected persons who menace the lives of others. This is proof that medical men, contrary to what some agencies would have us believe, are still motivated by a strong desire to serve their fellowmen. It is a direct answer to those who would change the entire structure of medicine in this country. Judged by the wealth of requests for free drugs for use in connection with indigents, the State of Pennsylvania may continue to depend upon the private medical profession as the bulwark for conservation of health as well as for alleviation of suffering.

The private physician is the most potent force in public health work. The part that is played by paid public health agencies is that of guide to medicine for the accomplishment of work in public health fields.

If the time ever comes when the medical profession is paid even a small sum for the performance of public service, no matter under what name it may masquerade, government will lose the immeasurable benefits which the profession now lavishly bestows without taking one cent from public funds.

CONCLUSIONS

1. Gonorrhea is a disease the cure of which depends upon gentleness in treatment.
2. Essentially it is a local, self-limiting disease the duration of which is prolonged by the use of methods that are harsh.
3. Gonorrhea is a widely disseminated disease the treatment of which necessarily rests with the general practitioner of medicine.

State Department of Health.

ABSTRACT OF DISCUSSION

GEORGE A. HOLLIDAY (Pittsburgh): Much has been said and written in recent years as to the avoidance of trauma (chemical and mechanical) in the treatment of gonorrhea. The physician who accepts the venereal patient should acquaint himself with the accepted methods of treatment and accord this patient the same consideration and care that is shown his nonvenereal clientele. The physician, knowing that gonorrhea is not always a self-limited disease and that upon occasion its complications may harass a patient the rest of his life, must put forth his best effort to effect a cure.

The only methods to be followed are those outlined in standard textbooks and current literature. The appraisal of a new remedy involves its use in a large number of cases by those capable of judging its merits. We are constantly hearing from the detail men of the

specifics they offer for sale. The general practitioner at all times contacts the major percentage of venereal patients and should follow the accepted routine of treatment and not be the dupe of the detail man in trying every new remedy recommended to him.

The use of strong germicides does not destroy the gonococcus in the tissues; such therapy may exacerbate and prolong the infection. Some drugs used in certain concentrations will favorably influence the tissues and aid them in throwing off the infection. To these we should adhere.

Internal medication cannot be depended upon. The course of the infection usually is chronic. Hypodermic medication by vaccines and other products of gonococcal growth in test tubes—much advertised by the pharmaceutical houses—have proven of little if any value.

Local treatment is accepted as the best method. It is to be initiated upon the patient's first visit in an effort to abort the disease or prevent its further extension. Do not discontinue treatment upon the first abatement of symptoms, as a residual infection usually persists only to relapse later. Persist in treatment until efficient tests assure a cure.

Besides the drugs other measures are often misused. Many physicians feel that as a case drags along they should do something more radical than injections and irrigations. Massage of the prostate should not be done when only the anterior urethra is involved. You are inviting extension of the infection. Nor should it be done during acute posterior urethritis. You are then inviting deep (and ultimately a chronic) involvement of the prostate and the occurrence of prostatic abscess and epididymitis. As a general rule, do not massage the prostate until all acute symptoms have subsided and the urine is clear. Instrumentation, except such as is required to treat the posterior urethritis or to evacuate the urine in case of retention, is to be avoided. So long as the gonococcus persists in the tissues the use of sounds or urethrosopes can only do harm.

Avoid traumatism (chemical or mechanical); follow the generally accepted routine of treatment; avoid experimenting with the new and unaccepted remedies; keep in close contact with your patient to know that your instructions are being followed; and you will be doing the best for your patient.

ARTERIAL EMBOLISM*

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The purpose of this paper is to present some comments on the cause, the result, and the treatment, even though it often is unsatisfactory, of the obstruction of major arterial channels.

Many of the most tragic events in the life of the practicing physician are concerned with the more or less sudden interruption of the blood supply to a part. A previously apparently healthy man drops down and is dead in a twinkling of an eye. An arm or a leg which a minute before was useful becomes powerless and limp. An intestinal wall previously well nourished and capable of maintaining peristalsis becomes black and lifeless. All of these result from the obstruction of the lumen of blood vessels by emboli varying in size from that of a millet seed to a pea. The interruption of blood flow may be produced by obstruction of the vessel caliber from within or by constriction from without. It may be sudden, causing death to the part supplied or to the whole organism in a time varying from a few seconds to a few hours, or it may be so gradual that the ischemia produced may be almost imperceptible in its results.

The effects of arterial embolism are almost wholly determined by the size and distribution of the vessel obstructed and by whether the tissue affected can be compensated by similar functioning tissue elsewhere. In addition, speed and

effectiveness of the establishment of collateral circulation are both therapeutically and prognostically important. One kidney may be infarcted and life still maintained. Embolism of the cerebral vessels, on the other hand, produces complete loss of function in the musculature enervated from this region because there is little opportunity either for collateral circulation or for the assumption of the duties of the cells destroyed by other bodily cells. The blood supply to a part may be equally suddenly obstructed by a sudden spasm of the musculature of the artery supplying it. Witness the dramatic picture of Raynaud's disease or the effect of the sudden arterial dilatation and transudation of fluids in Quincke's disease. The stealthy approach of arterial sclerosis with its more gradual starvation of a part and with ample time for the establishment of collateral circulation is in strong contrast to the picture presented by arterial embolism. At the necropsy table we frequently observe complete obliteration of coronary radicals which, were this to occur suddenly, would have certainly terminated life.

Obviously the subject of coronary occlusion is one of such proportions that it can be but lightly touched here. Emboli, excluding those produced by the escape of air or fat globules into the general circulation, are most often thrombotic in origin. This coagulation of the blood may be due to infection, to trauma of the vessel wall, to stagnation of blood or a change

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

in its character, or to its contact with a diseased arterial intima. Emboli may arise in either the arterial or venous systems. In the former they traverse channels which become ever smaller. In the latter they course toward the heart, in veins the caliber of which ever increases. Hence, the effect of the obstruction of arterial and venous channels will be markedly dissimilar. Obstruction of the vascular structures of the brain, spleen, kidney, or extremities produces a more or less characteristic train of symptoms.

The heart is the birthplace of most arterial emboli. Here, as a result of a great variety of muscular and valvular defects, clots accumulate which when dislodged traverse arterial channels until they arrive at a point beyond which their size prevents passage. Obstruction of the aorta itself is a comparatively rare occurrence because here emboli are less likely than elsewhere to encounter a vessel diameter less than their own. Banowitch and Ira collected a total of 105 cases of aortic embolism, more than 50 per cent of which were associated with mitral stenosis and auricular fibrillation. Mitral stenosis is notorious for its thrombi-producing tendencies. Bull in 1922 found from the records of 600 patients who had come to necropsy that thrombosis of the right heart occurred 67 times, of the left 63 times, and of both sides 51 times. It appears possible, therefore, for both sides of the heart coincidentally to throw off emboli which may produce obstruction not only of the peripheral arteries but also in the pulmonary circulation. In endocarditis of all types and grades, particularly infections of the heart valve with the *Streptococcus viridans* and in malignant endocarditis, infarction of the spleen and kidneys, the skin, and more rarely the liver occurs. Injury to the endothelium of heart chambers or blood vessels produced by arteriosclerosis or syphilis more rarely causes the formation of thrombi. The most common point for the lodgment of a large embolus is at the bifurcation of a vessel, as at the division of the aorta, at the emergence of the profunda from the femoral, at the divergence of the subscapular and axillary, and in the popliteal. At the bifurcation of an artery the embolus often assumes the rider position, forming an inverted Y with each branch extending downward into the vessels below. Embolism of the aorta is an exceedingly fatal condition, Harlow Brooks estimating its mortality at 92 per cent. Since stasis is one of the chief causes of thrombosis, embolism is usually succeeded by clotting of the vessel's own blood below the obstruction. The observation of Baron and Linenthal that there is an existence of widespread vascular lesions in such a local condition as thrombo-angiitis

obliterans suggests the cause for sudden cardiac or abdominal pain in the patient suffering with Buerger's disease. The comparative rarity of arterial embolism is difficult to explain considering that, in 15 per cent of all patients dying of heart disease, antemortem cardiac clots are found, and that in 30 per cent of mitral stenotics coming to necropsy the left auricle and its appendages particularly contain thrombi.

The subjective symptoms of the obstruction of the aorta or any of its major branches are the sudden onset of pain in one or both limbs which is sharp and persistent. This is followed by a sense of coldness, numbness, and tingling with an increasing inability to move the part, the power of motion being lost when obstruction is complete. Objectively the physician observes a changing color of the skin, it first becoming pale, then marble-like, and later cyanotic, with livid dark blue patches appearing, followed by complete gangrene. The original pain has been ascribed to a sudden spasm of the vessel's musculature produced by the irritant embolus within. Vomiting frequently accompanies abdominal pain when a rider clot lodges at the bifurcation of the aorta. One of the most dependable symptoms for early diagnosis in arterial embolism is the disappearance of pulsation in the vessels below the obstruction.

The attention of physicians generally has not been sufficiently directed to the possibility of infarction being mistaken for some other ailment. A patient suffering with mitral stenosis and fibrillation, who had experienced a hemiplegia one year prior to hospitalization, was recently admitted with an acute pain in the right lower quadrant, a leukocytosis, a fever, and a few red blood cells in the urine. A normal appendix was removed, and an almost complete infarction of the right kidney was discovered at necropsy some days later.

Within the past few years there have been developed some effective measures in the study of peripheral vascular conditions. The oscillometer is helpful. The salt-solution wheal test of Aldrich and McClure and the use of the histamine test both give much information as to the adequacy of the circulation of the part. The detection of the pulsation of vessels, particularly the dorsalis pedis, when ischemia of the distal phalanges is observed gives much diagnostic assistance. The use of the skin-temperature apparatus greatly assists following the injection of some fever-producing substance in differentiating vascular spasm from obstruction from within.

The diagnosis of arterial obstruction is usually not difficult. The presence of a diseased endo-

cardium or a fibrillating heart in a patient in the fourth or fifth decade in whom a sharp pain in the left upper quadrant or in either loin develops should suggest infarction of the spleen or kidney. It has been said that healthy lungs are rarely infarcted and that the passive congestion due to an obstructive mitral lesion greatly predisposes to this accident. A patient who has suffered with claudication of the extremities not infrequently develops an increasing disability in his limbs with change in color, tingling, and later burning pain. In such a case ascending thrombosis should be suspected.

As to treatment, it may be said that there is much difference of opinion as to the efficiency of embolectomy. Pease in 1933 remarked that a study of the literature revealed that 52 per cent of patients subjected to embolectomy died within a month following operation, although he believes that this high mortality was due to the primary systemic disease. Herein is to be found the fly in the surgical ointment. Portus and Roth in 1933 reported 3 cases in which emboli were removed from the popliteal and brachial arteries with an immediate good result, although 2 of their patients died later from cerebral embolism, the third succumbing to cardiac decompensation. They place 10 hours following the lodgment of the embolus as the interval beyond which, if operated upon, the patient rarely recovers. It must be granted that in the hands of a skillful surgeon the removal of an arterial embolus from within the aorta itself offers no great difficulty. The writer observed 2 instances in which emboli were extracted from the brachial and radial arteries respectively, only to have them recur elsewhere within a few hours. The discouraging factor in these cases is the existence of a distant birthplace of emboli waiting to cast off others which may lodge in more vital vessels.

The part which rapid digitalization plays in throwing off cardiac emboli is one of debate. Certainly there is always a constant danger of the dislodgment of cardiac clots when the rhythm of the heart is altered by the use of quinidine or when the contractility of cardiac muscles is rapidly increased. The injection of sera or glucose into the circulation in cases of malignant endocarditis may favor the breaking off of friable valve tissues. We have observed one such instance. It is unlikely that anticoagulants can materially delay thrombosis when obstruction has been established, and yet because there is no better remedy at hand the citrates by mouth or vein may be tried. Slow digitalization when no great urgency exists is to be encour-

aged in the presence of diseased and dilated hearts, particularly when fibrillation exists.

The study and diagnosis of peripheral vascular disease has become much of a specialty within the past half decade. The internist can make a definite contribution to the surgeon in the handling of these patients. The use of refined diagnostic methods in locating the point of obstruction frequently will make possible the saving of tissue by indicating the safety of a lower amputation. Before embolectomy is attempted a careful survey should be made as to the probabilities of recurrence of the obstruction by studying the nature of cardiac and vascular pathology and by estimating their thrombi-producing possibilities.

269 South Nineteenth Street.

ABSTRACT OF DISCUSSION

JESSE LENKER (Harrisburg): It is true that the etiologic factors furnish the key to the situation. What would be the use of subjecting a patient suffering from vegetative endocarditis, with infarcts elsewhere, to surgery for gangrene of the lower extremities or what is to be gained by the introduction of sera or glucose in the circulation when it is known that with every systole of the heart there is apt to be showers of emboli and that the introduction of foreign substance simply encourages more?

In the April, 1935, issue of the *British Medical Journal* there is an article on "Thrombo-angiitis Obliterans" by E. D. Telford and J. S. B. Stopford in which they describe this condition as a "chronic occlusive lesion which affects in the first instance the medium-sized arteries of the legs." It occurs mostly in males. They disclaim the fact that it is common in Jews. In 33 per cent of their cases they found Raynaud symptoms in the hands of these patients, in addition to the leg symptoms, and occasionally in other vessels.

They believe the disease commences at about age 40 and at 45 the first claudication is complained of. When occlusive lesions appear after age 50, they are due to arteriosclerosis rather than thrombo-angiitis obliterans. They do not know the etiologic factor but are sure that syphilis plays no part; neither does the use of tobacco. They do believe, however, that certain drugs play a part. The treatment suggested is ganglionectomy excision of the second, third, and fourth lumbar ganglion with the intervening chains.

I am not in accord with the common belief that quinidine is a safe drug to use in all cases of fibrillation. Here again we must be discreet, a careful survey of the patient must be made and the etiology carefully noted. I am, however, heartily in accord with those using digitalis when decompensation with evidence of congestive failure is present, but digitalization should be approached slowly.

Embolectomy should be encouraged when the diagnosis is not that of an absolutely hopeless condition.

In coronary occlusion or thrombosis we were heretofore too often inclined to throw up our hands in distress and give up the job as hopeless. Of recent years, however, we have assumed a different attitude. We know definitely that the coronary circulation changes

with every decade of life. If these patients are treated properly with plenty of rest, a collateral circulation will be established. Although they may not be able to carry on in the future as they did in the past, they may still have years of modified usefulness and happiness before them.

A patient, not much unlike those referred to by Dr. Doane, came under my care 3 weeks following an attack of pain in the left chest with all the other findings of coronary occlusion. He was referred for an opinion. While in the examining room he was seized with a very severe pain in the abdomen in the region of the umbilicus, followed by nausea, vomiting, and shock. He was detained in the examining room for the remainder of the day and then sent to his home. Examination revealed pulseless vessels of the lower extremities, which in a short time showed evidence of beginning gangrene. Several days later he was admitted to the hospital and both lower extremities were amputated. He survived the operation but a few days. This patient undoubtedly had a rider embolus such as Dr. Doane has described.

Had this man been kept at absolute rest following his first accident instead of being sent to my office for examination, the second accident would not have occurred and perhaps his life would have been spared.

NATHAN BLUMBERG (Philadelphia): There is no more serious complication in treating the cardiac individual than to have an accident of this kind occur. It is well to keep in mind that individuals suffering from a mitral lesion or fibrillation are very prone to have thrombi and subsequent emboli thrown into the circulation, and as a result it is most important that any individual suffering with cardiac disease who suddenly develops a sharp pain in any part of the body should be kept under careful observation.

The patient Dr. Doane described, a young woman, had a history of an old mitral lesion. While on a short

trip to a neighboring town she suddenly developed an acute abdominal pain. A physician was called, and instead of making a careful examination of the patient's heart, he told her she had acute indigestion and treated her accordingly. The patient was allowed to go about and carry on in an ordinary manner. Within 24 to 36 hours this dreadful accident occurred. If the patient had been diagnosed properly, placed on her guard, and immediately put to bed, very likely this serious accident would not have occurred.

As far as treatment is concerned, embolectomy has been performed by a great many individuals, but unfortunately the primary focus is not in the place where the embolism is found; the focus is in the heart itself, and it does not make much difference what is done, the focus is constantly pouring infection into the circulation and the ultimate result is death.

As far as diagnosis is concerned, a careful history must be taken. It is very important to use the oscilometer, the surface readings, and the histamine studies. It is very simple and can be done at home; the patient does not have to go to the hospital to have this procedure carried out.

DR. DOANE (in closing): In case an embolus lodges at the bifurcation of the aorta, it generally means recurrence elsewhere. Even then it seems best to attempt to remove the obstruction promptly because of the absolute certainty of the result if something is not done. Embolectomy has progressed to the point where it can be performed with comparative safety. I believe in the case of decompensation, if the physician has time, the digitalization should be gradual. Changing the rhythm of the heart with quinidine might shake loose thrombi. At any rate, we should remember the dire consequences which befall the patient when a thrombus gets loose in the bloodstream with the probability of loss of limb or of life.

THE PROBLEM OF INCREASED INTRA-OCULAR TENSION IN CONCUSSION INJURIES OF THE EYE*

P. HAROLD DECKER, M.D., WILLIAMSPORT, PA.

The question of the development of increased intra-ocular tension following concussion of the eye has been brought to my attention with sufficient frequency to regard it as a definite danger in such injuries. As most such accidents occur to active persons in the earlier decades of life before the usual age when glaucoma tendencies manifest themselves, the question which naturally arises is why certain patients withstand considerable eye trauma and more or less intra-ocular hemorrhage without any appreciable rise of tension, and why others will manifest destructive hypertension followed by organic changes characteristic of glaucoma.

The term glaucoma seems to convey the wrong impression as it carries with it a tendency to re-

gard it as a clinical entity rather than a condition. What seems to constitute pathologic intra-ocular tension in one individual, resulting in secondary changes of an organic and permanent nature, in other persons seems to be borne with little or no ill effects and no secondary permanent pathologic results. Why one child should receive a blow on the eye and with apparently no more injury than a small amount of hemorrhage in the anterior chamber develop a tension of above 50 mm. Schöitz, and another with a similar gross appearance stay within normal tension range and rapidly recover is very difficult to understand. Perhaps the first child would be a candidate for acute congestive glaucoma in later life or even for chronic simple glaucoma. Hypertension must be watched for in every case, whether it be a mild accident or a difficult unsatisfactory refraction.

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

The ciliary zone of the eye is so intimately associated both with the production of intra-ocular fluid and, by its close apposition to Schlemm's canal, with the evacuation of fluid, it is not surprising that there should be a rapid upset in the ratio of production to elimination of fluid after injury to this zonule. This is the area which probably sustains the greatest trauma in concussion injury due to the hydrostatic forces of the compressed fluid of the anterior chamber following a blow resulting in traction on the zonule and ciliary processes. Secondary minute ciliary body displacement, subluxation, and passive congestion combined with entangling products of hemorrhage—even though it be of capillary degree—would seem a reasonable answer to the upset of the ratio of production to elimination of congestive products.

We have all seen in trephine operations the prolapse of a large swollen ciliary process, or what we suspected to be such, into the trephine opening after the scleral button is removed. Could not such similar engorgement of the ciliary processes be a similar factor in increasing tension after an injury to the ciliary zone? I have no literature and no very large clinical experience to substantiate such a theory, but am simply trying to find an explanation for some of the things which have happened to some of my patients.

The classical picture of glaucoma with all its classical phases may be seen quite often in the average ophthalmic practice, but in my experience increased intra-ocular tension with or without one or more other glaucoma symptoms and signs is seen with much greater frequency than it appeared 10 years ago. I am forced to the conclusion that this is true chiefly because I am expecting it and watching for it more closely than formerly.

This paper has been entitled "The Problem of Increased Intra-ocular Tension in Concussion Injuries" because this condition very rapidly becomes a problem. The use, discontinuance, or counteraction of a cycloplegic in these cases becomes of very definite import, and it is for the purpose of bringing out some discussion on this phase of the matter that this paper originated.

During the past 5 years I have had 8 cases which rapidly developed a severe rise of tension after concussion injury without penetration of the globe. Three of these had an associated partial lens dislocation, which was probably the chief exciting factor, as these 3 were not treated with atropine. Of the remaining 5, 4 had atropine instilled prior to the onset of the in-

creased tension. All patients except one were under age 30; 2 were under age 6. All had tension above 50 Schoitz. Two lost all vision in the affected eye due to secondary degenerative changes and retinal detachment. Several were subjected to operative interference as a last resort. An iridectomy was performed in one case and repeated tapping of anterior chambers in 2 other cases. Two of these cases were Fourth of July accidents, one from a firecracker and one from a torpedo striking the eye. One resulted from a blow of a fist, one from a horse chestnut striking the eye, one from a snowball, and one from a branch of a tree bumping the eye. Two were indirect concussion—one occurred from jumping out of a window and striking the head, and the other, which was bilateral, from falling down a flight of stairs. The last case was that of the patient beyond age 30. This patient was seen 12 hours after the accident, with hemorrhage in both anterior chambers and bilateral acute glaucoma. No atropine had been used; an iridectomy was done as no effect from eserine was obtained. This case had a good functional result and might be classed as a typical case of congestive glaucoma with the fall as the exciting factor; however, the rather free spontaneous hemorrhage in both anterior chambers seems to justify considering it, due primarily to the concussion.

Having had these experiences and the rather unpleasant memories associated with them makes me hesitate before using atropine in what seems a simple bump of the globe with a small amount of blood in the lower part of the anterior chamber. I still use it—but with a great deal more watchfulness than formerly. I should appreciate discussion of this matter.

First National Bank Building.

ABSTRACT OF DISCUSSION

WARREN S. REESE (Philadelphia): To a clinically minded audience secondary glaucoma always is interesting, and that type due to concussion is no exception. By concussion Dr. Decker evidently means an ordinary blow to the eye by blunt force.

During the War I was fortunate enough to see numerous most interesting concussion injuries. These usually were due to high velocity missiles passing close to the eye. I recall none that exhibited increased ocular tension, nor, in civil life, have I seen hypertension in cases of Vossius' ring cataract, Berlin's edema, or hole in the macula. If, then, these cases that Dr. Decker refers to are due to hydrostatic force, it would seem that they require either a particular kind of force, or coincident injury or damage to other ocular structures.

Ciliary trauma may be causative, but ciliary trauma in the form of heat has been found experimentally and used clinically to reduce ocular tension. At first glance it would seem that exudation into the anterior chamber

might cause increased tension, yet we see hyphemia or hypopyon without hypertension. Indeed, the anterior chamber may be full of blood and the tension subnormal, as in blood staining of the cornea. It seems, therefore, that if the hypertension comes on immediately after the injury it may be due to a nerve shock which temporarily disorganizes the wonderfully balanced mechanism regulating tension. I recall one case in which hypertension occurred 5 or 6 days after injury, when a hemorrhage appeared in the anterior chamber.

This brings up the question of the part played by inflammation. An intermediate cyclitis may be responsible when the increased tension arises some time after the injury. This, coupled with an outpouring of blood, could effectively seal up the various channels of egress. In the case of a dislocated lens the hypertension may be mechanical in origin, though inflammation may play a part. It certainly seems to do so in old cases. It is

conceivable that a prolapsed iris would cause tension by blocking the angle. I have seen cases in which the entire iris was driven back into the ciliary body. In others there occurs an iridectomy-like prolapse.

I regret that Dr. Decker did not present his cases in more detail. That in which bilateral hypertension with hyphemia followed a fall is unique. I agree that this probably was a case of primary glaucoma. The mental upset incident to the fall could easily initiate the glaucomatous attack. The hyphemia might then be due to diseased ocular vessels from previous hypertension or to a vasomotor disturbance such as might occur in a glaucomatous individual.

In the management of these cases I am inclined to favor mydriatics. If dubious, start with homatropine and watch its effect. I seldom have resorted to surgery. Paracentesis of the anterior chamber may be helpful. More formidable operations are of doubtful efficiency and even dangerous.

THE SCHOOL PHYSICIAN AND THE PEDIATRICIAN*

ALLEN M. KERR, M.D., PITTSBURGH

I am grateful for the opportunity of appearing before this group as president of the State Association of School Physicians and the representative of the more than 500 full-time school physicians of this state, most of whom are members of this society. This is the fourth consecutive annual meeting at which we have been privileged to have a representative on your program; this recognition has been welcome and appreciated by the school physicians. While some of us might prefer a section of our own, if it were possible to secure it, we gladly accept affiliation with this group, with whose work and objectives we feel the closest sympathy.

Another reason for our presence here is found in the many phases of our work which bring us into situations that may cause annoyance and friction with physicians who care for the illnesses and other physical difficulties of children. Certain duties are laid down for us by the school authorities: Passing on the validity of excuses from any part of the physical education program; excluding or admitting pupils to teams engaging in interscholastic athletics; excluding pupils upon suspicion of contagious disease; examining pupils after quarantine for contagious disease to determine fitness to enter school; placing pupils in certain special schools, such as those for the seriously handicapped as regards vision or hearing, and choosing those among the underweight poor children who are to receive some form of school feeding. These are only a few of the activities in which the duties of the 2 groups may

overlap, but they serve to show the possibilities of friction due to difference of opinion and possible misunderstanding of the other person's viewpoint.

Excuses from various phases of school work, practically always physical education and especially swimming, are the most frequent cause of friction. Many high-school girls do not care to go into the pool, usually not because of any physical condition nor fear of the water, but simply because of the damage done to the cosmetic complexion which the modern lass deems essential, necessitating a good deal of work to bring it again to perfection after the immersion. Consequently, with the assistance of the good-natured family physician, she endeavors to escape through the medium of an excuse. The physician does not realize that physical education is as much a required subject under the state law as reading and writing, and writes an excuse—often vague and indefinite—bearing on its face the evidence that it was given as a favor to the family.

The school physician, acting on his instructions, refuses to honor the vague and unconvincing excuse. Then, if the family is persistent, the 2 physicians may find themselves in a disagreement which may lead to resentment and bad feeling. Clear, definite, and reasonable diagnoses given by the attending physician will usually obviate any possibility of friction. In any case the attending physician should feel free to state his case fairly and fully, but should be willing also to consider fairly the school viewpoint.

When it comes to the question of participation in competitive athletics, the shoe is often found

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

on the other foot; the family physician may try to secure permission for the pupil to participate in athletics which the school physician refuses, since no one can serve on a team without his consent, based on a physical examination which all athletes must pass before being enrolled on a high-school team. If they have suffered from certain diseases, such as scarlet fever, or have participated unduly in sports at an age when the heart muscle is more or less inadequate to care for a rapidly developing boy who is taking too much strenuous exercise, the examination may lead to a refusal to permit athletic participation. The family physician is then often asked by the family to write a note to the school, which he frequently does, and friction may promptly develop. The school physician in this case is acting as a protecting agent for the boy, and his attitude and the reasons therefor should be carefully considered by the family physician and explained to the parents.

A third important duty is an effort to control contagious disease through the early discovery of unreported or incipient cases and prompt quarantine of the affected members of the family, and through immunization against those diseases for which such protection is available. It is inevitable that the alert school physician will from time to time find such unrecognized cases in the school. Exclusion of the student and a report to the health department promptly follow, ending the school's connection with the case until the time for readmission arrives. Differences of opinion here may lead to friction. Even in such a dangerous disease as scarlet fever, the eruption may be so slight or so transient and the other symptoms so inconspicuous that the family physician, or even the pediatrician if he is consulted, may find nothing at that time to suggest the serious disease which exists. Two weeks or more later, when the school physician discovers a desquamation and excludes the child, there may be much misunderstanding and recrimination. So far as the school physician is concerned, his connection with the case ends when he has excluded the pupil and promptly reported the case as a suspect to the health department.

As for immunization or other preventive measures against diphtheria, scarlet fever, or other contagious diseases, it is the policy of the school health group to refer all such cases to the family physician, who in some cities is paid a modest fee by the health department for transmitting a report of the inoculation to the central office. This practice, steadily becoming more prevalent, has proved valuable in keeping in the hands of

the family physician the work that once was, and still should be, regarded as his prerogative, and incidentally reduces possibilities of friction between him and the school physician, who might otherwise find it part of his work.

Another important school health activity is the examination of the presumably healthy child for physical defects, which may at the time or later lessen his ability to profit by school instruction. The general impression of the public, and unfortunately also of some physicians and of authors of books on health, is that the average child has but few or no defects when he first enters the doors of the school, but that through the stress of the program and the strain of excessive study physical defects are soon brought into being. Nothing could be further from the truth. As a matter of fact, preschool children in Michigan showed in their fifth year of life, on entrance to school, an average of 3 defects per child. In Pittsburgh the figure is a trifle less than 2 per entering child, based on the findings in 25,000 examinations of preschool children. The average child in elementary school has 1.6 defects; the average high-school pupil has 1.2 defects; there is a steady decrease as the child passes onward through the grades.

Not all of these defects are equally important, but the 1.2 per cent of children entering school for the first time who show early signs of cardiac weakness, the one-half per cent with some evidence of beginning tuberculosis, and the 1 per cent with defective hearing demand, and should receive, prompt and thorough examination and careful treatment. Unfortunately this is often not the case, and the final results are sometimes disastrous not only to the child but also to the attending physician. The large number of preschool children who now have latent or undetected defects which may give serious trouble later should be an especial concern of the pediatrician as they are of the medical inspector. It will be difficult to obtain corrections if we do not have co-operation, not only of the family physician but also of the pediatrician to whom the case may be referred, in confirming the school diagnosis and urging the appropriate treatment. We do not ask that you shall think it is necessary to agree with the school physician's diagnosis if you find it erroneous. Your examination can be very much more thorough and complete than ours, but we do ask the understanding and sympathetic co-operation of our fellow physicians in the effort to preserve the health of school children.

ABSTRACT OF DISCUSSION

NORBERT D. GANNON (Erie): The school physician is an outstanding practitioner and is looked upon as a useful and respected member of the profession and the school system in which he works. However, more pediatricians should interest themselves in school medical inspection. It is their field, the field of children, and their association immediately enhances the value of the service to the community and school system.

When parents know that a pediatrician or a physician particularly interested in children is going to examine their child or is going to administer some preventive, as toxoid, the hesitancy disappears and splendid co-operation results. The inspection of children in schools could be elaborated to include a more detailed examination.

In our community little difficulty is experienced with physicians due to the exclusion from athletics. In very few instances do other physicians authorize participation in these contests after the student is excluded by the school physician. There appears good co-operation. However, should the question arise, the burden is placed over the signature of the parent and the family physician.

Essential in the examination of athletes is a re-examination after a season of sport. Often conditions, as hernia, develop after a football season, and the student comes back to the school authorities for repair of this condition, stating that it occurred during football season. An examination following the football season would determine whether it occurred during the school term or during the vacation time. A re-examination will rule out any serious defects caused by athletic competition.

Little difficulty arises in our community in the matter of contagion between the school physician and the family physician. After the nurses discover in the school or home a case of suspected contagious disease, the school physician makes the diagnosis and forwards a report to the health department. Then it becomes a matter for the health authorities. Since more than 50 per cent of the contagion is reported by 2 physicians, there is little danger of many errors in diagnosis being made.

School medical inspection deserves especial recognition in any community. To make such medical inspection more beneficial and powerful, more interest should be taken by family physicians and pediatricians.

COMMITTEE FOR THE STUDY OF SUICIDE

An organization to be known as the Committee for the Study of Suicide, Inc., was incorporated last December under the laws of the State of New York and began its activities early in January. The committee may in time increase its present membership of 10 to a total number of 20. The Board of Directors and the officers of the new corporation are: Dr. Gerald R. Jameison, president; Mr. Marshall Field, vice-president; Dr. Henry Alsop Riley, treasurer; Dr. Gregory Zilboorg, secretary and director of research; Miss Elisabeth G. Brockett; Dr. Franklin G. Ebaugh; Dr. Herman Nunberg; Dr. Dudley D. Shoenfeld; Dr. Bettina Warburg.

The committee plans to undertake a comprehensive study of suicide as a social and psychological phenomenon. To achieve this the following outline was adopted.

1. *Intramural studies* of individuals inclined to suicide in selected hospitals for mental diseases. These will embrace constitutional, neurologic, psychiatric, and psy-

choanalytic investigations of the phenomenon with special reference to therapy and prevention. This part of the study will include the investigation of suicidal trends or ideas of death emerging in organic deliria.

2. *Extramural studies* of ambulatory cases afflicted with suicidal trends or with obsessional wishes for their own death. These studies will be primarily therapeutic in nature, the cases to be treated in especially selected outpatient clinics and by qualified psychiatrists and psychoanalysts. Regular "control seminars" to follow and to supervise the course of the cases under treatment will be held under the guidance of the committee. The medical and neurologic status of all cases will be a prerequisite of each case record.

3. *Social studies* of suicide will be undertaken along the following general lines. Various attempts at suicide will be followed up by experienced psychiatric social workers; all cases will be studied from the standpoint of social background and history, and those who failed in their attempts or have recovered from injuries following a partially successful attempt (prolonged unconsciousness or physical illness) will be urged to submit to psychiatric and psychoanalytic treatment in the hands of the intra- or extramural therapeutic agencies which will be available to the committee.

4. *Ethnologic studies*, i.e., comprehensive investigation of suicide among primitive races, will be one of the first concerns of the committee, for suicide is a rather frequent occurrence among many primitive races still extant and when studied may throw some light on suicide as a psychobiologic phenomenon. It is planned that an expedition headed by a psychiatrically schooled anthropologist, a psychiatrist, and a psychoanalyst should work for a time in a region such as the Melanesian Islands or the Gulf of Papua and in the interior of the Mexican Northwest as well as among some of the North American Indian tribes. Further details of this plan will be elaborated.

5. *Historical studies* of suicide will be pursued systematically under the auspices of the committee, so as to make available a scientific history of the phenomenon as a social and medicopsychologic problem.

The committee was organized under the guidance of its first chairman, the late Dr. Mortimer Williams Raynor, medical director of Bloomingdale Hospital, who died on Oct. 5, 1935.

Dr. Henry E. Sigerist, professor of the history of medicine at Johns Hopkins University, and Dr. Edward Sapir, professor of anthropology at Yale University, are consultant members of the committee. They will advise and guide in that part of the work which touches their respective fields.

The executive offices of the committee are located at Room 1404, the Medical Arts Center, 57 West 57th St., New York City, and will be in charge of an executive assistant.

Everybody knows the doctor; a very important person he is to us all. What could we do without him? He brings us into this world, and tries to keep us in it as long as he can, and as long as our bodies can hold together; and he is with us at that strange and last hour which will come to us all, when we must leave this world and go into the next. When we are well, we perhaps think little about the doctor, or we have our small joke at him and his drugs; but let anything go wrong with our body, that wonderful tabernacle in which our soul dwells, let any of its wheels go wrong, then off we fly to him.—*Hora Subsiciue*, by Dr. John Brown.

EDITORIALS

THE INSTALLATION OF DR. J. TATE MASON

Dr. James Tate Mason was duly installed as president of the American Medical Association at the meeting recently held in Kansas City. Owing to the serious illness of Dr. Mason he was installed in absentia by the authority of the president, Dr. James S. McLester.

Dr. Mason sent a message to be read at the convention; this was read by Dr. Kenneth M. Lynch, Charleston, S. C., vice-president of the association. The address dealt with the fundamental principles and the trends in surgery looking hopefully to the advance of surgery. Dr. Mason fully believes that the medical profession now stands ready to serve the public, rich or poor, as always, and that it offers no apology for its past record and looks forward to greater achievement in the future; that our individual members and institutions are setting higher and higher standards which never will be lowered, and that they will deliver in the future a better order of service.

He begged the members to keep faith and confidence in a profession whose ideals and ethics are second to none. He said that if the public will pursue the social problems confronting the people of our country with the same degree of intelligence and zeal which medical men are devoting to the welfare of their lives; if they will demand of the politicians and political institutions the same integrity and honesty of service, they may look to the future with assurance that the ideals, liberties, and institutions of this great country will be preserved inviolate.

He has an abiding and unlimited faith in our integrity. He knows we will keep faith with the public and never let selfish interests for one moment divert us from the high purpose to which we have dedicated our efforts and our lives.

There is no limit to mechanical ingenuity in the production of new apparatus. Improved equipment, skill, and advancing knowledge promise unlimited advancement.

He fears that some of us became old in the practice of medicine before it was realized. The man of yesterday, with a limited amount of scientific knowledge, who in a kindly, knowing, sympathetic way placed his hand on the little girl's brow and said, "Why, we will not let you

suffer; you will be well in a few days," did more for her endocrine glands than anything that has been discovered in recent years.

LEST WE FORGET!

Dr. H. Malcolm Read, of York, Pa., calls attention to the fact that during the winter of 1885, Dr. George E. Holtzapple, of Loganville, York County, was the first to administer oxygen to a patient suffering with lobar pneumonia.

When we consider the marked advance in the therapy of this disease, we naturally cannot help but feel that to this Pennsylvania physician belongs the credit for being the first to use oxygen for this purpose.

Regardless of the discovery itself, we cannot help but look in awe to this individual physician as one who stands foremost in the profession in his zeal to help suffering man.

THE RETIRING PRESIDENT'S AWARD

It is customary in some county and state medical societies to give an award to the retiring president in recognition of services rendered. Many of the societies present a gavel, as is the procedure of The Medical Society of the State of Pennsylvania. More recently the Philadelphia County Medical Society discontinued the gavel presentation and in its place each future past president, unless rescinded by some future action of the Board of Directors, will be presented with a life membership in the Philadelphia County Medical Society, or, if already a life member, some other similar token as an expression of appreciation of their services by the society. A life membership fee is \$100.

The *New York State Journal of Medicine*, June 1, 1936, has an announcement calling attention to the procedure of a change in the award to the retiring president of the Medical Society of the State of New York. Throughout the long lifetime of the Medical Society of the State of New York the custom has been to extend a *vote of thanks* to the retiring president for his service to the society. This vote of thanks has always been deeply appreciated by the recipient and became one of his most cherished memories as well as his reward. For 129

years the Medical Society of the State of New York has given no other formal recognition of service than that just mentioned. The only dissatisfaction with the procedure in the minds of a large number of the members seemed to be that the incident was of such a transient character that it failed to express the true feelings of the members and something more tangible and permanent has long been desired.

The society finally decided to present the retiring president with a medal, appropriately inscribed and suspended from a ribbon to be worn around the neck of the one so honored on all formal social functions of the medical profession.

The first recipient of this medal is Dr. Frederick E. Sondern who was presented with the president's medal at the one hundred and thirtieth annual meeting of the Medical Society of the State of New York, held in New York, Apr. 28, 1936.

THE COST OF A MEDICAL EDUCATION

It is always of interest to hear the viewpoint of laymen as to matters medical, more especially as to the cost of securing a medical education. Mr. Leo Wingshot, a columnist, has devoted his article in the *Philadelphia* (Pa.) *Record* of May 15 to matters pertaining to the recent meeting of the American Medical Association at Kansas City. Mr. Wingshot pays a most deserving tribute to Dr. J. Tate Mason who was installed as president of the American Medical Association. Dr. Mason was unable to attend the installation owing to his very serious illness at Seattle following the amputation of a leg.

The particular part of the article by Mr. Wingshot concerned in this editorial is the following reference to the cost of securing a medical education.

"It takes at least 8 years' training after high school to make a physician, and I should say it costs \$10,000. After that, probably it takes 10 years for the young physician to establish himself. During this period many of them are almost in poverty. Should they be rash enough to marry a girl who has no money, their position is difficult indeed."

The writer then continues: "If the doctor is successful and in general practice, what does he get? Well, 10 or 12 thousand dollars a year if he's very lucky; generally he makes much less than that. Lots of times he has to wait for his money, and now and then he has to wait forever.

"His job is distinctly dangerous. He must expose himself to infection at times when his

own viability is low because of overwork and fatigue. It is a recognized fact that his chance for a long life is less than that of the usual office worker, and a little better than that of a fireman.

"His play time is not his own, and 9 times out of 10 his hobbies are ingratiatingly innocent. The doctors I know best are shining examples of virtue and of sobriety."

LIFE'S PURPOSES AND OBJECTIVES

Life's purposes and objectives are pretty closely linked together. Its purposes are to sustain and perpetuate the organism. Its objectives, psychobiologically, necessarily center around those things that will permit the fulfillment of these purposes. For example, food and nourishment are an essential objective to physically sustaining the organism, while heterosexual relationship is the objective medium for the perpetuation of the species. Many other objectives in the physical realm are necessary, such as sunshine, heat, water, place of abode, etc.

In order that life be not purely vegetative in function, nature has given to man certain instincts and desires (more or less closely linked to the vegetative life) which place his efforts on a more altruistic plane, to wit, the desire to be, the desire to attain, the desire for security, the desire for wealth, the desire for fame and glory, the desire to serve, and the desire to meet the approbation of his fellow men. It matters not, therefore, to what heights in the business world, family world, or the professional world, these desires may lead him, man's constant and most lofty desires, basically, center around 2 purposes, the desire to live and the desire to procreate.

In the progress of civilization, there has come into many lives the desire to live in the hereafter (also self-preservation). In a study of a cross section of society at large, therefore, are found indications of man's strivings at various economic, social, and cultural levels. They may appear in crude forms at the lowest social plane or as a result of frustration and sublimation they may appear in more altruistic forms. For example, the spinster who is denied life's great function finds a happy outlet in nursing or caring for children, or, perhaps again in some other unselfish manner.

Nature does not leave man wholly alone in his strivings for objectives. She has psychobiologically endowed him with certain aggressive and defensive mechanisms, mechanisms that protect him from himself and the forces in reality. These mechanisms are anger, fear, greed, hate, jealousy, love, affection, faith, hope, and charity.

A knowledge of life's purposes and objectives is exceedingly helpful to the physician in interpreting human conduct and behavior. It enables him to understand why human beings act as they do, the home of the acting being purely a neuromuscular mechanism, a structure which he understands from his knowledge of anatomy, physiology, and pathology; to understand their reactions to success and their reactions to defeats, reactions whose emotional concomitants are such that relief may be obtained only through a physical expression in the form of disease (hysteria, hypochondria, neuroses, *etc.*). A full knowledge of the psychic mechanism enables him to understand why some make wholesome adjustments and others do not.

When we review in retrospect man's struggles from the primordial ooze to his present state of cultural development, from that state when he struggled to exist to his present exalted state of the desire to let others live, we glory in his achievements and attainments that loom as great objectives of those that follow—attainments in social adjustments, business, professions, and philanthropy. Likewise, one can sympathize with those who unable to make adjustments to attain these ideals are now engaged in turmoil, struggles, conflicts, and defeats. Just why one group is able to make adjustment in fulfilling life's purposes and attaining the necessary objectives with satisfaction to themselves while others do not may be answered biologically, psychogenetically, or in the study of environment and early training.

Chance and opportunities must also be considered. After all, we wonder if in these groups there had been any thought given to the formulation of a plan for the living of a life and an interpretation of life and its greatest values.

AUTO CLUB OPPOSES FORCED INSURANCE

Obviously the physician is interested in matters pertaining to automobile activities as so often in automobile accidents the other party does not carry automobile insurance and too frequently is not in a financial position properly to take care of the damages if responsible for the accident.

A physician who practices in Philadelphia recently had an accident through no fault of his own. He was driving carefully on a one-way street and at an intersecting street was crashed into. The driver of the car that was responsible for the accident deliberately drove through a stop sign at considerable speed. This driver

lived in another state, was driving a borrowed car and was on relief, and naturally had no means to take care of the damages done. The police department placed him under arrest, but when the physician ascertained that the man was in no financial condition to pay for the results of the damages and did not carry insurance, he withdrew all charges that were made against him.

Quite a number of the medical profession do not understand why some states that have legislation requiring the owner of a car to have insurance are in favor of repealing that particular law.

It may be of interest to our readers to know that the American Automobile Association is on record opposing compulsory automobile insurance and is in favor of state inspection of motor vehicles. Among the reasons advanced against mandatory insurance are: It does not promote safety, it makes the responsible drivers, who constitute 90 per cent of motorists, pay for the 10 per cent reckless ones, and it is an open invitation to fraud and false claims.

It would seem that the financial responsibility law now adopted in whole or in part in 26 states should be urged. This law requires a driver to put up insurance or other security before he can drive after failing to satisfy a judgment against him.

The American Automobile Association is in favor of semi-annual compulsory inspection of vehicles on condition that the testing stations be wholly owned and operated by the state.

MOVE TO SAVE LIVES OF MOTHERS

Better co-ordination of clinical and hospital facilities to reduce the maternal death rate in New York City was advocated May 21, 1936, by leaders in the medical profession and endorsed in a resolution by the Maternity Center Association at its annual Mother's Day luncheon at the Hotel Waldorf-Astoria.

Dr. Louis I. Dublin, third vice-president and statistician of the Metropolitan Life Insurance Company, pointed out that the death rate for mothers at childbirth had not decreased in the last 15 years, although progress had been made in almost every other field of modern health work. Dr. Haven Emerson, professor of public health at Columbia University, also referred to the failure of public health authorities to reduce the number of fatalities to mothers, "in terms of each thousand children produced."

A resolution "to organize a city-wide maternity welfare committee whose function shall be to develop plans for co-ordinating and making wider use of the facilities now existing in this city for the care of pregnant women" was proposed by Dr. George W. Kosmak, chairman of the medical board of the association, and unanimously approved by the 300 members present.

"I cannot believe," Dr. Dublin said, "that it is your wish to go through another public exercise to mourn our losses, to rehearse our futility in wiping out the

blot of more than 450 unnecessary maternal deaths last year in New York City and thousands that might have been prevented in the whole country. The time has come when something very constructive must be done."

Dr. Dublin proposed that "an active rather than an advisory council" of obstetricians be formed in each borough "to work out a scheme which would be part and parcel of the organized official and nonofficial maternity work carried on in the city." This council, he added, "would bring together the machinery we now have in our prenatal clinics, in our hospitals and visiting nurse services, and would co-ordinate them under one direction and leadership."

Concerning the division of facilities between the Health Department, which conducts the prenatal clinics, and the Department of Hospitals, whose facilities were criticized as inadequate, Dr. Dublin proposed that "the best procedure would be to place the responsibility squarely in our City Department of Hospitals."

Dr. Emerson said that 3 elements were "indispensable for a concerted forward movement in protection of maternity in New York City"—the Department of Health, the Department of Hospitals, and the organized medical profession, particularly the New York Obstetrical Society.

"If these 3 bodies," he continued, "with the resourcefulness and sympathetic public appeal and prestige of the Maternity Center Association, make a sustained effort to analyze currently the causes of loss of maternal life and make this information effective through official and professional channels, and will assume responsibility for professional direction of obstetric care on a borough and neighborhood or district basis, the maternal mortality for the whole city would be nearer that of certain hospital and home delivery services in this city, which have equaled the best in any foreign country, and thus become creditable instead of excessive, as is the rate at present."—*N. Y. Times*, May 22, 1936.

GOVERNOR ALFRED M. LANDON'S ADDRESS AT THE KANSAS CITY MEETING OF THE A. M. A.

The governors of Kansas and Missouri delivered addresses at the time of the installation of Dr. J. Tate Mason as president of the American Medical Association at the meeting recently held in Kansas City. The following is an abstract of the address made by Governor Alfred M. Landon who is opposed to socialized medicine.

Medicine will not willingly be made the servile instrument of politicians or the instrument of domineering bureaucracy. The typical American physician and organized medicine as a whole will at no time be ready for any scheme of regimentation, for any system of impersonalized medicine which is totally alien to the best traditions of the American practitioner and of the profession as a whole.

The American practitioner will not be a party to destruction of that individual, personal service which has been the occasion of a special and justifiable pride. Whatever further advances are made in the broadening of medical service—and there will be an abundance of them—will be made, so far as he is concerned, in accordance with the fundamental conditions of previous achievements.

Governor Landon called especial attention to statements of Dr. Frank R. Teachenor, president of the

Jackson County Medical Society, who spoke of a proposed plan "whereby the low-salaried group may receive the same high-class medical service and hospitalization as the rich on a regulated postpayment plan," and of the responsibility assumed by the society for furnishing the indigent sick of Kansas City with the highest type of medical service, without any cost whatsoever. A nation that can maintain and even elevate its medical standards and the state of public health in the trying years of a prolonged depression needs to make no apology for the quality and the reach of its medical facilities.

That condition itself is a tribute to the American physician in his continued unselfish devotion to a worthy task. May he long abide in his loyalty to the ideal of individual, personal ministrations.

Governor Landon told the doctors he gained his feeling for the medical profession from childhood when he accompanied his uncle, a country doctor, along the roads of western Pennsylvania; and that later he associated the profession with his family doctor who died last year.

From the earliest days the general practitioner in America was, first of all, an individualist. The circumstances of his work made him that; but it was a fortunate situation for the people who needed medical care. It meant that they could have personal ministrations, that there was an intimate relationship between physician and patient and that the sufferer became at once, and remained, the object of very special attention.

Governor Landon concluded as follows: "Down to the present day American medicine has continued to be primarily individualistic. It is chiefly on that basis that it is to be distinguished from medicine in many foreign countries. I know very well the arguments for an extension of the best of medical service to all groups of the American people. It is a worthy cause. It is enlisting the attention of the best brains of your profession. I have confidence that you will work it out."—*Kansas City Times*, May 13, 1936.

THE MEDICAL RESERVE OFFICER

The efficient medical officer of the Reserve Corps is he who in time of peace prepares for war. The difference in the efficiency between the medical reserve and the regular officer of the various services is simply the difference between the amateur and the professional. The amateur has a special love for an art but does not have the time or opportunity to practice it. The professional, on the other hand, devotes his entire time to this art, in fact, it is his life's work and the result of his constant study, practice, and experience.

The medical officers of the Reserve Corps are as highly endowed by nature as the officers of the regular establishments; they are as well and oftentimes better versed in medicine and surgery, and are, if anything, more altruistic than their brethren of the regular establishments. That they are not equally proficient in the medico-military specialty is due to their lack of familiarity with the business and clerical problems always present in peace and war. These important essentials can only be obtained by constant study and practical experience. Unfortunately, there is a tendency far too common on the part of some reserve officers to disparage the business side of the medico-military profession. Medical officers who are officers merely by virtue of their uniforms and a hurriedly granted commission, although well prepared to practice their profession in civil life,

will, in time of war, be a liability rather than an asset, until they become familiar with the numerous special duties so intimately associated with the military and naval game. Past wars have demonstrated that civilian practitioners, however well qualified and patriotic, cannot be suddenly transformed into competent officers of the medical department of an army or navy.

A knowledge of the most recent and approved sanitary technic will avail an officer little, unless supplanted by familiarity with military routine, as estimating the number of sanitary personnel required for certain projects, their maintenance, and the amount of transportation and supplies required to carry on their work. The reserve officer may be qualified to treat the most desperate cases of disease, perform the most delicate surgical operations, yet be a failure as a military or naval surgeon if he does not know how or where to establish the various stations of relief, to obtain supplies for them, or how to evacuate the sick and wounded, thereby relieving the command of this impedimenta.

Every large business must be run according to some fixed system; the greater the business and the more extensive its ramifications, the more detail or so-called "red-tape" will be necessary. The maintenance of an army in peace and war is a stupendous business. Its aggregate success will depend on the exact conjunction of thousands of minute details. The reserve officer must have a working knowledge of all of these. In order to do this he should have a fair knowledge of regulations governing his special branch. He should be familiar with the essential paper work so valuable in connection with the sick and wounded so as to protect both the patient and the government in after years. If serving with the army in the field, he should be able to read a military map, to write out a military order, and to direct perfectly the execution of a simple tactical movement. He should be able to make a sanitary report. He should also be familiar with the lines, plan, and disposition of medical assistance that will be required for a hurried emergency. He should also familiarize himself with casualty statistics of past wars and know how to use them as a basis to formulate estimates of the number of casualties to be expected so as to arrange for the required personnel, supplies, and transportation.

Inasmuch as the medical officers of the various services of the government—Army, Navy, Public Health Service, National Guard, Organized Reserves, and Veterans Administration—have much in common, they should on every occasion endeavor to exchange views on subjects of mutual importance. Fraternization therefore is necessary. In the regular routine there is little opportunity for this; therefore, get-together meetings can only be arranged through outside mediums. The Association of Military Surgeons is that medium. Being composed of medical men, active and reserve, from all of the federal services, it offers at its annual meeting, and through the various chapters, an opportunity for these medico-military specialists to meet and greet each other on common ground.

It is realized that the exigencies of the service, professional work and other engagements, naturally may deprive many from attendance but through the columns of the *Military Surgeon*, the official publication of the association, there can always be found interesting papers, discussions, communications, and articles presenting recent advances in military medicine and surgery, new sanitary devices, and other matters of a medico-military nature which will prove of interest to the reserve officer. —Editorial, *The Military Surgeon*, June, 1936.

LICENSING OF OPTICIANS

Until recent years no effort had been made toward the licensing of opticians. Then nonmedical groups of those engaged in the refraction of the eye, who desired to increase the importance of this specialty and to protect the public and themselves from tests being made by unqualified individuals, organized and thereafter became instrumental in having laws enacted governing refraction of the eye in one state after another, until at the present time there is an optometric law in every state.

These laws, however, have failed to restrict the sale of lenses and other optical goods to those qualified to function in an intelligent and responsible manner. It seems obvious that not only should the public be protected from the inexpert refractionist but also from those who would sell inferior merchandise and those who cannot accurately fill prescriptions for ophthalmic lenses. It is true that most ophthalmologists make a practice of checking prescriptions after they are ordered; but owing to the complexities of modern lens grinding, it is not feasible for ophthalmologists to investigate in every case the details of the optician's work. It is not always easy to determine in a given case whether the best glass and the best method have been used in filling the prescription.

There seems to be a way to circumvent the intention of almost every law, good or bad. For example, at the present time, in some states in which there are rigid laws prohibiting the measuring of eyes for lenses by the untrained, the individual is allowed to test his own eyes for lenses at the counter of a department store! It might be possible to eliminate this kind of hazard, among others, by licensing those who dispense optical goods.

At the present time the writer knows of only one state in which there is a law for the licensing of opticians. There is a bill now under consideration by the legislature of the State of New York which will provide such licensure in that state. By the provisions of this bill certain qualifications will be required of those applying for a certificate as an optician. They "shall have completed a course of study in a duly licensed school or department of a college or university authorized by the regents to give instruction qualifying a person to act as an optician in a course duly authorized by the said board of regents and the said course shall be for a period of not less than 2 years." In lieu of this, 4 years of apprenticeship to an optician following 4 years at high school may be accepted. The candidate would have to pass an examination given by the state board of opticians. On this board would be one ophthalmologist. Exempted from the ruling would be ophthalmologists and optometrists, so that these would be permitted to dispense optical goods without an optician's license. At the outset, those who had been operating as opticians for 5 years, 3 of which were spent in New York State, would be licensed immediately.

This bill seemingly has the approval of most opticians. It is almost certain of the good will of ophthalmologists, for it is a protective measure which does not apply to them directly. Certain radical optometrists, those who desire to have refraction and all things pertaining thereto allocated to them alone, may oppose the measure; but if such opposition does develop, it would be by only a narrow-minded few.

Undoubtedly considerable harm is done by indiscriminate vending of cheap lenses. To license opticians and

to prohibit others than those licensed from selling spectacles should in a large measure result in the elimination of this danger. We cannot but feel that such a law as the one proposed for the State of New York would be advantageous to the qualified dispenser of optical goods and to the public alike.—Editorial, *American Journal of Ophthalmology*, April, 1936.

RURAL MEDICINE

Whether the recent lean years have made opportunities that were formerly frowned upon seem more desirable, or whatever the cause, there seems to be a very definite increase in the number of young physicians who are settling in the rural districts. Whether they remain to become respected and substantial citizens of their community, or only serve a few years to gain the very best possible preliminary training for special work, is not of importance. In fact that decision may be made with all deliberation after a comfortable remuneration is established.

If the advantages of rural life for a physician in this locality, that is Rhode Island and near-by Massachusetts and Connecticut, are surveyed they will be found to be many. Medical and social isolation, formerly the greatest causes of discontent, are now almost entirely removed. Not only are through highways and collaterals improved, but recently many rural roads have been improved to such an extent that they present a good hard surface the year around. The last 15 years have produced so many good small hospitals that it would be hard to find an area with a 15-mile radius that is not supplied with excellent emergency and operative facilities. In fact some country physicians find time to go daily to near-by medical centers and engage in regular hospital service.

Most villages at the present time are well supplied with electricity. This means that an electric range and electric refrigeration, together with oil heat, give the housewife all the advantages that are to be had in a large city. The local motion picture house probably shows the same pictures, only a little later, that are seen on Broadway.

The young doctor who elects to live in the country should realize that he is not to be isolated socially. He must, on the other hand, be far more socially inclined than his city brother, for his superior education and training will place him where his advice will often be sought on matters outside his profession. One may live a most isolated and antisocial—even lonely—existence in the midst of a big city, but not so in the country. Here, to be a successful doctor, one must be social to the extent of being a real lover of mankind, for to live unto one's self is not possible in a village.

With the advent of young and well-trained medical men in our rural communities, there should be not only very much improved medical service, but the administration of many public health offices should improve, i.e., public health, school health, and the little used but important office of medical examiner.

Let us hope for a return of the day when the village doctor will again be a respected, well-trained substantial member of each community.—Editorial, *Rhode Island Medical Journal*, Jan., 1936.

COMMENTS AND EXCERPTS

Plan Urged to Cut Maternal Deaths.—The New York City Maternity Center Association, reporting on its activities for 1930 to 1935, said on June 7 that this country's maternal mortality rate is "more than twice as high as it should be."

"We stand today as a nation where we stood 20 years ago," the association asserted, but it added that in the 5-year period thousands have learned "at least the simple facts that more than half, probably two-thirds," of mothers who die in childbirth could be saved by "good care."

A threefold plan to save mothers' lives in the United States was advocated:

1. Study of existing facilities for the care of expectant mothers and formulation of a plan to "remedy faults and supply services lacking."

2. Co-ordination of "all health, social, and recreational resources of every community to meet needs of each patient."

3. "Ample public funds to care for every expectant mother."

Surgical Operation on Nerve for Severe Diabetes Reported.—A surgical operation to relieve severe diabetes was reported by Drs. Fred A. Hitchcock and George M. Curtis, of Ohio State University, at the meeting of the American Physiological Society.

The patient, one of the first to undergo this operation, which has only recently been developed through animal studies, was a young lad suffering from very severe diabetes. To control the condition he had to take 100 units of insulin a day. This is a large dose and the cost of the treatment had become excessive for this patient. His physician had read reports of the operation performed on diabetic dogs and asked the Ohio investigators if they could not use the same surgical method to help his patient.

Arrangements were made whereby the patient became a "research project"—a human guinea pig—who let the scientists make important studies on him in return for the benefit he derived from the operation. This consisted in cutting the splanchnic nerves in the back of the chest. Following the operation the patient was able to get along on about half the amount of insulin he had been taking.—*Science News Letter*, Apr. 25, 1936.

Iodine Socks No Better Than Yarn That's in Them.—The question as to what to do about "iodine socks" came as something of a break in the routine at the Philadelphia and Baltimore stations of the Food and Drug Administration. Quack cures for human ailments usually fall into a grouping already familiar to specialists who enforce the Food and Drugs Act, but "iodine socks" were a bit of a novelty. They came from England.

Customs officials referred the matter to the food and drug offices. The socks in one lot were labeled to indicate iodine content and the label recommended them as "invaluable to sufferers from gout, rheumatism, flu, colds, varicose veins, bad legs, corns, bunions, and aching feet." The Baltimore office reported an odor suggesting iodine, but more particularly iodoform. Since the socks were labeled with "unwarranted therapeutic claims" and the importer was ready to abandon the shipment, their destruction was suggested.

At Philadelphia a shipment was not labeled, but was accompanied by literature making equally broad claims. The upshot was that this consignment got by after the

printed matter was destroyed. Anyone who wants to buy iodine socks may be able to find them on the market, but the Food and Drug Administration is not recommending them as a panacea.—*U. S. Department of Agriculture.*

Unmarried Persons More Prone to Mental Disease.—Bachelors are 3 times as likely to go insane as are married men. Divorced men are even more likely to develop mental disease, Drs. James Page and Carney Landis of the New York Psychiatric Institute revealed in a report to the meeting of the New York Branch, American Psychological Association.

Marriage is not a "vaccine against mental disease," they warned, but it acts as a sieve; men who are later to need treatment for mental disease are not the ones who readily find wives and willingly enter into marriage. If they do get married, they are more likely to be weeded out by divorce.

Here are the striking figures presented to the meeting by Dr. Page: For every one married man admitted to mental hospitals during the period studied, 2 widowers were admitted, 3 single men, and about 4.5 divorced men.

For women, the figures are much the same—one married woman to 2 single women, 3 divorced women, and about 1.4 widowed.

Young people under age 25 were not considered in these figures.

When the proportion of married and unmarried mental patients was compared with the marital status of the general population, it was found that a somewhat greater percentage of single persons and a markedly greater percentage of divorced persons find their way into mental hospitals than remain in the population at large. To be sure, it was pointed out, the married people do not always need to go to mental hospitals; they are taken care of at home.

Only among women admitted for alcoholism or general paresis were the numbers of single persons smaller. That is due to the high moral standards of American spinsters.

"The eugenic implication of this study is that from a heredity viewpoint mental diseases are self-limiting," Drs. Page and Landis concluded. "Since comparatively few mental patients marry, the spread of psychopathic tainting is restricted. In other words the biologic principle of the survival of the fittest is present in the field of psychopathology."—*Science News Letter*, Apr. 18, 1936.

Many Lives Saved by Identifying New Disease.—Many lives have been saved since the identification of the disease called terminal or regional ileitis, it appears from a report of Dr. O. J. Hagen, Regent of the University of Minnesota, to the Minnesota State Medical Association meeting.

The disease involves a part of the digestive tract called the ileum and before its identification was undoubtedly diagnosed as cancer, tuberculosis, ulcerative colitis, or appendicitis, because it closely resembles these in symptoms.

In practically all cases of terminal ileitis, the patient recovers if the disease is discovered and treated early. Before it was known as a separate disease, however, it is likely that many patients died who could have been saved by proper treatment, which is surgical operation. Roentgen rays make it possible to tell this from other intestinal diseases. The cause is probably invasion by some unidentified germ.—*Science News Letter*, May 23, 1936.

New Rôle for Pituitary—It Controls the Spleen.—Discovery of a new activity of the pituitary gland and possibly of a new pituitary hormone was reported by Dr. David Perla, of New York City, to the American Association of Pathologists and Bacteriologists.

The new hormone from the powerful but tiny gland in the head stimulates the spleen. This important organ is endowed with enormous recuperative powers, so that when a part of it must be removed because of disease, or is damaged, the organ regenerates itself, forming new spleen tissue to replace that lost. In animals the spleen cannot regenerate when the pituitary gland has been removed, Dr. Perla found. Doses of pituitary gland extract, however, renewed the regenerative power of the spleen in these animals whose own pituitary glands have been removed. These and similar studies indicate that the pituitary, besides influencing growth, sexual development, and other body activities, also has control over the spleen.—*Science News Letter*, Apr. 25, 1936.

Champion Blood Donor Gave 98 Transfusions in Year.—Raymond Briez works in the public markets of Paris, but he also has a thriving business of his own. He engages in the manufacture of blood, and since he entered the business in 1924 he has sold 257 quarts.

The output of Briez's human factory—his own body—is enormous when one considers that it takes only 7½ quarts of blood to fill the blood vessels of an adult man. During 1935, Briez manufactured enough blood to supply himself and to give 98 transfusions. Each transfusion averaged 10 ounces.

The champion blood donor of Paris started his manufacturing business in a small way. In 1924 he gave blood for 4 transfusions. The next year his orders jumped to 38. In 1927 the number of transfusions supplied by him attained the astonishing figure of 94 and from that time until 1935 he averaged from 50 to 60 a year.

No ill effects have been noted, and Briez is always ready for another call, according to the Paris correspondent of *The Journal of the American Medical Association* (Apr. 25).—*Science News Letter*, May 9, 1936.

MEDICAL ECONOMICS

Taking the Laity Into Our Confidence.—The late Dr. E. Starr Judd, who was president of the American Medical Association in 1931-32, is accredited with the following statement:

"One reason the charlatans and irregular practitioners are able to continue in their practice is that there still is so much uncertainty and mystery about disease. We cannot hope to be rid of this sort of thing until all of the mystery is cleared up. We can help society a great deal, however, by utilizing every effort at our command to educate people along medical lines. The idea of medical education for the public is not a new one, but the importance of it is more fully realized now than it was in former years."

Secrecy is not one of the besetting sins of the medical profession of this state. There was a time, long since however, when it was justified if for no other reason than the fact that there was very little to tell. Today, owing to the advances in medicine and allied sciences, there is nothing that may not be told to those capable of understanding it. As a profession, we have no secrets, though the body of medical and surgical knowl-

edge has become so great that not even the medically trained person can comprehend it all.

The Joint Committee (the component societies are well known) has been instrumental in carrying on public education in the basic principles of medicine. The Cancer Committee of the Michigan State Medical Society is carrying on an educational movement not only among the laity, but among physicians, that should be welcomed along the line suggested by the late Dr. Judd. Not only regarding cancer, but also tuberculosis and heart disease, are physicians willing to address lay groups and tell them all they may want to know.

There is a lot of quasi-science instilled into the minds of the laity by self-interested individuals and organizations. The only way to meet the false is by the true. It may take a long time but the effort is worth while.—*J. Michigan M. Soc.*, Jan, 1936.

Medical Deflation.—The following is an abstract of remarks by Dr. Richard J. Behan, president of the Allegheny County Medical Society, *Pittsburgh Medical Bulletin*, Feb. 8, 1936.

The deflation in medicine is indicated by the tendency to break down normal restraints and disciplines. In this period of general deflation there is a loss of spiritual values which is exemplified by a decreasing birth rate, decline in the supremacy of family life, an increase in degenerative diseases, insanity, and other abnormalities, and a rise in the number of suicides. This is particularly disquieting to doctors of medicine because it means a let-down in ethical values and factors of restraint.

They realize that, as soon as the attributes of sacrifice and of service are taken away from the medical profession and it deteriorates into a system of materialism, medicine will have lost its position of normal supremacy and the last of the humanities will have disappeared.

It is probable that, even though there should be a change in the form and manner of its service, medicine can still anchor itself to its ancient pillars of conservatism and stability. It can still hold true to the values which have served so long as its standards, and at the same time can test the experiments of the more bold of its members. However, in every change that is contemplated the value of the result must be commensurate with the cost of the means. If the integrating factors are too costly as measured by the substance which they destroy, then the experiment will be negative in its immediate results and possibly disastrous in its terminal effects. All changes should be estimated on the basis of extent and proportion as compared to approved or standard values. In all our considerations we should not forget that every philosophy of human effort will be inert unless it spreads tentacles of inquiry in all directions and grasps that which is of particular moment for its own development.

We must develop new courses and tendencies and must support their foundations on broad general principles instead of a restricted and regional experience.

If modification of customary habits and beliefs is too great to be acceptable to those of broad and liberal tendencies, a compromise must be made on a system of tolerance and of understanding. In any case unmerited skepticism and misbelief should have no place in the development of any code of ethics or scheme of conduct.

In other words, we doctors must depend on ourselves and must develop our own rules and formulas, for no one better than ourselves knows our own limitations and possibilities.

Syracuse, N. Y., Norwalk, Conn., and Alabama Organize New Group Hospitalization Plans.—Three new group hospitalization plans have recently been organized, one in Syracuse, N. Y., another at Norwalk, Conn., and a third, a state-wide plan, in Alabama.

The Syracuse plan, announced in January, is administered by Syracuse Hospital Service, Incorporated, a nonprofit corporation formed under New York's group hospitalization law. The officers and directors of the corporation are prominent Syracuse business people and hospital trustees. Carl P. Wright, superintendent, General Hospital of Syracuse, is the only hospital administrator on the board.

Robert Parnall is managing director for the corporation. He is also director of the group hospitalization organization at Geneva, N. Y.

The 5 general hospitals of Syracuse which are approved by the American College of Surgeons are co-operating in the plan. These hospitals are: Crouse-Irving Hospital, General Hospital of Syracuse, Hospital of the Good Shepherd, St. Joseph Hospital, and Syracuse Memorial Hospital.

The plan provides that men and women under age 65 and employed by the same firm may subscribe in groups of 10 or more. Hospitalization up to 21 days in any one membership year is provided in semiprivate accommodations. The cost is 15 cents a week.

Formal announcement of the Alabama plan has not yet been made, but an organization meeting was held in Birmingham on Dec. 27. By Jan. 13 a total of 12 hospitals had agreed to join the corporation, but the charter membership was being held open to permit others to come in during the month.

The Alabama interhospital contract, in addition to the usual terms, provides that hospitals shall be paid at the rates of \$4 and \$6.50 per day for ward and private room service, respectively, to subscribers. The contract is an entirely mutual affair and the hospitals agree to meet any deficit that might be involved in the liquidation of the Hospital Service Corporation of Alabama.

An unusual feature of the Alabama law on group hospitalization requires that any hospital entering the plan must first be approved by both the Alabama Hospital Association and the Medical Association of the State of Alabama. No memberships will be sold in any county without the consent of the board of censors of the county medical society.

The board of trustees of the corporation is composed of representatives of the member hospitals, one from each hospital. Working capital is to be obtained through an assessment of \$2 per bed on each hospital.

Two types of contracts are proposed, a Class A contract for ward service at \$9 a year and a Class B contract for private room service at \$18 a year. Family members may be covered in the Class A contract by paying \$0.50 a month additional for a wife, \$0.85 a month additional for a wife and children under age 18, and \$0.50 a month for any other dependent person. For the Class B contract the rates for family members are the same except that the group rate for a wife and all dependent children under 18 is \$1.50 a month.

The third plan, started in Norwalk, Conn., on Jan. 13, provides 21 days of semiprivate care for a \$9 annual fee. Roentgen-ray, laboratory, and operating room service are included and delivery service after a 10 months' membership. A discount of one-third from regular rates is granted after the expiration of the 21-day period.

The Norwalk plan is administered by Hospital Serv-

ice Plan, Inc., a nonprofit corporation whose officers and directors are prominent business men of Norwalk. Kenneth M. Coleburn is executive secretary of the corporation and Robert N. Brough, superintendent of the Norwalk Community Hospital, is secretary. Since there is only one hospital in Norwalk most of the service will be rendered there, but subscribers who are traveling outside of Fairfield County may receive the benefits in any hospital in case of accident or emergency illness. Family members may also enroll at the same rates as employed persons.

The plan has been well received by the leading business men of Norwalk and by the medical profession, according to Mr. Brough, although he adds that it is as yet too early to predict the ultimate enrollment.—*The Modern Hospital*, Feb., 1936.

The Socialization of Medicine.—What is this socialization of medicine of which so much is said, and of which so little is actually thought through? One does not get a very clear idea from the views expressed. Something is going on in medicine, some important change is taking place, and we are on our way, although we do not know whither the path will lead us. It is said also that physicians are backward, even blind, in failing to recognize this inevitable progress and adapt to it themselves and their practice.

Socialization of medicine means to make medicine conform to the principles of socialism. Since the socialists, perhaps most of all, fail to agree as to the principles of socialism, how can others be expected to know what it is all about?

Socialism and individualism are permanent tendencies in human nature; as an ultimate philosophy either is inadequate and so misleading. In the division of labor, it has been found expedient to have certain functions ultimately controlled by society at large, directly controlled by society organized politically, that is to say by the government. These functions are performed for the whole by the parts. Under complete and perfect socialism, if such there be, the government controls and directs every part. The question as to whether a function is or is not performed socialistically is settled by the answer to the questions: Who directly pays the bill? Who directly controls the group? Of course, in the long run society pays the bill in any case. It is to be remembered that a given socialistic scheme is not intrinsically better because it is socialistic; neither is it intrinsically worse. The outcome can be determined only by experiment. The method of science includes controlled experiment. It is true that history repeats itself, but never quite exactly.

Education is one of the socialistic enterprises to which we are committed. There are students of education, however, who think that our very commitment to this socialistic enterprise has made more imperative than ever the need of our continuing to develop our private educational system.

The question at issue in medicine does not concern primarily the quality of medical service. That is to say, it is not that the science and art of medicine are so far behind what one has a right to expect. It is a fact that the science of medicine has progressed so far, and that the art of medicine has become so complicated and thus so expensive that the average citizen cannot pay the cost for all medical services out of his own resources. The socialization of medicine means that the cost of medical care should be met by the government and not by the individual. Control goes to the

person or organization responsible for the payment of the bill.

Again and again we have found that the governmental hand has had a paralyzing influence. Indeed so often has this been true that many persons look askance at the injection of the government into any undertaking. If mere quality of service, dollar for dollar, is considered, is there anything the government does that would not be done better by private competitive enterprise?

Yet many times it has seemed wise, even necessary, to have the government interpose—to protect the weak against the strong, the poor against the rich, the ignorant against the knowing. Is there any justification besides protection?

What justification is there for the socialization of medicine? Against whom do the sick need to be protected? Is it against the medical profession?

If it has been expedient, perhaps necessary, to socialize medicine in some fields, to protect the well against the sick, and the poor and the ignorant against themselves, is not this the best of reasons why medicine should not be wholly socialized, why more vigorous efforts than ever should be made to preserve part of it, at least, from the dry rot of governmental influence? —Editorial, *N. E. J. of M.*, Nov. 21, 1935.

PHYSICAL THERAPY

Sunlight and Health.—The belief that sunlight exerts a beneficial effect on health is at present exceedingly popular. Its general endorsement by the public is visible during the summer months at the beaches and summer resorts. The growing tendency to continue "sun bathing" throughout the year is indicated by the increasing numbers of "sun lamps" available on the open market and the rather large number of these devices purchased by the American people for use in their homes. But what is the scientific knowledge regarding the effects of sunlight and of ultraviolet rays on health? Does such information indicate a need for excessive basking in the sun's rays or does it suggest that this practice is unnecessary or perhaps even undesirable? Henry Laurens has recently reviewed the available knowledge in this field.

First, which of the sun's rays actually pass through the outer layer of the skin into the deeper strata? Studies have shown that practically all the rays in the extreme ultraviolet range are reflected from or absorbed by the outer, horny layer of the skin, whereas a considerable proportion of the longer ultraviolet, the visible and the near infra-red rays are transmitted and penetrate into the malpighian layer, the corium and, in the case of the visible and near infra-red rays, even the subcutaneous tissues. Thus, the horny layer of the skin apparently protects the deeper strata from the shorter ultraviolet rays. Pigment, which is present in the basal layer of cells of the stratum corneum, apparently serves as a screen to prevent the "true skin" from receiving too much energy in the form of the longer ultraviolet rays.

The question of the effects of the rays that are transmitted by the stratum corneum into the deeper layers of the skin has received wide attention. Certain beneficial effects are well known, as, for example, the favorable influence of the ultraviolet rays on the assimilation of calcium and phosphorus and the resultant prevention or cure of rickets as the result of the formation of vitamin D in the skin. Favorable effects of moderate amounts of sunlight on the blood and cir-

culatation have also been described, particularly in increasing the platelet count in cases of idiopathic purpura hemorrhagica and as an adjuvant to diet and standard therapy in the treatment of secondary anemia. "Sunshine" carbon arc radiation has been alleged to cause a temporary decrease in both the systolic and the diastolic blood pressure in patients with essential hypertension. Natural sunlight, according to a number of authorities, hastens the healing of sluggish, indolent wounds by its local effect on the circulation of the blood and may be of benefit in tuberculosis of the skin (lupus vulgaris). Many believe that heliotherapy constitutes a valuable aid in the treatment of pulmonary tuberculosis. However, perhaps as many equally competent authorities feel that the results are "not likely to be spectacular and its omission not detrimental to the patient's best interest."

Harmful as well as beneficial effects may result from exposure to sunlight. Under certain conditions, as yet none too well defined, photosensitization may occur and the subject so sensitized may experience serious reactions on subsequent exposures to sunlight. A number of skin diseases, such as urticaria solaris and lupus erythematoses discoides, are probably due to this type of sensitization. Likewise it is well known that prolonged exposure to sunlight may cause not only inflammatory and degenerative changes in the skin but also systemic disturbances. One authority has stated that overexposure to sunlight may bring about damage to the central nervous system, especially the brain, as a result of heating the skull.

Thus it is evident not only that sunlight may exert a beneficial influence on health but also that it may cause serious harmful effects. Laurens believes that the beneficial effects appear to be largely overemphasized. As far as is known, man actually requires only a relatively small amount of sunshine for the maintenance of normal health, and the greatest danger perhaps at the present time lies in too much exposure to sunlight rather than too little. Certainly, overindulgence in solar radiation should be avoided because of known possible ill effects. "Owing to the hypersensitivity of many infants and adults, caution should be used in the use of sunlight, both natural and artificial. Overindulgence, even in the normal, is foolhardy."—Editorial, *J. A. M. A.*, June 13, 1936.

MEDICOLEGAL NOTES

Aggravation of Employee's Injury by Malpractice Not Actionable Against Physician.—It is a well-established principle of the common law, the Missouri (Kansas City) Court of Appeals says, in *Hughes vs. Maryland Casualty Co.*, 76 S.W. (2d) 1101, that if one is injured by the negligence of another and these injuries are aggravated by the negligence of a physician employed by the person doing the injury or by the injured person, in the exercise of ordinary care, the negligence of the wrongdoer, in causing the original injury, is regarded as the proximate cause of the damage following from the negligent treatment by the physician.

To this proposition the court cited cases in Missouri, Iowa, New York, Utah, North Dakota, Oregon, and West Virginia. And the court found the overwhelming weight of authority in this country is to the effect that in compensation cases the malpractice of the physician selected by the employer to treat the employee's injuries is directly traceable to and the proximate result of the primary injury for

which the injured workman is being treated and if his injuries are aggravated by the physician's negligence, compensation for such aggravation must be procured in the proceedings provided for in the act.

To this the court cited cases in West Virginia, Iowa, Oklahoma, Alabama, Nebraska, Tennessee, Colorado, Maine, Massachusetts, New York, Illinois, Wisconsin, Michigan, North Dakota, Oregon, Washington, and Texas. In one Texas case, *Hoffman vs. Houston Clinic* (Tex. Civ. App.) 41 S.W. (2d) 134, the holding is to the contrary.

Many of these cases hold that suit cannot be maintained against the physician even, but the present case was against the insurance carrier alone. The suit, however, was for the malpractice of the physicians and surgeons furnished by the employer and insurance company to treat the employee's injured eye, which the employee claimed resulted in aggravation of the original injury. Judgment for the plaintiff was reversed.—*Medical Record*, Nov. 6, 1935.

Release to Wrongdoer Barring Claim for Malpractice.—Plaintiff in an action against a physician and surgeon alleged that he had been injured in a motorbus accident, taken to defendant's hospital and treated for about 6 months; and he claimed damages for negligent treatment of his leg, arm, and neck.

Plaintiff had settled his claim against the bus company after seeking to recover from it all the damages he claimed in this action without then alleging malpractice of the defendant. He gave the bus company a release "from any and all liability of every kind and character whether known or unknown growing out of or incident to the accident."

The Texas Court of Civil Appeals held, *Phillips vs. Wright*, 81 S.W. (2d) 129, that the release barred any action against the defendant for malpractice. Moreover, the law presumes that a physician or surgeon has discharged his full duty, and in a case like this there must be expert medical testimony to establish malpractice and also the fact that injury resulted from the malpractice. Here there was no such evidence. Judgment for defendant was affirmed.—*Medical Record*, Dec. 4, 1935.

Requisites of Dying Declarations.—Dying declarations are admissible in evidence on the theory that the declarant, impressed with the thought of approaching certain death, will be urged to tell the truth with all the compulsion that would be felt after a solemn appeal to the Creator in an oath. The declarations must have been made in the consciousness of a swift and certain doom. Fear or even belief that illness will end in death will not avail of itself to make a dying declaration. Where there was no evidence that the declarant had been told there was no hope of recovery, or of statements by him to a like effect, or of circumstances showing his preparation for death, the New York Appellate Division, *People vs. Smith*, 281 N. Y. S. 294, held that his statement was not a dying declaration.—*Medical Record*, Dec. 4, 1935.

Improper Cross-Examination of Defendant Surgeon.—In an action against a surgeon for injury consisting of a burn on plaintiff's chest caused during or after an operation to remove a fibroid tumor and a diseased appendix, in which the plaintiff relied on the doctrine of *res ipsa loquitur*, the Montana Supreme Court held, *Vonault vs. O'Rourke*, 33 P. (2d) 535, that the questioning, in cross-examination, of defendant by counsel for the plaintiff relative to a conversation that oc-

curred between defendant and plaintiff's counsel, some time after the operation and before the trial, as to whether defendant then said that plaintiff had received this burn but whether in the operating room or afterwards he did not know, and that he carried insurance to protect him against that kind of a proposition and thought she should be compensated for it, was reversible error. This extraneous matter, the court said, may only be called to the attention of a jury in instances where the insurance feature is unequivocally a part of the admission of liability and actually incidental to and connected with the admission. Judgment for plaintiff was reversed and case remanded for new trial.—*Medical Record*, Dec. 4, 1935.

Opinion Evidence as to Malingering.—In an action on contract against an insurance company for total and permanent disability benefits, medical experts called by the plaintiff testified that in their opinion his symptoms of disease were genuine and not simulated, and that he was not malingering. Those for the defendant testified that certain specified symptoms of disease which he showed could be simulated, and in their opinion were simulated. The trial judge charged the jury to disregard the expressions of opinion of the physicians on the issue of malingering, leaving the question wholly to the jury.

The Massachusetts Supreme Judicial Court, *Campanale vs. Metropolitan Life Ins. Co.*, 194 N. E. 831, said that the case did not present the question whether a medical expert can be asked or allowed to characterize a party by using the word malingering, with all its implications of moral turpitude. What was disputed among the experts was, whether certain symptoms were simulated. The court held the opinions were competent, and ought not to have been excluded. Medical science and experience make possible a judgment as to whether symptoms such as were described are real, imaginary, or feigned that would not be possible to a layman witnessing the medical examination, much less to a lay jury hearing from witnesses what was said and done. Such an opinion is not one relating to the veracity of the party as a witness.—*Medical Record*, Dec. 4, 1935.

Verdict Against Hospital Set Aside.—According to the *New York Times*, Apr. 8, several weeks previously a jury brought in a verdict of \$1500 for a husband for loss of services of his wife, who suffered a fractured nose and other injuries when she fell off a wheeled stretcher while being taken to the hospital delivery room under the influence of anesthesia. She won a \$3000 verdict.

The court held in setting aside the verdict that the jury's findings were "fair and reasonable if there is any legal liability to support them." Finding no such liability, Justice Close said the hospital may be held liable for a breach of contract "if such breach is caused by an act of administration."

"It was the duty of the hospital to furnish competent trained nurses," said the decision. "There is no claim that the nurses were not registered and experienced. They were carrying out the directions of the patient's private physician when the accident occurred. They were exercising their profession and calling, and the hospital cannot be held liable for their acts, even though negligent. The work of the nurses is not an act of administration for which the defendant is liable, but is part of the treatment of the patient."

The child was not injured in the accident.

INDUSTRIAL MEDICINE

Cotton Mill Anemia.—That there is a widespread and severe anemia found among cotton mill hands in certain portions of the United States is evident to any person who visits a large number of the mills. . . . One of the most frequently advanced theories is that it is due to 'breathing in the lint.' . . . The writer has personally seen more than 2000 cases and suspects in the Southern cotton mills, but not a single case or suspect in the New England mills. . . .

. . . mills with clay land and city labor show the lowest percentage of suspects; . . . mills with sand land labor stand in general intermediate between the sand mills and the clay mills; and . . . mills with mountain and clay show a higher percentage of suspects than do the clay land mills . . . these general rules are . . . in harmony with the idea that this widespread anemia of the mills in question is due to hookworm disease, for in our country this malady is pre-eminently a disease of the sandy regions, and is relatively less frequent in the clay regions; in mountainous regions it increases over the clay regions.

This widespread and severe Southern "cotton mill anemia" has nothing to do with working in the cotton mills, but is directly traceable to other factors, namely, it is hookworm disease, contracted in the majority of cases on the farms; it is due largely to the present insanitary conditions existing in the rural districts, and is brought to the mills by the people who come from the farms. . . . Life under the improved sanitary conditions of the average Southern cotton mill is better (from a public health point of view) than life as a tenant on a soil-polluted one-horse farm, such as those from which so many of these people come.—*Southern Medical Journal*, May, 1936.

Silicosis.—In an article on "Silicosis," by D. M. Brumfiel, M.D., Saranac Lake, the following reference is made to the public health aspects:

There is a definite public health aspect to this problem which falls directly into the practitioner's province, as well as the economic and sociologic aspect. The economic phase is obvious in the loss to the employee of wages owing to his disability, and the loss to industry and state in compensation grants. The sociologic phase lies chiefly in the problems that arise in connection with, and center about, any unemployed, and unemployable, chronic invalid.

The public health aspect has to do not only with preventing the disability of the potentially silicotic workman himself, but with the possibility of his becoming a victim of tuberculosis and an unsuspected focus for the dissemination of that disease.—*N. Y. State J. M.*, June 1, 1936.

Health Service to Help Prevent Industrial Diseases.—Plans for preventing future Gauley Bridge tragedies were discussed at the Conference of State and Territorial Health Officers with the U. S. Public Health Service in Washington, D. C.

Using funds provided by the Social Security Act, the federal health service is ready to help state health departments establish units of industrial hygiene to study and find means to prevent the industrial hazards in each state.

Most important industrial diseases in this country are the dust diseases. Among these are silicosis, blamed for the deaths of hundreds of workers at Gauley Bridge, W. Va., and the similar lung diseases, anthracosilicosis of coal miners and asbestosis of the asbestos industry.

Skin diseases make up another important group of industrial or occupational diseases. While these do not threaten the worker's life, they are the cause of much lost time.

Until this year only 4 states, Connecticut, Ohio, Mississippi, and Maryland, had industrial hygiene divisions in the state health departments. These 4 states spent together about \$40,000 annually on the prevention of industrial diseases. New York State and Massachusetts handle the problem of industrial disease through their departments of labor.

After July 1, industrial hygiene units will be started in 8 more state departments of health. These units will be financed partly by the U. S. Public Health Service and partly by the individual states. Instead of \$40,000, some \$300,000 will then be spent annually on industrial disease prevention. This amounts to about 15 mills per worker for those states, and is not large, it was pointed out, when compared with the half million dollars paid out in compensation for occupational diseases by New York State alone during 1934.—*Science News Letter*, Apr. 25, 1936.

HOSPITAL ACTIVITIES

How Enforce Recording of Preoperative Diagnosis?—The operating room supervisor must be definitely instructed without any powers of modification to refuse to send for patients until the preoperative and history requirements are met. If the governing body through the superintendent enforces this ruling rigidly for a short time the procedure will become automatic.

A friendly way to bring this about is to have some member of the clerical staff type in the preoperative diagnosis on the "Report of Operation" as taken from the daily bulletin of operations. This can be done at the time the bulletin is made up, which is in the majority of hospitals between the hours of 6 p. m. and midnight of the day preceding the operation.

When a preoperative diagnosis has not been given, the words, "Not Given" or "Not Made," should be recorded. In this way the incomplete record comes before the staff for review and the offenders can automatically be dealt with by the staff. At the same time it prevents the habit of writing the preoperative diagnosis afterwards.

The problem if dealt with properly by the hospital is only a minor one.—*The Modern Hospital*, February, 1936.

Hospital Men Praise 3-Cents-a-Day Plan.—A prediction that the "few-cents-a-day plan" for hospital care would become popular in all the larger New York State cities was made May 22, by Sherman D. Meech, managing director of the Rochester Hospital Service Corporation, and Frank Van Dyk, executive director of the Associated Hospital Service of New York, in addresses to the Hospital Association of the State of New York.

Mr. Meech asserted that more than 33,000 persons in Rochester had subscribed to the plan and Mr. Van Dyk estimated 90,000 had enrolled in New York City in the last year.

Subscribers to New York's "3-cents-a-day" plan received complete hospital care, exclusive of the service of physicians, surgeons, or special private nurses, in semiprivate accommodations in any one of 180 hospitals in the metropolitan area, Mr. Van Dyk said. Because there are no physical examinations, subscribers are enrolled only in groups. Maternity care is available to those who have been members at least 10 months.

Mr. Van Dyk said the "3-cents-a-day" plan involves "neither charity nor profit."—*New York Times*, May 23, 1936.

Saving Dollars, Safeguarding Lives.—Within general limitations, each hospital determines its own premium rate for fire insurance. The type of construction, the hazards that exist, and the care devoted to minimize hazards and maintain equipment are the principal factors involved.

To a smaller extent but still significantly the experience of each hospital is reflected in the rates charged to all other hospitals. This is clearly shown by the recent reduction by the stock companies in premium rates on hospital buildings in most of the states in the Middle Western area. Last fall the rating organizations in some 15 Middle Western states made a change in their rating methods which produces a substantial reduction in those risks where fire hazards have been properly controlled, in some instances these reductions being as great as 25 per cent.

The new lower rates in most cases apply to renewals and do not affect policies now in force. However, it would be well for hospital administrators to discuss this feature with their local agents, as in some instances it might be desirable to cancel existing contracts and write policies at the new rate.

In 1924 and 1925 *The Modern Hospital* published a series of articles on fire prevention. In connection with this series, arrangements were made with the engineering departments of the leading fire insurance companies, acting through the rating and inspection bureaus having jurisdiction, to provide inspection service to any hospital requesting it. A great many hospitals took advantage of this free service and, when they carried out the suggestions, not only reduced their expenses for fire insurance premiums but also gave better protection to the helpless patients intrusted to their care. Beginning in an early issue, *The Modern Hospital* will run another short series of articles covering all important aspects of hospital fire prevention and control. If hospitals will heed the recommendations presented, premium rates can be still further reduced and lives more surely safeguarded.—Editorial, *The Modern Hospital*, Feb., 1936.

Should Gas and Oxygen Anesthetics Be Given to Ward Patients?—This question was asked by the director of a hospital in which approximately \$5000 is spent annually for gas and oxygen.

Oxygen and nitrous oxide gas are expensive, and the tendency to employ them routinely in the hospital appears to be on the increase. However, few superintendents have paused long enough to compute the hourly expense of gas and oxygen, ether and chloroform. The cost of spinal anesthetics, ether and oil for rectal cases, and novocain, procaine, and other local anesthetics is less difficult to estimate.

Gas and oxygen from an ordinary machine not equipped with a rebreather costs from \$2 to \$3 an hour. This variance depends on the skill of the anesthetist and on the proper functioning of the machine. Ether costs from 30 to 35 cents an hour, spinal anesthesia approximately 50 cents per injection, and ether and oil anesthesia approximately 20 cents per operation. The question arises in the consideration of these figures whether it would be fair to limit ward or nonpay patients to ether and to use gas induction or continuous gas and oxygen on those who are able to reimburse the hospital for this luxury.

No anesthetic should be withheld from any patient, free or full-pay, which would hasten his recovery. On

the other hand, since ether is a safe drug and has few contraindications, it seems logical to withhold an anesthetic costing \$3 an hour in favor of one costing one-tenth as much. The hospital should always be prepared to supply the needs of a particular patient, but in the present economic stress an institution that can render proper surgical treatment with the expenditure of less money is justified in so doing. Certainly it seems proper to switch to ether as soon as the anesthetic state is properly induced by gas.

In one institution the introduction of rebreathers has greatly reduced the cost of gas and oxygen anesthesia, approximately \$200 each month being saved thereby. Since the original expenditure necessary for the purchase of this addition to the gas apparatus is approximately \$200, no doubt should exist as to the economic wisdom of its installation.—*The Modern Hospital*, Feb., 1936.

PUBLIC HEALTH

Common Sense and Common Colds.—Colds are responsible for more time lost from work and school than any other cause.

Colds predispose more people to the onset of other diseases than any other one cause.

To put it another way, common colds tear more leaves from our calendar of daily living than any other one time-destroyer.

While colds are not altogether preventable, we are not entirely helpless in protecting ourselves against this common enemy.

You can, in a large measure, avoid the person with a cold.

If you catch a cold, you should keep it to yourself. It is unfair to expose others to your cold.

You should take care of a cold, because it often leads to pneumonia, and may open the way for tuberculosis or other serious chest complications.

You should always keep in good physical condition. Common colds are more apt to hit you when you are "run down"—that is, when your vitality is below par.

You should always dress sensibly, eat proper foods, avoid overeating, and always be careful about sudden changes of temperature.

Consult your family physician promptly upon the first appearance of a cold.

In short: "Apply common sense to prevention of the common cold."—*Kentucky Bulletin*, Dept. of Health, Apr., 1936.

Death Rate For 1936 Increased Over Last Year's.—The death rate is higher for 1936 in all but 17 of 130 major cities of the nation than it was in 1935, figures released by Bureau of Census of the U. S. Department of Commerce reveal. The comparison period is the first 18 weeks of each year.

Deaths from motor vehicle accidents are appreciably less for the 18-week period than they were last year, however. The figures for 1935 are 2949 deaths in vehicle accidents while for the same period in 1936 only 2503 motor vehicle deaths have occurred.—*Science News Letter*, May 23, 1936.

Negro's TB Death Rate Due to Living Conditions.—Living conditions rather than racial susceptibility may be responsible for the high tuberculosis death rate among American Negroes, it appears from a study of Bush Negroes living in the South American jungle. The study was reported by Prof. Morton C. Kahn, of

Cornell University Medical College to the National Tuberculosis Association.

The average death rate for Negroes in the United States is 3 to 4 times the average for the white population, Dr. Esmond R. Long, director of the Henry Phipps Institute, University of Pennsylvania, stated in another report at the same meeting.

Dr. Kahn's report was based on observations he made in an expedition to the Tapanahoni River region of Dutch Guiana, South America. These Negroes are of identical blood with the North American Negroes. Their ancestors came from the same part of West Africa. These slave ancestors revolted from the Dutch and since 1760 have been living in the wildest and most inaccessible part of Dutch Guiana. They have reverted to the same customs and type of existence as had their forebears in the forests of West Africa. Before the revolt, however, the ancestors of many of them had intimate contact with white people who presumably suffered from tuberculosis to the same degree as white populations in Europe.

Tuberculin tests were made on 765 of these Bush Negroes by Dr. Kahn and his assistants. Only 18 were found tuberculin-positive, that is, infected with tuberculosis germs. Of these 18, only 2 men had had any contact with white people. One of them had made a brief visit to a trading post. The other had lived at the trading post for 2 years. This man was found suffering from active tuberculosis. "It is evident that this man may be responsible for the spread of the infection in his village," Dr. Kahn stated.

Their isolation may be one reason why the Bush Negroes show so little evidence of tuberculosis infection in contrast to their North American blood brothers and also to those Negroes living in the West Indies and the towns of Dutch Guiana.

Dr. Kahn believes, however, that another reason is the way the Bush Negroes live. Their towns are "universally clean and sanitary." Their huts are large and spacious, with no crowding, and usually open at both ends, thus insuring ample ventilation. They bathe frequently, eat a fairly adequate diet, and get plenty of sunlight. Even more important, it appears, is the fact that when they are tired they stop working.—*Science News Letter*, May 30, 1936.

Malingering.—Albert P. Seltzer, M.D., of Philadelphia, states that malingering, known as feigned sickness and simulation, is a subject of interest and importance which has received recognition and attention over a long period of time. It is variously described as direct deceit and otherwise as closely resembling the neuroses. Distinction in the latter case is difficult, as there may be a background of definitely neurotic character.

Malingering appears to be a primitive characteristic, not confined to the human species, and if carried far enough may be considered an analogue of fundamental biologic adaptation, as seen in those forms which change their color to correspond to their surroundings, and others which are so formed that they resemble leaves, twigs, etc. This involuntary deceit is carried forward in more highly organized members of the animal sphere, as observed in such phenomena as the efforts of birds to decoy supposed danger from the immediate vicinity of their young.

Malingering in man may be what is called pure, that is, a fabric of entire untruth, or it may have a slight background varying in degree of actual fact. The former is said to be rare, though in medical work as seen in the Veterans Bureau it appears not infrequently. When a patient presents himself as tuberculous, without

showing detectable signs of the tuberculosis, and later confesses that he had held the sputum of an actual tuberculous person in his own mouth; when a man voluntarily causes glycosuria by any means, whether by injection of a solution of sugar into his bladder, or by the use of drugs which produce this condition; when albuminuria is caused artificially; then these and other frankly self-produced conditions can be considered as nothing else than pure deceit.

There is little in the available literature to indicate that the malingerer has received any of the sort of attention in the way of psychologic study that has been accorded both to sufferers from actual disease and to other individuals with social tendencies.

A study was made following the World War of the psychologic status of men who could not or would not fight, but this does not deal with the subject of malingering, although it would seem that such a piece of work might be done with profit, since at present there is no such study on which to base satisfactory conclusions as to whether the tendency to malingering is more frequently linked with degrees of mental defect or with deviations of personality. Such a piece of work would be an addition and an interesting contribution in this field. It would seem that there must be some common factor, since neither veterans nor other individuals equally in need resort to this means of obtaining the desired funds.

According to Tom Williams, "There is a great diversity of opinion on the subject among physicians interested especially in mental disorders. In France and also in America, an attempt is made to remove responsibility from simulators, more especially if they are also criminals." Here, the borderline would seem to be very close between the malingerer and the petty criminal.

In this relation, Gordon says that malingerers have to put themselves to much greater strain to maintain their rôle than do hysterics.

Three main groups are considered by Dufestal—those of normal mentality, the degenerate, and the hysterical.

In the World War veterans, malingering is found in a greater proportion between the ages of 30 and 40. It has been observed more frequently in the working classes, although occasionally professional men have been seen. As to general intelligence, it is usually that of the public school. Married men are most often offenders, not infrequently under the suggestion or urging of the wife.

Among military men there is always a notable increase in the number of malingerers just before or just after a war.

The soldier seems adept in the field of malingering, and it has been reported that men with actual disqualifying conditions have dissimulated to secure military enrollment, only after a few weeks to present themselves as being physically unfit, such unfitness being claimed due to severity of the routine training.

In an article on World War veterans, which appeared in a recent number of a well-known magazine, this statement can be read: "The War Department reported 220,000 wounded in action, of whom possibly one-half have some resulting disability. But if we make allowance on the one hand for the cases of genuine disability which developed after the war, and on the other hand for temporary injuries which did not involve permanent disability, it seems fair to conclude that a total of 300,000 potential 'service-connected' disability sufferers is a reasonable estimate. Yet the records of the Veterans Administration reveal no less than 1,060,000 applications filed for disability compensation; 493,655 allowances for disability had been made up to January 1. It is ridicu-

lously easy to prove a disability and to obtain an allowance. All you need is medical testimony that you are now suffering from an enlarged heart, constipation, asthma, dizziness, or what not—anything at all in the category of human ailments."

Is this an indictment of the examining physician?

Whatever the facts may be, it emphasizes the importance of all possible care and honesty in the certification of veterans for disability allowance.

It indicates the particular importance of detecting the malingerer in medical examinations made by the Veterans Bureau. In doing this, it is necessary that the examiner maintain an attitude of interested neutrality in order to avoid antagonism. Bispham says that "the physician is apt to be either too sympathetic, or the extreme opposite, considering all those who have no visible signs of disease as malingerers. . . . It is frequently noticed that, where the doctor is known to examine all cases thoroughly, malingerers are much fewer."

The range of disturbances simulated is almost endless, but difficulty of hearing seems to be a favorite complaint in this relation. The following method is useful. The veteran is placed against the wall of the examining room and the examiner stands 20 feet away from where he calls out numbers and words in a low voice, and then changes to a progressively lower or louder tone, after which the patient is requested to close with his finger his better ear which has been determined to be practically normal functionally. If he still says that he cannot hear, when a pitch and intensity are reached at which he should be able to hear and to reproduce the words with the sound ear, even though it is tightly occluded, it can be concluded that he is malingering.

Care must be exercised by giving adequate examination for disturbance of hearing, as changes may frequently be found indicating hearing difficulty, but severe change in the drumhead does not always mean loss of hearing, and absolute deafness may exist with completely normal drum.

The olfactory field is also frequently invaded by pretense of loss of the sense of smell. In testing these cases, bear in mind the fact which is emphasized by Spiller in his clinical lectures, that the use of strongly volatile and irritating substances as ammonia and the strong acids are not suitable for olfactory tests, as they stimulate the mucosal endings of the fifth nerve, the result of which is not olfaction. This becomes of added importance, when it is considered that disturbance of the sense of smell is the common result of cerebral concussion and thus may be subject to intentional exaggeration.

In simulation referred to muscles and joints, voluntary muscles can be controlled only within certain limits and their electrical behavior is not dependent upon the will. All voluntary muscular effort sooner or later leads to fatigue and no one can maintain it indefinitely; however, practice leads to ability to maintain unnatural postures over a longer time, therefore caution must necessarily be exercised. It is possible for a healthy person to activate not only striated muscle, but by muscular effort a change can be effected and blood volume in blood vessels can be affected, and thus the heart action and sweat glands are influenced. Many persons by autosuggestion can cause secretion of the lacrimal glands, and also dilatation of pupils and similar changes. Drugs, alcohol, and fasting are other means frequently resorted to, in order to produce symp-

toms on which to base claims for disability allowance for the veteran.

In considering this question fairly, it is also of equal importance to speak of the physician himself; that it is to his credit to make as correct a diagnosis in the case of a malingerer as in the case of an obscure actual disease. And it is also to his interest, since it reflects not only on the individual doctor, but also on the profession as a whole, to diagnose a suspect as malingerer, because his symptoms are slight, and later to have him return a well-marked case of lateral sclerosis, or some other disease equally serious both for patient and doctor. To avoid this, the physician should be a keen diagnostician and, if in doubt, willing to recognize it, and to seek the advice of someone else who has had more special training and experience with the question involved.—*Medical Record*, Mar. 18, 1936.

Morbidity in Pennsylvania in April, 1936

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	0	2	0	0
Allentown	1	11	15	20	15
Altoona	1	2	11	0	6
Ambridge	0	0	3	0	2
Arnold	0	0	2	0	4
Beaver Falls	1	1	4	0	0
Bellevue	0	2	2	0	0
Berwick	1	0	0	0	1
Bethlehem	0	4	1	0	3
Braddock	0	0	2	0	1
Bradford	0	0	1	0	2
Bristol	0	1	1	0	0
Butler	0	27	3	0	0
Canonsburg	0	0	0	0	0
Carbondale	1	0	0	0	0
Carlisle	1	0	2	0	0
Carnegie	1	19	7	0	0
Chambersburg	0	0	15	0	0
Charleroi	0	2	1	0	2
Chester	6	26	4	1	3
Clairton	0	8	1	0	0
Coatesville	0	0	0	0	0
Columbia	0	0	0	0	0
Connellsville	2	0	1	0	0
Conshohocken	0	5	2	0	0
Coraopolis	0	1	1	0	4
Dickson City	0	0	1	0	0
Donora	0	0	4	0	2
Dormont	0	0	1	0	0
Du Bois	0	50	3	0	1
Dunmore	0	0	1	0	0
Duquesne	0	1	0	0	0
Easton	2	4	5	0	8
Ellwood City	0	0	6	0	0
Erie	0	5	16	0	20
Farrell	0	3	1	0	0
Franklin	0	1	1	0	5
Greensburg	0	0	0	0	0
Hanover	0	0	1	0	0
Harrisburg	2	10	5	0	1
Hazleton	1	0	6	0	0
Homestead	0	0	0	0	0
Jeannette	0	5	3	0	0
Johnstown	0	2	1	0	15
Kingston	1	1	4	0	20
Lancaster	2	9	3	0	2
Latrobe	1	1	2	0	0
Lebanon	0	3	5	0	29
Lewistown	0	0	0	0	4
McKees Rocks	0	3	2	0	1
McKeesport	1	18	1	0	1
Mahanoy City	3	0	1	0	0
Meadville	0	0	0	0	0
Monessen	1	37	0	0	0
Mount Carmel	0	0	1	0	0
Munhall	0	0	1	0	0
Nantioke	0	0	0	0	0
New Castle	0	9	1	0	11
New Kensington	1	2	9	0	1
Norristown	0	3	1	0	1
North Braddock	0	4	24	0	0
Oil City	1	2	9	0	1
Old Forge	0	0	0	0	0
Olyphant	0	0	0	0	0
Philadelphia	5	1494	223	0	186
Phoenixville	0	4	16	0	6
Pittsburgh	19	68	340	2	79
Pittston	1	0	0	0	0
Plymouth	0	0	1	0	0
Pottstown	0	1	0	0	0
Pottsville	0	1	0	0	0
Reading	0	13	7	0	5
Seranton	1	4	12	0	0
Shamokin	0	0	0	0	0
Sharon	0	8	2	0	3
Shenandoah	0	0	0	0	0
Steelton	0	1	0	0	0
Sunbury	0	51	12	0	0
Swissvale	0	1	1	0	2
Tamaqua	0	0	6	0	0
Taylor	0	0	0	0	3
Turtle Creek	0	0	3	0	4
Uniontown	0	4	6	0	6
Vandergrift	0	0	2	0	2
Warren	0	0	1	0	7
Washington	0	117	5	0	0
Waynesboro	0	1	0	0	0
West Chester	0	52	1	0	9
Wilkes-Barre	1	3	25	0	23
Wilksburg	1	13	6	0	1
Williamsport	0	2	3	1	2
York	0	0	4	0	0
Townships					
Allegheny County:					
Harrison	0	0	1	0	0
Mt. Lebanon	0	18	7	0	14
Stowe	0	11	3	0	1
Delaware County:					
Haverford	0	7	5	0	18
Upper Darby	0	46	13	0	20
Luzerne County:					
Hanover	1	0	5	0	2
Plains	0	0	0	0	2
Montgomery County:					
Abington	0	31	13	1	3
Cheltenham	1	36	5	0	0
Lower Merion	1	10	8	0	32
Total Urban	62	2279	941	25	596
Total Rural	62	999	855	13	220
Total State	124	3278	1796	38	816

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the co-operation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

ABNORMAL incidence of tuberculous infection among inmates of hospitals for chronic patients, prisons, and other institutions where constant contact with one's fellows is inevitable has long been recognized and deplored. Careful studies of such situations are none too common. The thoroughness with which Dr. Burns has investigated this subject in the state institutions of Minnesota not only throws it into sharp relief but furnishes a constructive plan for control of this public health menace.

INSTITUTIONAL TUBERCULOSIS

The staff of the Minnesota State Sanatorium has carried on an investigation of the incidence of tuberculous infection in the institutions under the direction of the State Board of Control. The study began Sept. 1, 1934, when a program of tuberculin-testing and roentgen-raying all reactors was inaugurated for both inmates and employees and has been continued since that time. Old tuberculin, 1/1000, was used, paper films employed with celluloid in doubtful cases, and one man was detailed from the sanatorium staff to make all the tests and read the reactions.

"The Minnesota State Board of Control, responsible for the care of state wards, interested itself in the survey to determine the incidence of tuberculous infection and disease as a preliminary step in the development of a logical control program. The investigation of tuberculosis, of both infection and disease, was carried out for the purpose of identifying those infected at the present, those showing definite evidence of parenchymal disease, and those who show the presence of tubercle bacilli in their sputum. It was, therefore, hoped that this survey would furnish information upon which the Board of Control might build its future tuberculosis program in Minnesota."

During the 6 years preceding the beginning of this project the institutional population had increased 20 per cent, while the tuberculous cases

diagnosed increased over 100 per cent in the same period.

"Because of the intimate association in institutional life, exposure from unknown and unisolated positive-sputum cases must necessarily be greater than would occur from such cases in the average community. Such close association exists among all of the 15,994 inmates and 2400 employees. Visiting of friends and relatives, as well as parole cases leaving the institutions for home, increases the number of individuals exposed through contact beyond those associated with the cases in the institution.

"If the institution is a reservoir of infection, the many thousands of visitors associating with unknown inmate cases each year only add to the necessity of protective measures being carried out. It would appear, from the incidence of tuberculosis as well as the deaths from this disease in state institutions, that these dependents form one of the reservoirs of infection in the state which should be corrected as part of the state's program of tuberculosis eradication among its citizens."

The number of inmates in state hospitals and asylums and schools for the feeble-minded and epileptic was 11,617, of which 82 per cent reacted positively to the tuberculin test. This appears to be excessive in a state with a low death rate from tuberculosis. Of the reactors 11.2 per cent

showed evidence of pulmonary disease in their roentgen rays. Two and four-tenths per cent of the reactors had positive sputum, or just under 2 per cent of the total number of inmates.

Difficulty was encountered in collecting specimens of sputum because of the large number of deteriorated persons among the inmates. For this reason routine examination of stools for tubercle bacilli was also made. While as stated 2.4 per cent of reactors showed positive sputum, 8.8 per cent of this group carried the bacilli in their stools.

The examination was extended to include the 2430 employees in the institutions studied. Of these 72 per cent reacted positively to the tuberculin test, 3.7 per cent were found on roentgen ray to have parenchymal tuberculosis, and 0.66 per cent had bacilli in their sputum.

It is evident that the supply of tuberculosis cases in these institutions is derived from 2 sources, those active at the time of admission and those infected after becoming inmates. Thirty-three per cent of the deaths occurred one year or less following admission, suggesting the probability that the disease was active at the time they were committed. On the other hand 51 per cent of deaths among inmates over 24 years of age were in patients who had been in the institutions 5 years or more before the development of manifest tuberculosis. These may clearly be assumed to represent cases resulting from contact with existing and perhaps unrecognized cases within the hospital.

During the 6 years preceding the present study there had been a total of 538 deaths from tuberculosis. Of these 461 had no employment in connection with the work of the institution. Of the remainder, however, "14 did occupational therapy, 7 worked in the laundry, 43 were occupied in ward work, 1 did tailoring, 6 worked on the farm, 1 in the kitchen, 3 in the dining room, and 1 in the bakery." Aside from the direct contacts between the more restricted inmates these circulating spreaders were certainly in a position to infect many others.

These observations lead to the inevitable conclusion that there is a public health problem in connection with institutional tuberculosis which requires aggressive handling. "The study of the death reports points to the fact that protection of the inmate body in the future can be accom-

plished to a large extent by diagnosing the cases before or immediately following commitment, and providing the necessary isolation quarters for clinical cases to the end that their association with the uninfected can be prevented."

Obviously the first step in a program to protect a community against its institutional reservoirs of tuberculosis is the testing of all individuals entering either as inmates or employees and roentgen-raying the positive reactors. At the same time segregation should be arranged for all those now in the institution who show evidence of parenchymal infection. It is suggested that in Minnesota the present medical staff could assume most of the additional work involved with the exception of the Mantoux testing and reading of roentgen-ray plates. These should devolve as a continuous duty upon the Director of Tuberculosis of the State Board of Control.

In the careful study of about 15,000 individuals, 245 were found to have demonstrable tubercle bacilli. These should be segregated and under the special care of staff members skilled in the care of actively infectious disease. In addition there were found to be 1164 cases whose roentgen rays showed definite evidence of parenchymal involvement and who might be, or might become, actual spreaders of the disease. Provision for the isolation and special study of these cases is of similar importance in a comprehensive plan of control. Only by culling positive sputum cases and those showing parenchymal lesions on admission, at the same time discovering resident cases before they become infectious, can this public health menace to a community be eradicated.

The desirability of a wide application of the evident conclusions from this study requires emphasis. Further efforts to control tuberculosis must take the form of direct attack on specific foci of infection. In thousands of publicly maintained and doubtless in private institutions as well, opportunity for the occult spread of tuberculosis may exist. Pending further local studies to determine the conditions which prevail in other communities the program outlined may well be introduced widely as an approved procedure in preventive medicine.

A Study of the Incidence of Tuberculosis in State Institutions in Minnesota, Herbert A. Burns, M.D., Am. Rev. of Tuberc., June, 1936.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

CALL TO THE 1936 MEETING

The first meeting of the House of Delegates of The Medical Society of the State of Pennsylvania will be called to order in the Cardinal Room, Hotel William Penn, Pittsburgh, on Monday, Oct. 5, 1936, at 3 p.m.

A notice regarding parliamentary requirements for consideration of amendments was published in this department in the May JOURNAL.

Proposed amendments to the by-laws, which were published in the June JOURNAL, will be published again in the September JOURNAL, as well as in the official handbook for the 1936 session. Resolutions to be brought to the attention of the 1936 House of Delegates will also be published if received by the secretary of the State Society on or before Aug. 10.

ANOTHER SPUR TO PROGRESS

In 1931 the Board of Trustees of The Medical Society of the State of Pennsylvania first gave substantial recognition to the value of component county medical society activities in establishing improved public relations by appropriating \$1500 to the Philadelphia County Medical Society in recognition of its fine progress in the desired direction.

The following year, believing "that the State Society can best advance the relations of its members with the public throughout the state by offering financial assistance to the component societies which might develop a proper interest in such work," the Board of Trustees provided for the reimbursement to component societies recommended to the board by the Public Relations Committee of the State Society of an amount not to exceed 50c for each paid-up member of such society. This stimulating endeavor resulted in

a recommendation by the State Society Committee on Public Relations in behalf of 15 component societies, which received a total of \$2400, ranging in amount from \$12.50 to \$967.

In 1934 the Board of Trustees, "planning for more frequent and closer contacts between State Society representatives and members of county societies on subjects of public health legislation and medical economics, and as an expression of appreciation for past courtesies," through a committee of the Board of Trustees, authorized the distribution of a sum not to exceed \$2250 to those component societies co-operating through their official bulletins.

In each instance the Board of Trustees was careful to emphasize the fact that any such plan "was not intended to establish a precedent, nor in any way give an impression of permanency."

In 1936 the Board of Trustees, pursuing the current social trends of sickness service, is embracing the opportunity to co-operate with the first satisfactorily situated component society to develop, in connection with a sponsored credit and collection agency, a plan for co-ordinated health service in a rather extensively mixed industrial and agricultural community. Secretary and Treasurer John A. Daugherty of the Dauphin County Medical Society and Mr. Clement W. Hunt, director of the Physicians and Dentists Business Bureau of Dauphin County, Inc., having appeared before a meeting of the committee of our Board of Trustees appointed to study the social aspects of sickness service, held in Altoona, Mar. 29, the latter committee, after its second meeting held in Philadelphia, Apr. 22, invited Mr. Hunt to discuss the plans and ambitions of the bureau before the entire Board of Trustees at its May meeting in Harrisburg.

Immediately subsequent to this meeting the Dauphin County Medical Society made formal request that the State Society advance \$2000,

"a sum equal to that contributed by the members of the Dauphin County Medical Society," to assist the bureau in the expansion of its other service beyond that of credit and collection, "which has operated successfully since February, 1936."

On the basis of the following points, if agreeable to the Board of Governors of the Dauphin County Medical Society, the Board of Trustees of the State Society voted to grant the request:

That (1) the funds thus advanced are to be in the form of a loan, without interest, made to the Dauphin County Medical Society; (2) said funds to be used by the Board of Governors of the Dauphin County Medical Society solely for the purpose of developing, before 1937, a co-ordinating community health service feature of the Physicians and Dentists Business Bureau of Dauphin County, Inc.; (3) the proper representatives of The Medical Society of the State of Pennsylvania are to be recognized as conferees in the development of the health service plan; and (4) the services of the employees of the bureau are to be made available at times for consulting service to other components of the State Medical Society.

It is obvious from the scope of this modified agreement that our Board of Trustees looks upon this enterprise of one of our State Society's most strategically located and widely experienced components as an opportunity to further intelligent experiments in the development of an adequate communal sickness service, to be under the control of the organized medical profession, and likely to prove of great value to many sections of our state.

DECENTRALIZATION OF STATE SICKNESS SERVICE PLANS FOR THE UNEMPLOYABLE

Representative officers and committeemen of all component societies have recently received a communication setting forth reactions and suggestions from the Board of Trustees based on the studies of various committees interested in the future of tax-supported sickness service. Important among these is the future of medical service connected with emergency medical relief as now administered in the various counties under state control.

The postulate of the board stressed the obvious need, since the emergency unemployment problem has taken on so many characteristics of permanency, of transforming the present "minimal sickness service" plan of the state into an adequate sickness service county plan for all noninstitutionalized persons supported by

tax funds, whether they be employable or unemployable, on the free choice of physician and fee-payment basis.

The Board of Trustees in its communication to all county societies naturally referred to the possibility of applying agreements similar to those in existence for the care of unemployables (formerly called paupers) in Mercer and 6 other Pennsylvania counties, as well as the agreement operating in Beaver County.

Responses, from some of which we quote below, were encouragingly numerous and interesting, and in a sense offer replies to the following complex question asked in the Board of Trustees' communication above referred to—

"Can we meet our responsibilities in the future development of tax-supported medical service in Pennsylvania?"

SECRETARY DONALDSON:

Relative to your communication of June 3 (Can We Meet Our Responsibilities?), in Mercer County medical service to the indigent is taken care of by an agreement between the county medical society and the board of poor directors, a copy of which you now have. Under the operation of this plan, the indigent apply to the poor director in charge of the district in which they live for medical service and state their choice of physician. The director issues an order to that physician for services rendered to the applicant. They are not referred to any hospital or any free clinic without the advice of the physician of their choice.

Our Committee on Medical Economics has not studied any deferred-payment plans for medical service.

Relative to the continuation of decentralized medical relief in the state: I have talked with other members of the county society located in Grove City relative to carrying on this work under the so-called Beaver County Plan. We feel that in adopting such a plan the State Medical Society would be asking the Mercer County Medical Society to take a step backward in the progress which they have made, as witness their agreement with the board of poor directors. We consider our plan the equal of the Beaver County Plan, and its superior in that it covers a wider range of service.

In comparing the 2 plans you will note that ours makes provision for rural practice by a fee rate according to mileage. You will also note a higher obstetric fee, also provision made for roentgen-ray examination of fractures and more than ordinary home and office fees in the treatment of fractures. Also you will note that it provides for surgical cases on a basis of 50 per cent of the usual operative fee for such cases.

We feel that an agreement with the State Emergency Relief Board any less remunerative than the agreement which we have with our poor directors would be a step backward for us and would lead us into difficulties with our poor board. They will immediately ask why they should pay us more than the state does and then the strife would be on. After the years of striving in politics which we have gone through to attain our present standing, we feel that we cannot let down one iota.

JONATHAN B. PERRINE, *Secretary*,
MERCER COUNTY MEDICAL SOCIETY.

June 6, 1936.

SECRETARY DONALDSON:

Since your recent communication stating that this whole program might soon again become a county matter, we have given a great deal of thought and attention to this whole subject. Our Economics Committee proposes to recommend to the society at its regular meeting tomorrow that a substantial sum of money be set aside by the county commissioners to finance the medical care of the indigent under the direct supervision of the county medical society.

Our Economics Committee is always glad to have from you any information as to State Medical Society activities in the field of medical economics, and we are indeed proud of the interest and leadership which has been demonstrated by some of our members in this vital field of medical activity.

JOSEPH SCATTERGOOD, JR., *Secretary*,
ECONOMICS COMMITTEE, CHESTER COUNTY
MEDICAL SOCIETY.

June 15, 1936.

SECRETARY DONALDSON:

I was happy to read your circular letter of June 11 containing correspondence between Dr. Perrine of Grove City and you. We in Northampton County feel that our plan is along the same lines as Mercer County and that we do not care to have a plan such as Beaver County has; and I, personally, wish heartily to subscribe to the action of the Board of Trustees.

FREDERICK O. ZILLESSEN, *Secretary*,
NORTHAMPTON COUNTY MEDICAL SOCIETY.

June 17, 1936.

SECRETARY DONALDSON:

It would be, it is believed, a "noble experiment" to entrust county medical societies with the disbursement of funds to pay for medical relief, but a great deal of criticism would be obviated if the legislature would agree to the appointment, on a full-time basis, of a physician to act as investigator. Unfortunately, situations arise which demand investigation, and it is obvious that this could be done by a trained physician better than by a social worker, against whom a certain amount of opposition and criticism is reared.

W. EGBERT ROBERTSON, *Member*,
MEDICAL ADVISORY COMMITTEE TO SERB.

June 18, 1936.

SECRETARY DONALDSON:

A committee has been formed and has had conferences with the poor board, with the objective of arriving at a satisfactory solution of the problem mentioned in your letter. We have made rapid strides to counteract the abuses which have been the result of years of inertia, not only of members of the society but of State Society officers also. The State Society can depend on us to work for the interests of physicians in general, and we will always be ready to respond.

AUGUSTUS H. CLAGETT, *Chairman*,
MEDICAL ADVISORY COMMITTEE TO
DELAWARE COUNTY ERB.

June 16, 1936.

FLOOD RELIEF

Continuing and concluding comments appearing in this department in recent issues of the JOURNAL, we herewith set forth, without mention of names, the number of individual con-

tributors and the amounts contributed to the Flood Relief Fund of our Medical Benevolence Committee, from all sources, by 57 of our 60 component societies.

The total individual contributions from 983 members of the State Society, amounting to \$3782, have been handsomely augmented by contributions amounting to \$2035 from the treasuries of Allegheny, Beaver, Blair, Bucks, Center, Erie, Lackawanna, Mercer, Montgomery, and Warren county medical societies, and graciously enriched further by unsought contributions from the treasuries of the woman's auxiliaries to Allegheny, Dauphin, Lebanon, Mercer, and Philadelphia county medical societies, and a few individuals, nonmembers.

The entire amount in the sum of \$6052 has been disbursed to 31 physicians, fellow-members in Blair, Cambria, Huntingdon, Luzerne, and Lycoming county medical societies, who suffering severe flood losses were most in need of assistance toward rehabilitation of their practices.

There are interesting deductions to be made from the table below: e. g., had individual members throughout the state responded in proportion to the membership of Blair County Society (next door neighbor to Cambria County which suffered the most), 3850 of our members would have contributed individually a total of \$25,872.

County Society	Number of members contributing	Contributed by Society treasury	Woman's Auxiliary	Total
Allegheny	150	\$632.00	\$500.00	\$1,132.00
Beaver	18	61.00	100.00	161.00
Blair	50	336.00	500.00	836.00
Bucks	16	67.50	50.00	117.50
Center	8	25.50	200.00	225.50
Dauphin	20	72.50	25.00	97.50
Erie	12	50.00	25.00	75.00
Lackawanna	12	50.00	500.00	550.00
Lebanon	3	6.00	10.00	16.00
Mercer	20	73.50	50.00	123.50
Montgomery	32	121.00	100.00	221.00
Philadelphia	185	717.50	50.00	767.50
Warren	5	17.50	10.00	27.50
Adams	3	10.00	.....	10.00
Armstrong	3	7.50	.....	7.50
Berks	19	75.50	.....	75.50
Bradford	9	28.00	.....	28.00
Butler	5	15.50	.....	15.50
Cambria	18	75.50	.....	75.50
Carbon	5	12.50	.....	12.50
Chester	16	58.50	.....	58.50
Clarion	2	5.00	.....	5.00
Clearfield	7	40.00	.....	40.00
Clinton	1	5.00	.....	5.00
Columbia	3	7.50	.....	7.50
Crawford	7	17.50	.....	17.50
Cumberland	3	10.00	.....	10.00
Delaware	24	83.50	.....	83.50
Elk	4	12.50	.....	12.50
Erie	18	55.50	.....	55.50
Fayette	17	55.50	.....	55.50
Franklin	9	25.00	.....	25.00
Huntingdon	8	35.50	.....	35.50
Indiana	17	52.50	.....	52.50
Jefferson	5	22.50	.....	22.50
Juniata	1	2.50	.....	2.50
Lancaster	36	133.50	.....	133.50
Lawrence	7	18.00	.....	18.00
Lehigh	16	44.50	.....	44.50
Luzerne	28	85.50	.....	85.50
Lycoming	13	40.00	.....	40.00
McKean	14	41.00	.....	41.00
Mifflin	7	23.00	.....	23.00
Monroe	3	17.50	.....	17.50
Montour	6	20.50	.....	20.50
Northampton	11	37.50	.....	37.50
Northumberland	6	25.00	.....	25.00
Potter	3	20.00	.....	20.00
Schuylkill	15	54.50	.....	54.50

County Society	Number of members contributing	Contributed by Society Woman's treasury Auxiliary	Total
Somerset	3—	\$12.50	\$12.50
Susquehanna	2—	5.00	5.00
Tioga	6—	20.00	20.00
Venango	5—	15.00	15.00
Washington	38—	132.00	132.00
Wayne-Pike	2—	7.50	7.50
Westmoreland	20—	81.50	81.50
Wyoming	2—	10.00	10.00
York	12—	45.00	45.00
Unsolicited indi- vidual contribu- tions*	5—	.....	25.00
988—\$3,782.00 \$2,035.00 \$210.00 \$6,052.00			

* Mrs. Cyrus L. Stevens, Athens; Mr. and Mrs. Franklin M. Crispin, Philadelphia; Olin West, M.D., Chicago; Anonymous; Deceased member's family.

INTELLECTUAL CURIOSITY VERSUS INTELLECTUAL LAZINESS

"After the choice of a wife, about the most important decision a man has to make in this world is that of a profession.

". . . The purely scientific side of medicine—investigation, research, discovery—is a field in which genius can find all the intellectual and other satisfaction that even it can hope for. The problems are as intricate as any that concern men. The rare man who is suited to a life devoted to them need have no fear of ever reaching the point where he has no more interesting problems to confront him. The solutions of these problems offer rewards in service to mankind that are among the greatest that altruism can wish.

"Fortunately the possibilities of investigation and of discovery are not confined to the few great men. Every patient is more or less a problem. In medicine more than in any other vocation that I know, the rank and file are constantly stimulated by their experiences to suggest new ideas and almost every doctor occasionally makes some new observation or develops some useful idea in practice."¹

"The true spirit animating the medical writer is one of helpfulness. It should be his object not to exploit his personal accomplishments but to present data which will be of substantial aid to his fellow practitioners in solving their problems."²

Our package library service is made up of approximately 15,000 reprints which embody the painstaking research and far-seeing imagination of men who are more interested in the progress of medicine than in their own personal aggrandizement.

Borrowers who availed themselves of the library service during the past 2 months are:

James Kay, Philadelphia—*Thrombo-angitis Obliterans* (25 articles).

Eli Eichelberger, York—*Education, Medical* (10 articles).

A. Reid Leopold, Lewistown—*Carbon Monoxide Poisoning* (6 articles).

W. Blair Mosser, Kane—*Peptic Ulcer* (28 articles).
Augustus S. Kech, Altoona—*Carbon Monoxide Poisoning* (6 articles).

A. Reid Leopold, Lewistown—*Carbon Monoxide Poisoning* (6 articles).

Oliver E. Mattas, Altoona—*Therapy of Gonorrhea* (20 articles).

James Bloom, Harrisburg—*Socialized Medicine* (23 articles).

David L. McAninch, Lamartine—*Dietary Therapy of Cholecystitis and Cholangitis* (12 articles).

Mathew H. Sherman, Harrisburg—*Manchester Operation* (3 articles).

Clarence R. Phillips, Harrisburg—*Phlebitis, Thrombophlebitis* (10 articles).

Clarence R. Phillips, Harrisburg—*Coronary Occlusion* (19 articles).

Allen M. Kerr, Pittsburgh—*Pneumococcus, Type VI* (11 articles).

Theodore O. Elterich, Pittsburgh—*Cretinism, Myxedema in Childhood* (9 articles).

Mathew H. Sherman, Harrisburg—*Manchester Operation* (1 article).

Clarence R. Phillips, Harrisburg—*Pleurisy* (5 articles).

Francis I. Taylor, Altoona—*Diagnosis of Alcoholism* (4 articles).

Alfred E. James, Beaver Springs—*Endometriosis* (10 articles).

David C. Pewterbaugh, Saint Thomas—*Cholesterol in Thyroid Dysfunction* (3 articles).

John H. Boyd, New Wilmington—*Dietary Therapy of Urinary Calculi* (22 articles).

Henry P. Kohberger, Pittsburgh—*Impotence* (3 articles).

Francis I. Taylor, Altoona—*Diagnosis of Alcoholism* (5 articles).

Charles W. Lueders, Philadelphia—*Stomach* (30 articles).

Laurie Dodd Sargent, Washington—*Medical Care of the Cancer Patient* (13 articles).

Cecil E. Ross, Erie—*Camphor in Oil to Stop Lactation* (1 article).

John F. Blair, Derry—*Nurses and Nursing* (14 articles).

David I. Giarth, Kittanning—*Diseases of the Eyes* (23 articles).

Henry R. Douglas, Jr., Harrisburg—*Typhoid Vaccine* (1 article).

Joseph W. McHugh, Johnstown—*Fistula* (7 articles).

David I. Giarth, Kittanning—*Eyes* (3 articles).

James M. Henninger, Woodville—*Alcoholism, Psychoses and Diagnosis* (21 articles).

Francis I. Taylor, Altoona—*Alcoholism* (1 article).

Angelo L. Luchi, Wilkes-Barre—*Lead Therapy of Cancer* (9 articles).

Marie V. Zerr, Pittsburgh (not a physician, but referred by a member)—*Socialized Medicine* (16 articles).

Members desiring to borrow reprints from the library should send 25 cents in stamps to cover the postage and part of the expense of collecting the material. Address the Librarian, 230 State Street, Harrisburg, Pa. Only one package may be borrowed at a time and it must be returned within 14 days.

It is encouraging to the library committee that so many of our members when returning their packages state that the material supplied was exactly what they wanted.

CLARENCE R. PHILLIPS, *Chairman,*

WALTER F. DONALDSON,

FRANK C. HAMMOND,

Library Committee.

1. PUSEY, WILLIAM ALLEN, Former President of the American Medical Association: "Medicine as a Career," Reprint from Bernay's *Outline of Careers*, Press of American Medical Association, Chicago, 1930, pp. 1, 9, 10.

2. NICHOLS, B. H.: "Medicoliterary Ideals and Technique," *Medical Mentor*, 2: Jan., 1931.

IF THREATENED WITH SUIT

If you are threatened with suit for alleged malpractice you should communicate at once with the secretary of your county society, the councilor for your district, or the secretary of the State Society *before consulting an attorney.*

The State Society will not undertake the defense of any member unless his application is made *within 7 days* after summons has been served by the court.

DO NOT MISS THE SCIENTIFIC EXHIBIT

We wish that we were sufficiently familiar with the English language to tell you in a short and concise manner all of the things which you will see in the Scientific Exhibit of the State Medical Society during the convention in October, because there is a fine display in store for you. Some of the exhibits were mentioned last month; here are a few more:

Indications for the use of and the technic of physical therapy will be in the ablest hands and will form a feature of the Scientific Exhibit. You will get away from the ordinary sales talk, and facts will be presented regarding the newer refinements of this most valuable field of therapeutic endeavor.

One of the past presidents of the society will show motion pictures of ordinary and complicated operations. He has submitted a list of which any man might be justly proud. We want you to see these.

You have heard a great deal about the sedimentation test. You have undoubtedly utilized it. One of the exhibitors has been working with this procedure for a long time, has concentrated his energy in determining just where and when it is most useful. We have asked him to put this in the form of an exhibit and to give us graduate training in it.

Another exhibitor has gone to a great deal of expense and trouble to present before you color

slides of abnormal blood cells, clearly differentiating the various -cytes, -blasts, *etc.* This clever exhibit will be much frequented.

Several of the exhibitors are preparing actual patient demonstrations. This will not only "liven" the exhibit, but will acquaint the members with firsthand and intimate information on the use of the procedures advocated.

One of these patient demonstrations will be presented by the Cancer Commission of The Medical Society of the State of Pennsylvania, which at the present time is under the able leadership of Dr. Samuel J. Waterworth, of Clearfield. It might interest you to hear about this exhibit in advance so that you may make proper arrangements to spend profitable time with the Commission. The exhibit will be divided into 5 parts:

1. A selected group of moulages which depict skin and mucous membrane carcinoma, presenting the picture in all dimensions. This life-like presentation will be one of the contributions of the Pittsburgh Skin and Cancer Foundation.

2. To emphasize the importance of section diagnosis, to acquaint you with the latest form of frozen section work, to illustrate the criteria of carcinoma diagnosis microscopically, there will be presented, under the direction of Dr. A. J. Bruecken, of the St. Francis Hospital, of Pittsburgh, a laboratory exhibit using mammary carcinoma for illustration. Dr. Bruecken, or one of his associates, will freeze, section, stain, and examine the slides with you, thus completing the whole procedure. This should serve as a fine graduate lesson to all of us.

3. Dr. Stanley P. Reimann, of Philadelphia, another member of the Cancer Commission, is preparing a very interesting exhibit on the relation of diet to cancer—an exceedingly worthwhile endeavor which will give the proper answer to the question of what a cancer patient may eat. It will help to counteract diet fads as therapeutic measures against neoplasm.

4. Under the direction of Dr. H. W. Bernhardt, of Rochester, Pa., carcinoma of the oral cavity will be demonstrated in vivo. Patients suffering from carcinoma of the lip, tongue, buccal mucosa, and pharynx will be demonstrated at a regularly appointed time. You can examine these patients yourself, and re-acquaint yourself with the pathognomonic signs of carcinoma in this location.

5. Dr. Waterworth will conduct a breast clinic. His associates will be surgeons who will demonstrate the patients to you. This will also be done at a regularly scheduled time; it should prove of interest and benefit.

Thus the Cancer Commission is furnishing a true dramatization of its work, and thus the State Society is promulgating a short, concise, and very worthwhile graduate course at its Scientific Exhibit. By all means arrange to be present at these exhibits.

Muscle training may be but a vague term to most of us, but to the orthopedic surgeon and to the patient who is benefited by it, it is a superlatively important procedure. Actual patient demonstration of muscle training will be given in the Scientific Exhibit. Don't miss it!

Why not develop the habit of revisiting the Scientific Exhibit? See the exhibits and then, after giving them some thought, choose the ones which interest you most and come back to them. You will have intelligent questions to ask, and the exhibitors will give intelligent answers. You may even have problems affecting the welfare of your patients which may be pertinent and applicable to one or more of the exhibits presented. Take up your problems with the demonstrators. They will be there solely for the purpose of helping you.

LESTER HOLLANDER, M.D., *Chairman*,
Scientific Exhibit Committee,
631 Jenkins Building,
Pittsburgh, Pa.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledges the following contributions to the Fund:

Woman's Auxiliary to Allegheny County Medical Society	\$476.44
Woman's Auxiliary to Dauphin County Medical Society	100.00
Woman's Auxiliary to Delaware County Medical Society	100.00
Woman's Auxiliary to Erie County Medical Society	100.00
Woman's Auxiliary to Luzerne County Medical Society	100.00
Woman's Auxiliary to Northampton County Medical Society	100.00
Woman's Auxiliary to Mercer County Medical Society	30.00
Woman's Auxiliary to Fayette County Medical Society	25.00

Total contributions since 1935 report \$2099.94

HOSPITAL INSURANCE

In February, 1936, the executive secretary of the Associated Hospital Service, Inc., San Francisco, wrote to the Public Relations Committee of the California State Medical Association asking, among others, the following questions:

Our proposed contract, drawn for the consideration of medical men, excludes the sale of professional service of medical men. By professional service we mean diagnosis and treatment furnished by medical men themselves. We understand, further, that such diag-

nostic and treatment services cannot be rendered by technicians, nurses, or unlicensed persons.

May we ask, then, why the furnishing of the roentgen-ray technician's service or the laboratory technician's service is disapproved when the service of nurses and other technical assistants in other departments is not disapproved?

ANSWERS

The committee (Public Relations) holds that *hospital care* consists primarily of providing the patient a bed in a ward, a semiprivate room, or a private room; the diet that has been prescribed by the attending physician; and those other common services directed to the comfort of the patient, including a resident staff, perhaps, who may assist the attending physician in the care of his patient. Nursing care which can be had either in the home or the hospital may be provided in the hospital on a general duty basis, or pupils in a training school may be used under supervision. This care or service gives all of the care that a nurse is permitted to do, and is given under the explicit directions of the patient's attending physician.

Medical care is defined as the diagnosis or treatment, or both, of any mental or physical ailment of a human being, and includes all of those procedures, diagnostic or therapeutic, that require for their performance the possession of a valid and unrevoked license to practice medicine in the State of California. Many procedures in clinical pathology and roentgenology require this, particularly in obtaining specimens and preparing patients for proper examination, and the Committee on Public Relations and the Council have not seen fit to begin a separation of so-called technical procedures. All of them lead to diagnosis and are considered to be the practice of medicine.

Anesthetic service is the practice of medicine, in the opinion of the committee and of the council, and will continue to be so unless decided otherwise by the Supreme Court of California. Being the practice of medicine, it cannot be furnished in hospital contracts.

The service of an operating-room nurse in preparing for an operation is certainly not medical care. All she does is set up, as she is told to do, a table or chair, sterile instruments, towels, sponges, dressings, etc., and she may prepare the operative field under the direction of the operating surgeon. This service may be furnished in hospital contracts.

It is held that clinical pathology is the practice of medicine, and that such service cannot be furnished in hospital contracts.

The taking of roentgen-ray pictures for diagnosis is considered to be the practice of medicine. We hold that the application of a dangerous physical agent, like the roentgen ray, to the human body, either for diagnosis or treatment, is the practice of medicine, as is the administration of barium and the various substances given by mouth or intravenously to outline certain viscera or ducts.

In view of the fact that the practice of medicine is *not* divided into technical and professional parts in the surgical operating rooms, wards, and rooms, and in view of the fact that, there being no division, except by the hospitals for purposes of this argument, it cannot be said to be legal and ethical.

From the financial standpoint, we are not interested except insofar as the law states that corporations and lay persons cannot sell medical service.

The Committee on Public Relations trusts that it has answered, as satisfactorily as possible, the questions upon which you desired information, and also assures the hospitals who are members of your association that the committee will be very willing to discuss these questions and problems at any time in order that a common understanding may be obtained and mutual interest served.

C. A. DUKES, *Chairman*,
COMMITTEE OF PUBLIC RELATIONS OF THE
CALIFORNIA MEDICAL ASSOCIATION.

Abstracted from *California and Western Medicine*, Apr., 1936.

SCOPE OF STATE GENITO-URINARY CLINICS

The following communication has been received from Dr. W. Burrill Odenatt. This letter from the United States Public Health Service is reproduced for the general information it contains to the membership of The Medical Society of the State of Pennsylvania:

May 26, 1936.

DR. W. BURRILL ODENATT, *Chairman*,
State Society Committee to Confer with Govern-
mental and Private Health Agencies,
Philadelphia, Pa.

Dear Dr. Odenatt:

Inquiry has been made as to the type of patient that is being treated in the genito-urinary clinics conducted by the State Department of Health. Such communication recently came from one of the component bodies of the State Society.

It should be of interest to your committee to know that only those are accepted for treatment who are not able to pay for private service.

The chiefs of the clinics are instructed to determine the ability of patients to pay for private service. If there is a question concerning this matter, they are told to refer the patient to the family physician, who should be in position to advise the clinic on the subject.

In order that this information may be given wide publicity, it is suggested that the subject matter of this communication be published in the PENNSYLVANIA MEDICAL JOURNAL.

Very truly yours,
EDGAR S. EVERHART,
Acting Assistant Surgeon, U. S. P. H. S.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to June 11:

ADAMS: *New Member*—Patrick J. McGlynn, 145 Baltimore Ave., Gettysburg.

ALLEGHENY: *New Members*—Charles N. Gross, 742 Lorenz Ave., Harold W. Jacox, 4800 Friendship Ave., Raymond E. Jordan, 522 Federal St., N.S., Jules E. Landy, 377 Main St., T. Morrow McLenahan, Jr., 500 Greenfield Ave., Pittsburgh; Norman C. Mathieson, 7115 Church Ave., Ben Avon (Bellevue P. O.). *Removal*—James E. Topper from Pittsburgh to Spangler (Cambria Co.). *Death*—Clyde O. Anderson, Pittsburgh (Univ. Pgh. '95), May 18, aged 65.

BEDFORD: *Removal*—Harold R. Vogel from Everett to 1939 Crafton Blvd., Crafton Station, Pittsburgh.

BLAIR: *Transfer*—Robert R. Hays, Blair County Hospital, Hollidaysburg, formerly of Spring City, from Chester County Society.

BRADFORD: *Death*—Charles M. Pratt, Towanda (Univ. Pa. '82), May 23, aged 77.

CAMBRIA: *New Member*—Albert F. Doyle, Gov. Hosp., Tanana, Alaska. *Removal*—James P. MacFarlane from Vintondale to Indiana (Ind. Co.); John L. Hamilton from Spangler to Collier, W. Va. *Resignations*—Melvin E. Cowen, Quechee, Vt.; Clyde J. Bibb, Carson City, Nevada. *Death*—Frank J. Livingston, Salix (Eclectic Med. Coll. '88), May 5, aged 69.

CHESTER: *Removal*—Murray M. Friedman from Avondale to New York City.

COLUMBIA: *New Member*—William R. Galbreath, 38 W. Fourth St., Bloomsburg.

DAUPHIN: *Removal*—Peter Zemo from Harrisburg to Hightshire.

DELAWARE: *Death*—Katherine Ulrich, Chester (Woman's Med. Coll. '09), May 18.

JEFFERSON: *New Member*—Charles Brohm, Timblin.

LACKAWANNA: *New Member*—John Lohmann, 759 N. Main Ave., Scranton.

LANCASTER: *New Member*—Elias M. Solomon, 516 N. Duke St., Lancaster. *Reinstated Member*—William M. Workman, Mount Joy.

LAWRENCE: *New Member*—Ralph Markley, N. Mercer St., New Castle.

LUZERNE: *New Member*—Herbert Herman Feissner, 132 Main St., Eckley. *Death*—Seth Bachman Kistler, Nanticoke (Hahn. Med. Coll. '28), May 15, aged 32.

LYCOMING: *New Member*—Joseph P. Robinson, 748 W. Fourth St., Williamsport. *Removal*—Isidore di Salvo from Williamsport to Elkland (Tioga Co.); John W. Mann from Williamsport to 1205 Farragut St., N.W., Washington, D. C. *Deaths*—James S. Mosher, Williamsport (Coll. Phys. & Surg., Balt., '91), May 10, aged 69; Ward L. King, Muncy (Coll. Phys. & Surg., Balt., '80), May 24, aged 81.

McKEAN: *Resignation*—Hilding A. Nelson, Jamestown, N. Y. (formerly of Mount Jewett).

MERCER: *New Member*—Homer R. Allen, 29 S. Oakland Ave., Sharon.

MONTGOMERY: *New Members*—Norman M. MacFarlane, Ardmore; Earl S. Vollmer, Glenside. *Transfer*—Albert S. Super, Pottstown, from Chester County Society.

PHILADELPHIA: *New Members*—Mary R. Curcio, 3855 Manayunk Ave., William Brody, 1303 N. 52d St., Earl F. Hawkins, 2008 N. 17th St., William B. Jackson, 1832 N. 11th St., Philadelphia. *Reinstated Member*—Ellis B. Horwitz, 1835 W. Diamond St., Philadelphia. *Removal*—Edward A. Leonard, Jr., from Philadelphia to 3754 Jocelyn St., Chevy Chase, Washington, D. C.; Zenon F. Novicki from Philadelphia to 4 Aspen St., Hazleton (Luz. Co.); Ethel C. Russell from New Paltz, N. Y., to 454 Magill Ave., West Collingswood, N. J. *Resignation*—John F. X. Jones, Philadelphia. *Deaths*—Henry K. Dillard, Philadelphia (Univ. Pa. '02), May 17, aged 58; Henry B. Golden, Philadelphia (Univ. Pa. '96) May 20, aged 63; Matthew Cushing O'Brien, Philadelphia (Temple Univ. '08), May 22, aged 63; Clarence A. Patten, Philadelphia (Jeff. Med. Coll. '16), June 2, aged 46.

SCHUYLKILL: *New Members*—Hamilton Wallace, Pottsville; Leo Perloski, Middleport; James McL. Steele, Coaldale Hospital, Coaldale.

SOMERSET: *Reinstated Member*—John F. Maurer, Acostia.

TOIGA: *Death*—Edwin E. Clark, Knoxville (Coll. Phys. & Surg., Balt., '93), May 12, aged 70.

VENANGO: *Resignation*—E. Emery Huth, Sumter, S. C. (formerly of Franklin).

WARREN: *New Member*—Gail K. Ridelsperger, 104 Liberty St., Warren.

WAYNE-PIKE: *Removal*—Clark B. Holbrook from Waymart to 26 N. Austin Ave., Ventnor, N. J. *Transfer*—Nellie C. Heisley and Rowland S. Heisley, Honesdale, from Dauphin County Society.

WESTMORELAND: *Death*—Lee M. Sankey, Jeannette (Cleveland Homeo. Med. Coll. '08), May 14, aged 56.

YORK: *Removal*—Bruce A. Grove from York to 604 Philadelphia Ave., Chambersburg (Frank. Co.).

PAYMENT OF PER CAPITA ASSESSMENT

The following payment of per capita assessment has been received since May 12. Figures in first column indicate county society numbers; second column, State Society numbers:

May 13	Indiana	49	7896	\$7.50
14	Washington	133	7897	7.50
	Columbia	31-34	7898-7901	30.00
	Lawrence	71	7902	7.50
16	Somerset*	42	8171	7.50
18	Lackawanna	261-263	7903-7905	22.50
	Lycoming	115	7906	7.50
	Adams	25	7907	7.50
	Luzerne	318	7908	7.50
20	Elk	21	7909	7.50
	Washington	134	7910	7.50
	Wayne-Pike	20-21	7911-7912	15.00
21	Clearfield	66	7913	7.50
	Armstrong	44	7914	7.50
22	Crawford	60	7915	7.50
	Berks	164	7916	7.50
23	Beaver	94	7917	7.50
	Lawrence	72	7918	7.50
	Blair	98-99	7919-7920	15.00
25	Cambria	155-157	7921-7923	22.50
26	Montgomery	194-195	7924-7925	15.00
	Butler	52-54	7926-7928	22.50
	Venango	47	7929	7.50
28	Lancaster	171-172	7930-7931	15.00
	Lancaster*	177	8172	7.50
	Bedford	16	7932	7.50
	Elk	22	7933	7.50
	Allegheny	1285-1294	7934-7943	75.00
June 1	Chester	106	7944	7.50
	Lycoming	116	7945	7.50
	Mercer	77	7946	7.50
	Chester	107	7947	7.50
2	Westmoreland	161-163	7948-7950	22.50
3	Blair	100-101	7951-7952	15.00
	Schuylkill	157, 160-165	7953-7959	52.50
4	Lycoming	117-118	7960-7961	15.00
5	Westmoreland	164-165	7962-7963	15.00
9	Luzerne	319-321	7964-7966	22.50
	Indiana	50	7967	7.50
10	Wayne-Pike	22	7968	7.50
	Philadelphia	2022-2051	7969-7998	225.00
11	Washington	135	7999	7.50

* 1935 dues.

COMMITTEE ON SCIENTIFIC WORK

FREDERICK B. UTLEY, M.D., *Chairman*

PROGRAM OF THE SECTION ON PEDIATRICS

The officers of the Section on Pediatrics hope that they are submitting a program that will

stimulate interest and be of value to members and guests.

The Tuesday session will be opened with an address by the chairman, entitled "Medical Education and the Practice of Pediatrics."

On this same day the section will hear one of the guest speakers, Roy Graham Hoskins, director of the Memorial Foundation for Neuroendocrine Research of Harvard Medical School. He is the author of a widely read book, *The Tides of Life*. His topic will be "The Present Status of Endocrinology in its Relation to the Child." Other topics to be discussed on Tuesday will be: "Lyophile Serum in the Prevention and Treatment of Scarlet Fever and of other Infectious Diseases," "The Three Major Complications of Acute Hemorrhagic Nephritis in Children," "Intestinal Intoxication," and "Causes of Sudden Death in Infants and Children." There also will be 2 case reports given respectively by Thomas W. McCreary, of Monaca, and Hugh A. O'Hare, of Corry.

On Wednesday afternoon the members of the section will be guests of the Children's Hospital at luncheon. On this afternoon there will be an address by Walter J. Larkin, medical director of the Scranton public schools. Ralph S. Bromer, of Philadelphia, will tell how the roentgenologist may be of aid to the pediatrician in diagnosing many of the rarer childhood diseases. The matter of posture in children will be taken up by a group of Pittsburgh orthopedists. The latter half of the afternoon will be devoted to case presentations and round-table discussions.

This is a new departure and an experiment in State Society section meetings. It is hoped that it will be received with approval.

Members and visitors will be requested to choose the topic in which they are most interested and will be assigned to the round-table discussion that they request. There will be 8 choices including communicable disease control, physical appraisal of the pre-school and school child in office practice, chronic nontuberculous lung infections, psychopediatrics and endocrinology, dermatologic problems in children, infant feeding, heart disease, and demonstrations of specialized pediatric technics.

On Thursday the Sections on Internal Medicine and Pediatrics will hold a joint meeting. The presentations will be chiefly on allergy. At this session, there will be 2 guest speakers, Leslie Newton Gay, of Johns Hopkins University, and Thomas Francis, Jr., of the Rockefeller Institute. The former will discuss "Treatment of Asthma Based on Etiologic Factors," and the latter will review recent developments in the prevention and treatment of influenza.

County Society Reports

BLAIR

May 27, 1936

The monthly meeting was held at Jaffa Mosque, Altoona, at 9 p. m., with President Harold F. Moffitt presiding.

The application of C. B. Daugherty, Tyrone, for reinstatement, was rejected due to the lack of the necessary three-fourths vote. Frank Keagy was voted president-elect of the society and consequently will be one of the delegates to the State Convention. Elwood Stitzel announced the program for the June meeting, and his suggestion that the meeting start at 8 p. m. was accepted. The June program will be a symposium on "Cancer of the Breast" and will be participated in by other nearby counties. Joseph D. Findley was elected delegate to the annual meeting of the State Society, with Lewis P. Glover and Carey C. Bradin as alternates. Trustee and Councilor Augustus S. Kech presented several items of interest in connection with the recent sessions of the American Medical Association; and it was approved that a letter of congratulation be sent to Mrs. Augustus S. Kech of Altoona upon being president-elect of the Woman's Auxiliary to the American Medical Association.

The scientific session consisted of a paper on "The Treatment of Acute Gonorrhea in the Male" by Oliver E. Mattas, assistant in urology at the Altoona Hospital. He said in part: In 1879 Neisser made the important discovery of the gonococcus. It is a common opinion that very little or no progress has been made in the successful treatment of gonorrhea since that time. However, even though the treatment of gonorrhea in the male still remains one of the serious problems of medicine, much actual progress has been made since that time.

The essayist presented some of the more prevalent successful methods of treating the disease in the male, limiting his treatise solely to the male because of the vast number of complications that often develop in the female, making a detailed study of all these conditions in a short time impossible. Much that is done in the treatment of the male is applicable to the female as well.

Some years ago tenesmus, dysuria, chordee, prostatitis, epididymitis, *etc.*, occurred in some degree in almost every case of gonorrhea. In the properly treated case none of these complications should occur; the inflammation should run its course in 6 to 8 weeks without pain or suffering and complications should be extremely rare. The occurrence of complications in an acute case treated from its incipency, with the proper co-operation of the patient, may well be regarded as indicative of faulty therapy. The chief error that is being made frequently in the treatment is the tendency to force a rapid cure of the infection. This means overtreatment which in turn predisposes to trauma and eventually to complications. This tendency is in direct violation of the fact that the natural reparative forces of the body cannot be rushed. The urethra is a structure highly sensitive to the slightest trauma and will not tolerate it to any extent; therefore any form of treatment or medication which produces pain or irritation is distinctly harmful. Local treatment should be the mildest possible consistent with therapeutic effectiveness. Medication should exert a sedative effect on the inflamed urethral mucosa analogous to that of a soothing lotion on a burn.

The methods of treating gonorrhea are legion. The late Hiram R. Loux said about the treatment of gonorrhea that "many times there are patients with gonorrhea who would be far better off if they had never seen a physician, because they have been overtreated and too roughly treated." The important thing is to use only such chemical products as will not damage the tissue in which the organisms are embedded, and if this is done nature will take care of the deep-seated organisms. The significant advance that has been made in recent years in gonorrheal therapy has been that gentleness and mildness must be strictly followed.

The efficacy of local treatment in repressing acute urethral gonorrhea leads many practitioners to the old methodic or systemic treatment. The methodic treatment is very important and must be strictly followed for the best results. This includes instructions and directions in cleanliness, diet, rest, sexual hygiene, diluents, and internal medication. (1) *Cleanliness*.—The parts should be washed well and often with soap and water. A combination bag and suspensory should be worn, allowing the testicles to be properly supported in the one section as a preventive of epididymitis, and the discharge collected in the other section. It is important that the drainage not be interfered with by having the discharge bag too tightly fitted. The patient must be advised of the danger to his eyes from contamination, to touch his genitals as little as possible, and to wash his hands thoroughly with soap and water after touching them. (2) *Diet*.—This need not be interfered with very much; alcohol, spices, and condiments should be excluded; otherwise no change in food intake need be made. (3) *Rest*.—Physical rest is most important. The patient should be instructed to get as much rest as possible, to ride rather than walk, to sit rather than stand, and to take no trips. (4) *Sexual hygiene*.—Absolute continence is essential, with the avoidance of anything liable to induce sexual excitement. (5) *Diluents*.—Water is the best diluent, 8 to 10 glasses daily being quite helpful. (6) *Internal medication*.—The drugs that may be used effectively to combat acute urethral inflammation belong to 5 orders, as follows: Urinary antiseptics such as methenamine, methylene blue, salol, *etc.*; alkalies such as bicarbonate of soda, potassium citrate, *etc.*; demulcents such as buchu, flaxseed tea, *etc.*; anodynes such as potassium bromide, tincture of hyoscyamus, codeine, *etc.*; and balsamics such as sandalwood oil. This last drug is really the only one necessary because it has a soothing effect on the urine, relieves the burning and the frequency, and in addition is a mild antiseptic. It is usually given in 10 minin capsules 4 times daily.

In regard to local treatment, the author stressed the importance of gentleness. Unquestionably much damage has been done by using remedies too strong and irritant and employing them with a frequency and vigor far too heroic for the sensitive urethra. There are 2 procedures in local therapy, the hydrostatic irrigations usually with potassium permanganate solution, and syringe injections of the silver salts. Potassium permanganate injections should be avoided. As a routine measure, irrigation of the urethra is a dangerous procedure especially if done by the careless and inexpert. There is always the danger of complications arising from such a method. It has been demonstrated that fluid may be driven into the seminal vesicles by forced injection from the urinary meatus and it is not difficult to visualize gonococci and other organisms being driven into the prostate and seminal vesicles by the hydrostatic type of treatment. There seems to be no valid reason

for using this potentially dangerous method when better results with infinitely less danger of producing complications can be obtained through the intelligent employment of the silver salts by injection. The most effective is that which most closely embodies the 3 elementary principles upon which treatment should be based, namely, nonirritating, bactericidal, and a tendency to stimulate a mild tissue reaction. The more commonly used silver salts are: Argyrol 10 per cent, and protargol one-fourth to 1 per cent. Some physicians begin the injection immediately while others wait until the acute symptoms subside and the discharge becomes thin and watery. The latter method is better and produces less complications.

The method used in the injection treatment is to instruct the patient to void first, then inject a small quantity of the fluid into the urethra. The anterior urethra should be only comfortably filled with fluid and not distended as this tends to force the infection into the urethra. The fluid should be retained for 10 or 15 minutes by holding the end of the penis or by means of a penis clamp. It is important that the patient be seen often and the 2-glass test used at every visit. Many physicians make the serious error of treating gonorrhea without studying the urine voided in the glasses. The amount of discharge at the meatus is of little value in determining the progress of the case, but a clear urine in the second glass and a diminishing purulency in the first constitute ample evidence that an acute case is progressing favorably. Persistence of the gonococci after 3 or 4 weeks of treatment is highly suggestive of prostatic invasion even though there be no clinical evidence of posterior extension of the inflammation. In such cases the prostate and seminal vesicles should be thoroughly examined.

Additional methods of treatment have been devised recently with the aim of increasing the natural healing processes of the body. The chief forces of treatment among these are vaccines, foreign proteins, autovaccines, and diathermy. The most recent product is the gonococcus filtrate which has some promise of being beneficial. However, it has not been as successful as would be expected from the literature published by the various drug houses. It is, of course, comparatively new and may be found to possess some value. Fever therapy has some possibilities but has not been developed sufficiently to be of value to the practitioner. In some cases these factors have seemed beneficial and in others have had little effect. The chief benefit from these newer methods is that patients must return to the physician's office more frequently; hence, they can be watched more closely and in turn the course of the disease shortened and the complications lessened.

When the posterior urethra is definitely affected the purulent urine voided in both glasses makes the fact evident before the patient himself notices any change in his condition. The most that therapy can do in these conditions is to check the severity of the inflammation and thereby prevent the further spread of complications. Hot sitz baths and hot rectal recurrent irrigations are of great comfort and value. If there is any evidence of previous overtreatment, as there usually is, the acute state often will be relieved immediately by the cessation of local treatment and the internal administration of a mild remedy with a maximum water intake. In the average case, the best way to treat the posterior infection is to leave it alone. I recall a case that was treated for 18 months without much relief. The patient was having rectal massage once weekly and passage of sounds weekly. All treatment was discontinued and in a few weeks the patient was well.

When complications have occurred through the patient's neglect, they should be treated conservatively. For acute prostatitis and vesiculitis, local heat is the first indication, applied in the form of hot sitz baths, and hot rectal irrigations or diathermy. Sedatives in the form of suppositories often give relief. When the acute stage has subsided prostatic massage may be tried cautiously. A vigorous massage often induces acute epididymitis. For this last, immobilization associated with cold applications is standard treatment. Diathermy is sometimes of value. If purulent foci have developed, the pus should be evacuated through an open incision. Surgery is often resorted to in epididymitis today because it immediately relieves the pain, the condition subsides more quickly, and occlusion of the vas deferens is better prevented. Treatment should be continued until all signs of the disease have disappeared. The prostate should then be massaged, and smears taken and examined for the gonococcus. Three consecutive negative smears are necessary before the condition can be said to have been cured. Sounds may be passed and smears made after their passage. Make sure the patient is cured before discharging him.

Conclusion and summary:

1. Gentleness and mildness are the important factors to remember in treating gonorrhea. Do not overtreat, for the urethral mucosa is very sensitive. Natural reparative forces cannot be rushed.

2. Methodic treatment in regard to cleanliness, diet, rest, sexual hygiene, diluents, and internal medication is today as much as previously a great factor in curing the disease.

3. Pressure irrigations tend to drive the infection deeper into the urogenital tract; hence they should be avoided.

4. The most favorable bland and nonirritating antiseptics for urethral work are protargol one-fourth to 1 per cent, and argyrol 10 per cent.

5. Complications must be treated as they arise; however, the chief aim in treatment should not be to cure the disease in the shortest possible time but to prevent complications.

In discussion, Henry O. Jones disagreed with the statement that sounds should be passed in any case of acute gonorrhea, and stated that they should be used only in chronic gonorrhea. All the newer methods, such as diathermy and foreign protein stimulation, are merely fads and the older methods are not only more reliable but are also more helpful. He indicated that adequate prompt local treatment will aid in curing acute gonorrhea in many cases and will prevent numerous complications and sequelae. He described his experiences as a health officer in Manila and told how the prostitutes there used salt water as a prophylactic douche. Early hospitalization for both male and female patients with acute gonorrhea was quite effective in that region. W. K. Mathewson also indicated that the newer methods have not been proven clinically and consequently the older procedures are still applicable. Fever therapy may be valuable in the sequelae of gonorrhea, such as arthritis, but for the acute urethral inflammation it is not of definite value.

MARLYN W. MILLER, *Reporter.*

CHESTER

May 7, 1936

A special meeting was held at the Chester County Hospital for the purpose of outlining a policy concerning the conduct of free clinics throughout the county.

The society has been invited to send a special committee to the meeting of the Chester County Public Health Nurses' Association on May 12, and it was considered advisable that this committee should have a clear understanding of the feeling of the entire society concerning this important phase of medical activity.

It was unanimously approved that no patient be admitted to any clinic in Chester County unless he or she presents a card from a physician, preferably the family physician. It is understood that where emergency treatment is required, the patient will receive medical care on the first visit but will have to present a card from a physician on subsequent visits. It was further agreed that the patient will be taken care of only for the present illness, and that another card from a physician will be required if the patient subsequently appears with a new illness. It was unanimously agreed that a notification of this policy be sent to every member of the society through the reporter and that all visiting nurses' associations, social service organizations, parent-teacher associations, and all other organizations interested in this problem should be sent a notification of the policy of the Chester County Medical Society. It was felt that the committee appointed to meet with the nurses should use its discretion in discussing the details of clinic care, but that the above-outlined policy concerning participation in all free clinics must be put into practice in all clinics throughout the county.

May 19, 1936

A regular meeting was held at the U. S. Veterans Administration at Coatesville. Both the Medical Society and the Woman's Auxiliary were guests of Dr. and Mrs. Pierce and the hospital staff at dinner.

Two patients at the hospital were presented by members of the Medical Staff; one was a typical case of hypothyroidism with myxedema; the other was apparently one of dementia praecox.

Several advertisements were read from a local newspaper regarding the activities of Dr. Hershey, an osteopath, who is practicing in Honeybrook; the matter was referred to the censors for action.

Dr. Hughes reported that the meeting of his committee with the Chester County Visiting Nurses' Association terminated harmoniously with agreement between the physicians and the nurses in the matter of admitting patients to clinics only with a card from a physician.

It was suggested that a Milk Sanitation Control Board be created in Chester County for the purpose of assuring high-grade milk. This matter was referred to the Public Health Commission for action.

Upon recommendation of the Executive Committee it was agreed that a committee should be appointed to initiate an educational program among the various parent-teacher associations throughout the county for the purpose of making clear the policy of the Medical Society concerning free clinic care.

Dr. Wright, medical director of the U. S. Veterans Administration at Coatesville, read a paper on "Psychotherapy," and he outlined in detail many of the possible approaches in this form of treatment.

JOSEPH SCATTERGOOD, JR., *Reporter.*

CRAWFORD

May 20, 1936

The regular monthly meeting was held in Meadville. Frank A. Evans, of the Western Pennsylvania Hospital, Pittsburgh, was the guest speaker.

Dr. Evans spoke on "Essential Foodstuffs." He listed these essentials as water, proteins, metals, and vitamins, and then discussed their use in special diets.

Water should not be restricted except in renal insufficiency with edema. Since electrolytes hold water in the tissues in this condition, the more intensive use of water only heaps insult on injury. If the water were not bound in the tissues the kidneys could eliminate it.

Proteins.—These are most often misused in special diets. The average sick patient requires one gram of protein per kilogram of body weight. If less than this amount of protein is given the patient sustains a negative nitrogen balance. For example, restricting a nephritic requiring 70 grams of protein a day to 30 grams by lowering the protein intake (such as eggs, meat, and cheese), Dr. Evans stated, will result in his using 40 grams of his own protein to supply that lacking. Therefore the protein intake of a chronic nephritic should not be restricted.

Metals.—Their use is absolutely essential, especially the alkaline salts.

Vitamins.—Their use is necessary but enough are secured in a well-balanced diet without the giving of pellets and pills. There are only 4 definitely known diseases caused by lack of the 4 main vitamins and prescribing vitamins too freely is not scientific medicine.

RICHARD L. BATES, *Reporter.*

DELAWARE

May 14, 1936

The meeting was held at 9 p. m., at the Chester Hospital; Vice-president Albin R. Rozploch presided.

Ellen Brown, chairman of the Committee on Necrology, submitted a resolution on the death of Dr. Howell.

Dr. Rozploch then turned the meeting over to President John Sweeney. John A. Farrell, of West Chester, outlined the history of the activities of the Chester County Medical Society which led to the appointing of a county health supervisor.

He referred to the difficulties they encountered with the Chester County Commissioners. He also pointed out that Law 21 of the Statute of 1925 made it possible for the County Commissioners to appropriate the sum of \$4000 annually towards the maintenance of a county medical director. He also stated that the Chester County Tuberculosis Association had aided in this by appropriating \$1500 and an automobile for the use of the medical director.

The guest speaker, Samuel J. Dickey, of West Chester, Medical Health Supervisor for Chester County, outlined the work that was assigned to him, and stated that the Chester County Medical Society had prepared a list of 10 items which were supposed to form the bulk of the duties of the county health supervisor. Dr. Dickey also pointed out that he is directly responsible to the County Medical Society. One of his first duties was that of co-ordinating all health organizations in the county; there were between 10 and 12 various nurses' organizations, and 4 third-grade school districts, each having school nurses and school medical directors; there is a group of medical surgeons and several clinics in the various hospitals of the county. Also, there were numerous so-called "well-baby clinics" in various parts of Chester County and clinics maintained by the State Health Department and the State Welfare Department.

The work of co-ordinating health activities is an extremely difficult one which requires vision and tact. The nurses in these various associations for health are paid by the month, and they have taken a great deal of pride in the number of cases that they could take to free clinics. They paid little or no attention to the economic side of the situation, being indiscriminate in the cases they referred to free clinics. In many cases the individuals were able to pay for such services.

Dr. Dickey reviewed the work of preventive medicine and how it has improved health in general, showing the decreasing cases in smallpox, typhoid fever, diphtheria, etc. Yet from the economic standpoint of the physician, preventive medicine has greatly reduced the physician's income. Health organizations of lay origin have undertaken to carry out immunization indiscriminately. One of the first projects which Dr. Dickey has undertaken is to plan for complete control of all immunizations. This has been effected with the result that the immunizations are made in the physicians' offices. Patients who can pay for such immunization do so. Those who are definitely indigent receive the immunization free. A second duty was that mentioned before, the co-ordination of special health activities and clinics.

Under Dr. Dickey's direction, request for clinic service in Chester County must now come from the family physician and such requests must be renewed every 30 days. Hence, families who may be indigent at one period and gainfully employed later are sent back to their family physician. A number of cases were cited to illustrate this point.

A general discussion followed, dealing with the matter of immunization. Dr. Noskow, the new Health Director of the State Department of Health for Delaware County, offered his co-operation with the County Society in his efforts to control mass immunization. It was approved that the County Society request the state health officers for the county to refuse the gift of toxoid for mass immunization.

President Sweeney referred to the letter received regarding appendicitis mortality and appointed Drs. Eynon, Rankin, and Kennedy as a special committee to investigate the appendicitis mortality in Delaware County.

Refreshments were served.

E. A. WHITNEY, *Reporter.*

FAYETTE

Mar. 12, 1936

The regular meeting was held at Medical Hall, Uniontown Hospital; Lewis N. Reichard presided.

William H. Guy, Pittsburgh, held a dermatologic clinic, and 24 cases, outpatient and clinic, were presented for diagnosis and treatment.

Dr. Guy presented each case at length, giving the differential diagnosis, prognosis, and course of treatment. He discussed the newer trends in the treatment of skin diseases based on etiology and work done by various men.

Apr. 2, 1936

The regular meeting was held at Medical Hall, Uniontown Hospital, Lewis N. Reichard presiding.

Zoe Allison Johnston, Pittsburgh, was the guest speaker; her topic was "The Use of Radiation in the Treatment of Cancer."

The manifestations of cancer in its more common locations and the treatment were outlined in the following manner.

Skin.—Diagnosis by clinical picture. Treatment by radium needles or electrocoagulation.

Intra-oral.—Diagnosis by clinical picture. Treatment by heavy doses of roentgen ray by the modified Coutard method, radium needles, and emanations.

Gastro-intestinal.—Especially that of the stomach. Small lesions are asymptomatic, unfortunately, but are curable if recognized early. The only method of treatment available is the use of roentgen ray by an expert. Surgery is advised in these cases, or the newer method of giving roentgen ray in heavy doses according to the Coutard technic.

Bladder, Rectum, Prostate.—Diagnosis by clinical examination and roentgenography. Treatment either by surgery or radium implantations, or both.

Breast.—Easily accessible, but difficult to eradicate. Diagnosis by clinical picture and transillumination. Treatment is pre- and postoperative radiation. In young women in whom malignancy is greatest and in the borderline cases preoperative radiation is most important. It also lessens the tendency to embolism incident to surgical trauma. Surgery alone yields only 30 per cent of 5-year cures.

Cervix.—Diagnosis by clinical picture and biopsy. Certain local lesions such as erosions, endocervicitis, and leukoplakia consequent to syphilis, which are known to precede cancer, should be eradicated. In the microscopic picture of these conditions are found all cell changes of malignancy except invasion. Unfortunately, many of these patients present themselves rather late. In those cases in which the diagnosis of malignancy is doubtful, certain tests are of value, as follows: *John G. Clarke test:* The cervix is exposed and a sound is introduced. Cancerous areas have a tendency to bleed very easily. Further examination of that area is done and gives the examiner an idea where to take a section for biopsy. *Schiller's test:* One-half ounce of Lugol's solution is injected into the cervical canal and left for 30-60 seconds and then the excess is withdrawn. Normal tissues which contain glycogen will be stained mahogany. Tissues with abnormal physiology will remain unstained. These latter areas are sectioned for biopsy. *The colposcope:* Magnifies tissues 10 times and may be used to inspect suspicious areas.

Factors influencing the prognosis of cancer treated by radiation are: Age of the patient; extent of the disease; method of treatment; presence of infection; grading of tumors; and knowledge and experience of the physician.

In treating cases with pelvic malignancy, the modified Coutard method is used. Severe reactions occur, especially burns of the abdomen, but they are not usually serious and clear up readily. The tendency among physicians who use the roentgen ray is to give insufficient dosage and to treat the case haphazardly.

In discussion, George H. Hess, radiologist, Uniontown, stressed the point that many poor results are due to a too great caution against dangers, inexperience, and giving too small doses.

LOUIS F. ROGEL, *Reporter.*

FRANKLIN

May 19, 1936

The meeting was held at the Chambersburg Hospital, Chambersburg. Samuel D. Shull, Chambersburg, read a paper on "Leukemia."

It is something of a change for this society to produce its own essayists; the present meeting was very informative, and the attendance was good. On the theory that a prophet is quite without honor at home, in the past we have rather worked on the idea that to get out a good attendance an outside speaker was imperative. This meeting proved that we can paddle our own canoe and do it well.

Dr. Shull said in part: Leukemia is a disease of the blood-generative organs. Far too many leukocytes are seen in the circulating medium, and characteristic changes take place in the blood-making organs, bone marrow, spleen, and so on.

Leukemia is probably always fatal if allowed to run its course. In 1845, Bennett, of Edinburgh, called the attention of the medical world to this malady. He mistakenly called it suppuration of the blood—a quite natural error, owing to the immense number of white cells in that fluid. The masterly Virchow, a few weeks after Bennett's proclamation, brought out the true nature of the disease. It occurs in 3 forms: Splenic, lymphatic, and myelogenic. Its causative factor unfortunately is not known, although Löwitt alleges that an animal parasite is responsible.

Men seemed affected about twice as often as women. It may occur at almost any age, although the third decade of life is the commonest time for men, the fourth decade for women. The theory that there is a hereditary influence lacks confirmation.

There seems to be a very general tendency to enlargement of the lymphatic gland system in general, including the spleen. The swelling of that organ is an outstanding symptom of this disease. There is often seen a peculiar skin appearance, an uncommon color which is not easily described, and occasionally there are ulcerated areas which appear similar to those of mycosis fungoides.

Fortunately we are able to study the blood under good conditions, and the diagnosis will largely depend upon what is found. A point worthy of remembrance in studying leukemia is that a differential diagnosis should be made between an ordinary leukocytosis and this malady. In the latter, there are immense numbers of myelocytes. In ordinary leukocytosis the major increase is in the lymphocytes. The leukocytes in leukemia are not ameboid.

The changes in the blood are more or less these: The color index is practically normal, and alkalinity is somewhat reduced, as is the specific gravity, which varies between 1.036 and 1.049. One factor which should be borne in mind is the great augmentation in the number of blood platelets.

Based upon the predominant type of cell found in the blood, the disease arbitrarily is classified as spleno-myelogenic (characterized by changes in spleen and bone marrow and myelocytes in the blood) or the lymphatic form, characterized by changes in lymphatic glands and the occurrence of excessive lymphocytes in the blood.

Your reporter ventures to add to the foregoing notes the fact that in leukemia the heterophile antibody titer is low. This fact has been used diagnostically by the administration of horse serum which will induce a rise in heterophile antibody in chronic myelogenous leukemia but not a comparable rise in Hodgkin's disease, lymphosarcoma, or lymphatic leukemia. Fitz-Hugh has stated that this may suggest a real biologic difference between myelogenous leukemia on the one hand and the lymphatic group (lymphosarcoma, Hodgkin's disease, etc.) on the other.

J. Elmond Kempter reported one of his own cases. He suggested that care be used in the employment of benzol in this disease, although clinically it does reduce the number of leukocytes. His patient had a large spleen, no enlarged lymphatics, and a rather dusky red appearance of the facial skin. Likewise there was a definite history of trauma to the sternum, after which there were hemoptysis and night sweats, as well as an attack of epistaxis, which seemed to be related to her menstrual function. This patient was about age 36, married, and had 2 healthy children. The history is rather suggestive of a possible tuberculous infection, although the râles as reported were heard at the base of the left lung, which of itself would not be suggestive of tuberculosis. The sputum was negative for tubercle bacilli.

The blood count showed 15 per cent myelocytes, 18 per cent myeloblasts, with 54 per cent neutrophils.

Fairfax G. Wright, of Chambersburg, discussed 11 cases which had come under his personal attention, and gave a report of a case seen by the eminent Osler, in which the diagnosis apparently had been made before Osler saw the patient but the blood findings purposely were withheld. Yet the famous clinician held to the scent and after a moderate examination remarked that it was a case of leukemia. None seemed able to understand quite how he reached his conclusion without blood findings, but he did and with entire accuracy.

Robert G. Le Fevre added some pertinent information. He suggested that chloroma not be forgotten, and remarked that one of the essentials to a correct diagnosis of leukemia is an expert to read the blood picture. This blood picture then requires co-ordination with the findings of the clinician. About 4 per cent of the splenomyelogenous cases have bone changes.

FASSETT EDWARDS, *Reporter.*

LUZERNE

May 20, 1936

The meeting was held in the Medical Building, at Wilkes-Barre, Vivian P. Edwards presiding. Leonard G. Rowntree, of Philadelphia, gave an address supplemented by lantern slides on "Organotherapy from the Internist's Viewpoint." Herbert B. Gibby was re-elected as the District Censor.

Dr. Rowntree said that he attended a meeting in Philadelphia 30 years ago which was addressed by William Osler, who said that there are about 13 drugs which are considered great and anyone can make up a list out of the 13. Osler had the faculty of picking out the good things. Endocrinology is a large subject with only 4 active principles in the field and many more in the stage of clinical investigation.

The causes of failure in treatment are: (1) Incorrect or incomplete diagnosis; (2) unsatisfactory glandular products (potency is lost by standing and these drugs should be sold with expiration dates on the packages); (3) incorrect method of administration; (4) commercial exploitation.

The conditions which are essential to success are: (1) Potent preparations; (2) proper preparations; (3) adequate dosage; (4) administration at appropriate time; (5) given over sufficient period of time; (6) administered on correct diagnosis; (7) reasonable cost; (8) administration based on metabolic consideration, as glands are regulators of metabolism.

The important substances in the group of female sex hormones are folliculin which includes theelin and

theelol; progestin; prolan A and B. Gonorrheal vaginitis can be cured in 92 per cent of cases in children by the use of theelin and it is very useful at the menopause.

There are 2 male sex hormones. Androitin is used in hypogonadism and aspermia. There is, however, no really first-class product available for aspermia. The Cleveland Clinic has ceased to make it because of the odor of the product. The second is inhibin, water soluble. It has been used in urologic clinics in hypertrophied prostates with some results.

Hypothyroidism is an important condition in medicine. Cretinism and myxedema when treated early with thyroid show excellent results. Many would be imbeciles and idiots if it were not for this treatment. It must be prolonged and begun early, i.e., in the first or second year of life.

Thyroid therapy is of use in myxedema, obesity, pregnancy and sterility, skin diseases such as ichthyosis, heart block, arthritis, patients having had total thyroidectomy, and endocrine diseases.

Para-thor-mone in large doses is useful in tetany. Calcium salts and cod liver oil should be included in the treatment.

In the treatment of diabetes mellitus, the general physician should have knowledge of internal medicine, metabolism, nutrition, and food values. Laboratory methods are also important. Hospitalization and education of the patient to care for himself regularly are likewise important.

In hyperfunction of the pancreas as in the case of a tumor, there are symptoms of hyperinsulinism, periodic weakness before meals, personality changes, and unconsciousness. The protamine insulinate gives a more gradual and prolonged response than the regular insulin. This is better in cases in which the blood sugar is high at night. Hyperinsulinism is treated by eating chocolate, sugar, or gum drops. Insulin is the greatest single gift of time. It overcomes anorexia, is used in the treatment of diabetes mellitus, after the removal of tumors of the islands of Langerhans, and in sterility.

Addison's disease is treated by the use of adrenalin by mouth, by rectum, or hypodermically. Eschatin is often harmful. The disease is tuberculous in origin and is hopeless. The symptoms are asthenia and fatigue, nausea and vomiting, pigmentation of the skin, arterial hypotension, and dehydration. Large quantities of sodium salt and foods rich in potassium should not be given simultaneously.

Adrenalin is a local styptic, of value in hay fever, constitutionally of value in sea-sickness, urticaria, etc.

The pituitary hormones are from the anterior and posterior lobes. The anterior lobe governs growth and gonadotropic aspect, and from the posterior lobe are obtained pitressin and pitocin. Atrophy of the pituitary causes general disintegration and death. In diabetes insipidus, 1 c.c. of pitressin is given. Sometimes the effect lasts for several days. When very large or oft-repeated doses are necessary, then nothing will help. Pitressin is often used like snuff and gives the same results.

Antuitrin S is used in retarded growth and menorrhagia.

Much important work has been done in the treatment of pernicious anemia by various well-known investigators. The use of liver has proved of the greatest value. Extralin (Lilly) and liver extract are used, but a combination of both liver and stomach extracts 1 to 3 gm. t.i.d. is the best treatment.

Thymus extract causes growth in the rat, and pineal extract causes retardation. A series of slides demon-

strating the effect of these substances on growth, opening of the eyes, etc., were shown.

In order to treat the sick intelligently we must study the true nature of the fault in the endocrines.

In closing, to emphasize how closely the surgeon and internist should work, the case of one-sided descent of the testes was mentioned. In such a case, medical treatment with antuitrin S should be instituted for several months. If there are no results with 6 or 7 treatments, surgery must be done. Migratory types of testes are more or less normal. The method of visualizing the testes is as follows: Apply several hot towels to the region of the genitalia with the patient in the prone position. Without touching the patient, have him raised to the sitting posture, and often the descent of the testes into the scrotum can be noticed. By palpation of the part, the cremasteric reflex is seen, and no descent is accomplished.

MARJORIE E. REED, *Reporter*.

LUZERNE (HAZLETON BRANCH)

Apr. 6, 1936

The regular meeting was held at the White Haven Sanatorium, White Haven, Pa., President Fayette C. Eshelman presiding.

John A. Sweeney, of Philadelphia, spoke on "The Signs and Symptoms of Beginning Tuberculosis," after which members of the society were granted the privilege of examining early cases of this disease. Roentgen-ray plates were available for these cases so that the physician was able to compare the physical findings with those as shown on the plates. Patients were fluoroscoped, demonstrating the value of this procedure from the standpoints of diagnosis and therapeutics. Charles A. Heiken, of Philadelphia, demonstrated and lectured on the technic and value of artificial pneumothorax in the treatment of this malady.

Dr. Sweeney emphasized the importance of a complete history and physical examination. He demonstrated with roentgen-ray films cases which had been diagnosed as pneumonia and when the symptoms failed to subside, tuberculosis was suspected, finally diagnosed, and verified as such.

On physical examination, Dr. Sweeney emphasized the determination of the mobility of the chest as being one of the most significant signs. The limitation of motion or lagging of one side of the chest with a suspicious history is nearly diagnostic of pulmonary involvement.

Percussion properly done is quite valuable. The value of light percussion over deep percussion to elicit small areas of dullness was stressed.

Indefinite breath sounds are of most significance in auscultation. The crepitant râle elicited by forced breathing and the like is important, but any change from the normal in the character of the breath sound is of vast importance.

In establishing the early diagnosis of tuberculosis, repeated sputum examinations are of extreme importance not only from the standpoint of diagnosis but also from the standpoint of economy for the patient. Many times sputum examinations preceding roentgen-ray examinations will obviate the expense of the latter procedure.

As a concluding statement, Dr. Sweeney emphasized that the early diagnosis of tuberculosis depends on careful study of the patient in so far as history, physical examination, and laboratory studies are concerned.

Supper was served. JOSEPH V. FESCINA, *Reporter*.

PERRY

Apr. 17, 1936

The quarterly meeting was held Apr. 17 at the home of Robert K. Stoner, New Bloomfield, and was a postponed meeting due to the previous flood conditions. President Morris Gerber presided.

Catharine Johnston, chairman of the Birth Control Clinic for Perry County, gave her report for the past year. Lenus A. Carl, chairman of the Emergency Child Health Committee for Perry County, tendered his resignation which was accepted, and Catharine Johnston was recommended for the position.

John H. Harris, of Harrisburg, read a paper on "Roentgen Ray as an Aid in General Practice."

Jay D. Smith, of Harrisburg, gave a talk on "Otitis Media—Various Forms and Complications."

Following the meeting a buffet luncheon was served.

J. EDWARD BOOK, *Reporter*.

PHILADELPHIA

May 13, 1936

This meeting was designated "Interns' Night." The papers were submitted in open competition and appreciation was shown by the award of a significant honorarium. The papers will appear in full in a current number of *The Weekly Roster and Medical Digest*.

"The Effect of Estrogenic Substances in Certain Cases of Diabetes Mellitus" was presented by Paul B. Patton, of the Graduate Hospital of the University of Pennsylvania. He referred in his introductory remarks to the advancement in the knowledge of carbohydrate metabolism and the relationship of the pituitary and subrenal glands. That the pancreas is not the only organ at fault in diabetes has been demonstrated by the fact that removal of a large portion of the pancreas of experimental animals does not produce typical diabetes. Several charts were shown. The first of these pointed out the well-known effect of pituitary dysfunction on carbohydrate metabolism and gave a summary and review of the work to date. Case histories were presented showing the effect of the administration of female sex hormone. After a very elaborate analysis of a series of cases the essayist advanced the following conclusions: (1) Experimental evidence indicates the existence of a factor in the adrenals which plays an important rôle in ketogenesis and glycogenolysis, and that this factor is apparently under the control of the anterior lobe of the pituitary; (2) the administration of large doses of female sex hormone has an apparently inhibitory action on the anterior pituitary in stimulating ketogenesis and glycogenolysis; (3) this type of therapy does not replace insulin and diet in the treatment of diabetes.

"Difficulties in Differential Diagnosis of Brain Tumors in Older Age Groups" was presented by Donald Wilson Hastings, of the Philadelphia General Hospital. A review of the necropsies at the Philadelphia General Hospital for a 7-year period (1928-1935) showed 117 cases of brain tumor; there were 25 instances in patients over age 40 in whom the diagnosis of brain tumor was made only at necropsy. This group of 25 did not include any cases in which brain tumor was suspected. Space-taking lesions such as tuberculomata, gummata, and abscesses which simulated the picture of brain tumor were also excluded. The cardinal symptoms—headache, vomiting, and choked disk—were absent. Duration was found to be variable; the average length

of symptoms from onset to death was 10 months. The blood pressure readings were well within normal range or below in all but one case. Only one case showed severe renal damage as evidenced by a blood urea nitrogen of 60. The roentgen ray was of little value in the few cases so examined. The studies made of the cerebrospinal fluid in 19 of the cases were of little diagnostic value. In the group of patients in which tumor should have been suspected from the history and symptoms a fairly uniform course was noted. The symptom picture was slowly progressive and localizing signs were in evidence, all of which were interpreted as cerebral thrombosis.

In this group there is progressive motor weakness ending in hemiplegia, and some convulsions. Epilepsy in later life is extremely suggestive of brain tumor. In none of these patients was there definite evidence of cardiovascular disease. Four out of the 5 cases in this group showed anisocoria or pupils that were sluggish or fixed to light, although the Wassermann test was negative. The only case in which the pupils reacted to light stimuli had a ptosis of the left lid. In this group the cases were characterized by psychic changes and by sudden terminal development of paralysis. The mental picture was one of gradual loss of concentration and higher intellectual faculties associated with thick speech, confusion, and character change. The outstanding feature of these cases was the simulation of cerebral vascular disease in the absence of demonstrable cardiorenal disease.

"The Ketogenic Diet in Urinary Tract Infection" was presented by Louis Spitz, Jr., of Mt. Sinai Hospital. Utilizing the demonstration of Helmholtz that a high fat diet had a beneficial effect upon urinary function he proceeded to elaborate upon the theme by the report of a series of cases confirming the statement. References to the literature on the subject were included. The essence of this paper was a plea for further intensive study of diet in disease.

A report of a case of full-term tubal pregnancy with the removal of a fetus four and a half months after calculated term was made by Forest F. Smith and William F. Hartman of the Methodist Episcopal Hospital. In only rare cases is tubal gestation carried to term because anatomically the tube is not constructed for such a task. The fetus was removed from the abdomen by low median incision and a supravaginal hysterectomy performed.

SAMUEL HORTON BROWN, *Reporter*.

WARREN

May 18, 1936

The regular monthly meeting was held, with the president-elect of the State Society, Maxwell Lick, of Erie, as the guest speaker. Dr. Lick spoke on "State Medicine" and in forceful language gave the main reasons why organized medicine should oppose the attempts of otherwise sincere welfare workers and philanthropists to introduce into America plans of sickness insurance in vogue in other countries.

He showed first that the crying need for such measures has been greatly exaggerated. Absolute perfection is not to be attained anywhere. Medicine is only one of many social evils in need of reform. Medicine cannot be reduced to a system as some sciences. It is an art and is dependent on a certain amount of faith and trust in individuals. Socialized medicine would undermine this personal element without which many of our best efforts often fail.

The failures in foreign countries were recounted, such as the destruction of individual liberty and the subjection of science, opinion, and practice to the whims of dictators and politicians.

The cost of medical care is not due to economic causes. The public needs education so that it can properly appreciate necessary medical care and waste less on charlatany and fraud. Our system cannot be so much in need of change when America today reports the lowest rate of morbidity and mortality of any civilized country. Medicine has attained its high standing in this country through individual effort.

The tradition of our profession is ever on the side of mercy, and few persons suffer for lack of medical care because of failure on our part to heed the wants of the needy sick.

Malingering and fraud are increased under sickness insurance. Quackery and cultism are not diminished under social control of medicine for when medical care is free for the asking it is apt to be cheapened in its quality and spurned.

The money of the great foundations that is now being used to foster socialized medicine could be much better employed in educating the public and in fighting superstition and quackery.

The talk was very helpful in bringing home to each member the danger organized medicine is facing in this country in the efforts being made to bring about the political management of the practice of medicine.

The meeting was attended by 30 members and 3 visitors. Dr. Otis S. Brown, who has been practicing 50 years in Warren County, was honored by being presented with a wrist watch, the gift of members who esteem him for his high standing and honorable character as a man and a physician.

The society voted against giving its endorsement to the establishment of the 8-hour service as requested by the Nurses' Association. The nurses have voted to put this ruling into action and asked for the approval of the Medical Society. MICHAEL V. BALL, *Reporter*

WESTMORELAND

Apr. 9, 1936

The meeting was held at Mountain View Hotel, near Greensburg, William H. Robinson presiding; 32 members and guests were present for the dinner, and 38 members and 15 guests were present for the scientific program.

Leopold Vaccaro read a paper on "State Workmen's Compensation Insurance Fund." He explained the origin of and subsequent amendments to this fund, outlined its limitations, and told of his plans to enlarge the scope of its usefulness.

Judge Keenan of the Common Pleas Court of Westmoreland County stated that while manager of the State Workmen's Insurance Fund he felt the need of a medical division. Upon his recommendation this division was originated with Dr. Vaccaro as its head. His policy has been one of fairness and decency toward the members of The Medical Society of the State of Pennsylvania.

Chauncey L. Palmer, chairman of the State Society Committee on Public Health Legislation, detailed the work of the various state committees and emphasized the necessity of co-operation between his own committee, the Committee on Public Relations, and the Committee on Medical Economics. In regard to cult legislation, Dr. Palmer advised his audience to request

the candidates to the House of Representatives and Senate to obtain from the physicians of Pennsylvania their ideas on the various forms of proposed legislation affecting the medical profession.

He said that the State Medical Practice Act has been sustained through the Superior Court, and we are on the defensive to maintain this act as well as to protect the public from the various cults. He classified the cultists as follows: Those dealing with the spine, as chiropractors, *etc.*; those dealing with the mind; and those that may come in the future. There is a Board of Medical Education and Licensure through which these cultists could be licensed, if they met the qualifications, but there are only 200 licensed drugless therapists, with 2000 that did not meet the requirements. When arrested for practicing medicine illegally, these cultists bring a horde of patients before the magistrate to testify to their healing powers and are thus often acquitted. The judges should be advised to state that they are not interested in how good a doctor he is but whether or not he has met the required qualifications in this state. If we hope to maintain the high standing we now have, we should use every means available to prevent these inadequately prepared cultists from becoming licensed.

That part of the Social Security Act was stressed relating to child and maternity health, and crippled children. He pointed out several fields in which we should be prepared to work, one being occupational diseases, another public health work, *etc.* In conclusion, Dr. Palmer stated that the solution of these problems will come through better organization. "We must stay with our organization," he said, "and boost everything that is good for public health. Each county society should be prepared to take care of the indigent because soon we will be confronted with sickness insurance and we will have no part in its operation and organization if we do not show the initiative in taking care of the indigent members of society." Several counties already have adopted plans for the care of the needy, the Mercer County Plan being the best example he knew.

Walter F. Donaldson, secretary, State Medical Society, spoke on "Hospitalization Insurance." He reviewed the Easton (Pa.) Hospital plan and the plan proposed for Adrian Hospital, Punxsutawney, Pa. This latter plan, as originally proposed, gave 21 days' hospitalization, with general care, laboratory work, diet and nursing, first aid, roentgen-ray work, and metabolic tests. As this plan included the selling of medical services, it was discouraged, and the final plan adopted made no reference to anything regarding the physician. It is important for all physicians to be on the look-out for such proposed plans and to contact the State Society officials when such plans are first presented.

In discussion, Richard J. Behan, president of the Allegheny County Medical Society, advised as to the handling of complaints regarding compensation fees. His suggestion was to have a Grievance Committee, one being already active in Allegheny County. The duty of this committee is to hear individual complaints and if a just one is received to make it a county society problem and not a problem for the individual doctor.

Robert H. Jeffrey and Francis J. King, from the Fayette County Medical Society, spoke on the Compensation Fund fee problem and complained of the cutting of the fees after bills had been submitted to Harrisburg. Dr. Vaccaro answered their questions and promised an investigation and correction of this condition if complaints are founded on facts.

SPURGEON S. DEVAUX, *Reporter*.

YORK

May 16, 1936

The regular monthly meeting was held with President Clyde L. Seitz presiding.

Harvey F. Smith, chief surgeon of the Harrisburg Hospital, Harrisburg, and district chairman of the Appendicitis Commission of the Pennsylvania State Medical Society, spoke on "Appendicitis."

Dr. Smith said in part: The trend of the operation for appendicitis with its results and the public opinion of operations for appendicitis change every so often; in the last few years there has been a rising mortality from acute appendicitis.

He reviewed the cardinal symptoms of a typical appendicitis patient and gave in detail variations in such symptoms as pain, its location, its character and type, muscular rigidity, location, occurrence and method of eliciting same, the speaker advocating gentle and careful rather than too vigorous palpation of the abdomen.

Nausea, fever, and leukocytosis are more variable than the other symptoms of pain and tenderness. Five per cent of appendicitis patients, even with abscess, have a leukocyte count of less than 10,000 per cubic millimeter; the absence of constitutional symptoms in the presence of more reliable physical signs should warrant a diagnosis of appendicitis.

An analysis of the appendicitis patients in the Harrisburg Hospital for the past 2 years, a total of 451 patients, was given. He divided the patients into 3 groups: Group I, under age 10, 35 patients, 3 deaths; Group II, age 10 to 40 years, 6 deaths; Group III, age 40 to 70, 12 deaths.

Appendicitis might be confused with tuberculosis of the bowel, spinal cord lesions, anemias, etc., and in these cases exploratory laparotomy (making a large incision) under spinal anesthesia, which assures good relaxation, is advisable.

Those physicians were censored who do not examine patients carefully and who use cathartics and morphine indiscriminately in patients suffering abdominal pain.

Dr. Smith stressed the importance of disseminating a knowledge of appendicitis at the various meetings, medical and lay.

In discussion, Louis S. Weaver, of York, stated that the medical profession has carried on the dissemination of propaganda concerning appendicitis to the lay public; the local committee in York County has talked to over 8000 high school children and the lectures and work of the committee have been enthusiastically received by pupils, teachers, and the Parent-Teachers Association in a co-operative spirit. The diagnosis of intestinal influenza is a difficult one to make. A survey of the local hospital shows a death rate of 2.5 per cent. Charles Rea, York, said that intestinal influenza is not an entity. Appendicitis may be confused with pneumonia and here the respiratory rate helps to differentiate; also it can be confused with diaphragmatic pleurisy. He reiterated that light abdominal palpation is desirable. Joseph C. Atkins, Red Lion, stated that the general practitioner must be "on his toes" if he does not wish to come to grief with his appendicitis patients. He stressed the advisability of consultation with a surgeon or referring the suspected appendicitis patient to a surgeon even if it is not true appendicitis; hospitalizing the patient in order to observe and in order to have the surgeon watch will keep the mortality down.

W. Frank Gemmill, York, stated that as a member of the local committee he was pleased with the co-operation of the students and teachers in those talks which he gave as compared to the response to the usual health talks. He said that pain may be more constant in appendicitis but that tenderness is more reliable. He spoke of the special sign which he elicits known as the "rebound sign" elicited with the patient on hands and knees. To lower the mortality rate, stop postoperative distention and never delay operation. He spoke on the various types of bacteria present in and about the appendix; he asked the speaker whether or not too much drainage was used in abscess cases. The tone of the intestines must be maintained to prevent obstruction and death, for which morphine may be used as well as pitressin which, in addition, prevents leakage and further acts as an antidiuretic, thereby maintaining water balance; pantopon is not indicated; prostigmin is not useful; pitressin is supposed to act on the small bowel only.

Dr. Smith, in closing, stated that respiratory infection arousing an appendiceal infection is more a problem for operation. There has been a swing of the pendulum back and forth regarding drainage in abscess cases. Closed cases often have to be opened later but there is no fixed or fast rule; if there is no definite soiling of the peritoneum or no rupture, use drain; culture fluid even then and, if the fluid is reported sterile, use rubber tissue and not cigarette drain. For a sloughing wound, drainage or not does not seem to enter the problem. Spinal anesthesia, gentleness of handling tissues, and walling off with the patient completely relaxed, reduce to a minimum postoperative ileus; the use of morphine, pitressin, and intravenous saline and glucose with Wangenstein's suction to the lower bowel and the stomach are the most important; when in doubt, drain. PAUL M. REIGART, *Reporter*.

CUSHING'S "JOURNAL"

Harvey Cushing is the outstanding living American physician, both in surgery and in literature. Many years ago, he took a special field of surgery as his own. Building on the slender foundations of his predecessors—Horsley, MacEwen, and Keen—he, almost single-handed, erected a substantial structure, now copied all over the civilized world. Thus he rightfully takes his place as a world figure, honored wherever medicine progresses. In literature, his *Life of Sir William Osler* has found a permanent place, one of the best of medical biographies. To those accomplishments he has now added another, perhaps, a hundred years from now, to be considered his most enduring effort. *From a Surgeon's Journal* is his diary of his war-time experience, written under the stress of conditions in the field. Ships at sea, hospitals being formed in America and in action overseas, front-line dressing stations, the mud of Flanders, gassed and wounded troops, men with "chickens" on their shoulders and men without, bombing, illness, and a host of friends and associates—the pictures are deftly painted with the sure hand of a great surgeon and the clear eye of a penetrating, and yet sympathetic, mind. To those who shared, this fine book comes as an old friend, to sit by the fireside with in a reminiscent mood, telling tales of bygone days. To the others, and particularly those boys too young to share, the diary presents a truthful picture of events which one hopes they will never see duplicated.—*New England J. of M.*, May 7, 1936.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

To recount the events of the past month would tax even the generous space allotted and strain our meager stock of adjectives and synonyms. The high lights must for the time suffice: Kansas City, the enthusiastic group of 1500 women, representing 40 of the organized states, with 23 Pennsylvania women attending; the pride your president felt in representing you and of hearing that Pennsylvania had "long since outgrown the kindergarten stage in its development"; the growing nation-wide interest of auxiliaries in public relations as evidenced by the reports of program group activities and health institutes; the added importance that auxiliaries have achieved in the plans of organized medicine; the increased and very sympathetic attitude of all the men in our constructive projects; the regret that our state lost by a narrow margin the opportunity to entertain the next national convention; the joy of participation in the election of our own Mrs. Augustus S. Kech to the presidency-elect; the return with the profits of interchange of ideas, the bringing home of new perspectives of auxiliary work, and, lastly, the supreme satisfaction in knowing that Pennsylvania has been a pioneer in many things. We come back from such a meeting feeling that all of these joys have been made possible by your generous support of the women who represent you, and sustained by the fact that you invest these women with a confidence born of a pride in your achievements. It is heartening to listen to the stimulus that Pennsylvania has given to other states and to see many of her projects adopted and elaborated upon.

Dauphin County beckoned to us and we were off on the nineteenth of the month to its annual meeting at Harrisburg, the scene of our last state meeting, still remembering its hospitality; then to Luzerne County, marking another milestone of its vigorous existence; Berks County, at Reading, where your president heard annual reports, in common with Luzerne and Dauphin counties, and saw the induction of new officers. Each report showed how these various groups,

while geographically separated, demonstrated their fidelity to the principles of unity of purpose with no abatement of their adherence to the basic principles of our group.

Between these neighborly calls your president attended the annual luncheon of the Philadelphia Auxiliary. Into their listening and tolerant ears she poured the story of her year's hopes and endeavors.

Shortly thereafter the president started for Erie to begin, after its enthusiastic meeting, what proved with the help of our president-elect to be a thousand-mile motor trip through 10 counties; the second day out from Erie, at St. Mary's in Elk County; the third day at Mansfield in Tioga County; the fourth at the Sixth Councilor District meeting at Philipsburg; an evening meeting at Lock Haven, Clinton County; and on Friday at Danville, Montour County. This does not include a Paul Revere-like journey through intervening counties and towns, guided by the indefatigable president-elect, knocking at doors and spreading the gospel of auxiliary work directly or indirectly. In all, 15 counties were visited—truly a Herculean task and only possible through the kindness of Mrs. David W. Thomas, who has a host of friends throughout the state.

Plans are in the making for the twelfth annual meeting to be held in Pittsburgh from Oct. 5 to 8. Mrs. Woelfel, the chairman, is in constant touch with the president and her tentative plans promise a meeting which will be true to the traditions of Pittsburgh's hospitality.

MRS. W. BURRILL ODENATT.

EDITOR'S NOTE

Please remember our column in the State JOURNAL during the summer months and send in any news items. We are interested in auxiliary picnics and other pleasures too, so do not discontinue sending your messages even if the meetings are suspended for the summer.

(MRS. GEORGE C.) JESSIE N. YEAGER,
Publicity Chairman.

COUNTY AUXILIARY REPORTS

Allegheny.—The auxiliary closed its year with a rose luncheon at the William Penn Hotel. Preceding the luncheon a business meeting was held at which reports of all committees were read. Officers for the coming year were elected, and it was with pleasure that we announced the re-election of our president, Mrs. Herbert E. Woelfel.

The guest speaker was Mrs. Florence Fisher Parry, who gave a talk on the doctor's wife and the part she played in his success. She compared the life led by a doctor's wife to that of any famous movie star. Describing an evening spent at a night club in Hollywood, at which all the famous stars of moviedom were present, she told of the beauty and glamour of the women, but said those people were not to be envied, for their lives were not their own. Every moment they had to think of themselves, how to keep fit for their public. At the most, 5 years was the longest period during which they could hope to remain at the peak of their profession; without publicity they would be forgotten in 6 months.

Would the doctor's wife want to measure the product of her life in 6 months' work? Would she elect to live such a selfish life? When the doctor is immersed in his work, his real self is revealed. His life is better, bigger, stronger, and more complete for having studied medicine, and the wife of the doctor has the greatest opportunity to be more magnificent than anyone else on earth.

Since Mrs. Parry is a niece of Dr. John M. Fisher, of Philadelphia, "Uncle John," as she called him, she felt that she knew first-hand whereof she spoke.

The program continued with musical selections and two amusing skits written by Dr. Samuel R. Haythorn.

Honor guests present were Mrs. James I. Johnston; Mrs. Charles C. Crouse, Westmoreland County; and Mrs. E. S. McCauley, Beaver County.

Center.—The May meeting of the auxiliary, which was a luncheon meeting, was held at the home of the president, Mrs. James R. Barlett. This being the last meeting of the year, the following officers were elected to serve 2 years: President, Mrs. John V. Foster; vice-president, Mrs. Paul M. Corman; secretary-treasurer, Mrs. James C. Rogers; directors, Mrs. Melvin Locke and Mrs. James R. Barlett. Fourteen members and 2 guests were present, and 2 new names were added to the membership list.

Chester.—There was a well-attended annual meeting of the auxiliary held at the U. S. Veterans' Hospital, Coatesville.

While luncheon was being served in the nurses' dining room, Dr. Appleton H. Pierce led the hospital orchestra in the rendition of several musical numbers.

The business meeting was held in the recreation room with Mrs. Howard Mellor in the chair. The routine business was followed by the reading of all annual reports.

The party held on Apr. 16, at the U. S. Veterans' Hospital, netted close to \$200 for the Medical Benevolence Fund.

The election of officers for the next 2 years resulted as follows: President, Mrs. Howard B. Davis; president-elect, Mrs. Michael Margolies; first vice-president, Mrs. Howard Mellor; second vice-president, Mrs. U. Grant Gifford; secretary, Mrs. Joseph Scattergood, Jr.; treasurer, Mrs. Robert C. Hughes.

Mrs. Mellor was presented with flowers and a book, *Poor Splendid Wings*, in recognition of her term in office.

Some of the members played bridge.

Delaware.—The annual meeting of the auxiliary was held at the Inglenook Tea Room in Swarthmore, May 19, at 12:45 p. m., 24 members and 3 guests being present. Luncheon was served.

The officers for 1936-1937 are as follows: President, Mrs. John B. Klopp, Chester; president-elect, Mrs. Walter A. Landry, Swarthmore; vice-president, Mrs. Edward H. Bedrossian, Drexel Hill; recording secretary, Mrs. Harry Gallagher, Chester; corresponding secretary, Mrs. John E. Smaltz, Media; treasurer, Mrs. Francis G. Miller, Chester; directors—(1 year) Mrs. Adrian V. B. Orr, Swarthmore; (2 years) Mrs. Ralph E. Bell, Media.

Lehigh.—The auxiliary entertained at a Reciprocity Tea with a health program. Informative talks were given by 2 Allentown physicians, Dr. Anna M. Ziegler and Dr. W. Frederick Herbst. Dr. Ziegler spoke on "The Economy of Keeping Well," and Dr. Herbst spoke on "Tuberculosis." Music was furnished by an instrumental trio, and tea was served.

Luzerne.—The fourth annual spring meeting and luncheon was held at the Irem Temple Country Club, May 26, with an attendance of 126. The retiring president, Mrs. Clarence W. Prevost, presided and gave her annual report. During the luncheon a musical program was rendered.

The following officers were elected: President, Mrs. Vivian P. Edwards; first vice-president, Mrs. Edward W. Bixby; recording secretary, Mrs. Charles F. Netzel.

Mrs. W. Burrill Odenatt, State Auxiliary president, was guest speaker, as was also Mrs. Harry M. Kraemer, of Scranton, third district councilor.

Corsages were presented to the retiring president, newly elected president, and guest speakers.

Montgomery.—A luncheon meeting was held at the Plymouth Country Club, May 6. Major W. I. Rutan, chaplain of Valley Forge Military Academy, guest speaker, spoke on "Mothers of Our Youth."

Dr. Edith MacBride-Dexter, State Secretary of Health, was a guest of the auxiliary at luncheon preceding the meeting of the County Medical Society.

Plans for a basket lunch to be held at the home of Mrs. Edgar S. Buyers on May 26 were discussed. It was decided to hold the annual picnic late in June. Bridge was played.

Medical News

Births

TO DR. AND MRS. R. F. OTTERBEIN, of Warren, a son, May 24.

TO DR. AND MRS. A. H. BOYER DRAKE, of Philadelphia, a son, John Ellwood, June 5.

TO DR. AND MRS. ROBERT H. ISRAEL, of the State Hospital, Warren, a son, May 12.

Engagements

MISS ELIZABETH ANN KRUSEN, daughter of Dr. and Mrs. Francis T. Krusen, and Mr. Randolph Cressman, all of Norristown.

Marriages

MISS LILLIAN DAVIDOW to Dr. Abraham Cohen, both of Reading, May 10.

MISS ELIZABETH AGNES WARGO to Dr. William C. Hutchison, both of McKeesport, May 9.

MISS HANNA A. YOST, of Norristown, to Dr. Benjamin D. Parish, Jr., son of Dr. Benjamin D. Parish, of North Hills, May 28.

MISS ANNA LOUISE SOEST to Mr. William Ramsey Bready, 3d, son of Dr. and Mrs. William R. Bready, all of Philadelphia, June 20.

MISS MILDRED MARIE PETERS, daughter of Dr. and Mrs. Stephen Edwin Peters, to Dr. Joseph Bernard Brain, all of Masontown, June 16.

MISS MARY GIBSON HENRY, daughter of Dr. and Mrs. J. Norman Henry, of Philadelphia, to Mr. Edward M. Davis, 3d, of Spring House, Pa.

Deaths

CHARLES SHEWELL ABBOTT, Bristol; Hahnemann Medical College and Hospital of Philadelphia, 1892; aged 64; died Feb. 19, of angina pectoris.

CLYDE OSCAR ANDERSON, Pittsburgh; University of Pittsburgh School of Medicine, 1895; aged 66; died May 18. Dr. Anderson was a member of his county and State medical societies and a Fellow of the A. M. A.

WALTER JAMES AXFORD, Philadelphia; Hahnemann Medical College of Philadelphia, 1904; aged 57; died May 17. He is survived by his widow.

JOHN M. BRISTER, Washington, D. C., Medico-Chirurgical College of Philadelphia, 1898; died at the Naval Hospital, Washington, D. C., on Apr. 10. Rear Admiral John M. Brister, M. C., U. S. Navy, was born May 24, 1877, in Pennsylvania. He was appointed assistant surgeon in the Medical Corps, U. S. Navy, in 1900, and passed through the various grades to Rear Admiral, Medical Corps. At the time of his death he was on duty in the Bureau of Medicine and Surgery as inspector of the Medical Department activities on the Atlantic Coast. Admiral Brister had a most distinguished career in the Navy, serving at various stations in the Orient with Marine Corps expeditionary forces. He commanded the naval hospitals at Canacao, P. I., Chelsea, Mass., and New York, and was an outstanding authority on hospital administration. He was a graduate of the Naval War College at Newport, R. I. From 1927 to 1929 he was chief of the Division of Planning and Publication in the Bureau of Medicine and Surgery.

Admiral Brister has been an outstanding member of the Association of Military Surgeons since 1927. He was buried with full military honors in Arlington National Cemetery on April 13, 1936.

WILLIAM ROSS BROTHERS, Duncannon; Jefferson Medical College, 1892; aged 67; died Mar. 1, of cerebral hemorrhage and myocarditis.

EDWIN E. CLARK, Knoxville; College of Physicians and Surgeons, Baltimore, 1893; aged 70; died May 12. Dr. Clark was a member of his county and State medical societies and the A. M. A.

JOHN COOPER, Pittsburgh; Hahnemann Medical College of Philadelphia, 1879; aged 81; died Mar. 21, of cerebral hemorrhage.

EMMA FOWLER WEEKS CRISPIN, wife of Mr. Franklin M. Crispin, executive secretary of the Philadelphia County Medical Society, died May 21.

HENRY KUIHL DILLARD, Philadelphia; University of Pennsylvania School of Medicine, 1902; aged 58; died May 17, in Asheville, N. C., where he had gone for his health. Dr. Dillard engaged in general practice in Philadelphia until 1917, and in May of that year he joined the Pennsylvania Base Hospital, Unit No. 10, and was assigned to overseas service in France. He was wounded in the leg and sent to England where he conducted a hospital for 3 months. He was then transferred to the Sixth Welsh Battalion and returned to Germany with the Army of Occupation. Upon his return to this country he became full-time associate medical director to the Penn Mutual Life Insurance Com-

pany. A widow and a son survive. He was a member of his county and State medical societies and a Fellow of the A. M. A.

MALCOLM W. EVERSON, Pittsburgh; Jefferson Medical College, 1889; aged 68; died Feb. 6, in New York.

MICHAEL J. FLANAGAN, Shamokin; Jefferson Medical College, 1890; aged 69; was found dead in his home, May 16, from heart disease. Dr. Flanagan was born in Ashland, Pa., and was one of the first interns at Fountain Springs (Pa.) Hospital. He practiced in Shamokin from 1893 until 4 years ago when he retired. For many years he served as surgeon for the Reading Railroad Company and the Philadelphia and Reading Coal and Iron Company. He was a member of his county and State medical societies. He is survived by his wife and one son.

CARROLL FOX; University of Pennsylvania School of Medicine, 1897; aged 61; died May 24 at the United States Marine Hospital at Stapleton, Staten Island. Dr. Fox was medical director of the United States Quarantine Station at Rosebank, N. Y. He was born in Philadelphia and served in various Pennsylvania cities. Later he became chief quarantine officer of the Philippine Islands. He is survived by his wife.

JACOB ERNEST GADDIS, Beaver; Jefferson Medical College, 1888; aged 75; died Mar. 14.

HENRY B. GOLDEN, Philadelphia; University of Pennsylvania School of Medicine, 1896; aged 63; died May 20. Dr. Golden was a member of his county and State medical societies and a Fellow of the A. M. A.

MRS. GUY, wife of Dr. William H. Guy, of Pittsburgh, died May 21.

JOHN FERGUSON HOPE, Drexel Hill; Jefferson Medical College, 1904; aged 54; died May 21, at the Delaware County Hospital from heart disease. Dr. Hope was seized with an attack as he was driving his automobile. He retired from practice several years ago.

WARD LAFAYETTE KING, Muncy; College of Physicians and Surgeons, Baltimore, 1880; aged 80; died from heart disease, May 24, in the Muncy Hospital. Dr. King was a native of Sullivan County, and a graduate of the Orangeville Academy and Mansfield Normal School. He was a member of his county and State medical societies and the A. M. A. He is survived by 2 sons, Sterling C. King, M.D., of Watontown, and Denzil King, M.D., of Milton, and one brother.

SETH BACHMAN KISTLER, Nanticoke; Hahnemann Medical College of Philadelphia, 1928; aged 32; died May 13 in the Hahnemann Hospital, Philadelphia, following an operation for obstruction of the hepatic duct. Dr. Kistler was born in Nanticoke, July 25, 1904, a son of Dr. and Mrs. Seth W. Kistler. He was graduated from the Nanticoke High School in 1922 and served his internship in Philadelphia, following which he began practice with his father in Nanticoke. He was a member of his county and State medical societies and the A. M. A. He was on the staff of the Wyoming Valley Homeopathic Hospital. Surviving are his father, 2 sisters, and 2 brothers, Charles J. Kistler, M.D., of Kingston, and Clarence P. Kistler, M.D., of West Chester.

DAVID FRANK KLINE, Philadelphia; Jefferson Medical College, 1888; aged 72; died Mar. 13, of pyelonephritis and myocarditis.

WILLIAM HENRY LEE, New Castle; Hahnemann Medical College and Hospital, Chicago, 1886; aged 73; died Mar. 17, of pleurisy and chronic nephritis.

FRANK J. LIVINGSTON, Salix (Cambria Co.); Eclectic Medical College, Cincinnati, Ohio, 1888; aged 69; died May 5 from apoplexy. Dr. Livingston was the earliest physician to locate in the southern part of Cambria County outside of Johnstown. He was one of the organizers of the old Johnstown City Hospital and a

member of its surgical staff until it closed. He was a member of his county medical society for many years. He is survived by his widow, 2 daughters, a sister, and a brother, Wm. W. Livingston, M.D., of Dunlo.

EMANUEL J. LUPIN, Philadelphia; Medico-Chirurgical College of Philadelphia, 1896; aged 73; died Mar. 10, of tuberculosis and arteriosclerosis. He was a member of his county and State medical societies and a Fellow of the A. M. A.

HORACE WINTER MILLER, Philadelphia; University of Pennsylvania School of Medicine, 1889; aged 70; died Mar. 6, of bronchopneumonia and mitral insufficiency.

MR. THORNTON MOORE, son of Dr. William F. Moore and grandson of Dr. E. Quinn Thornton, all of Philadelphia, was instantly killed in an automobile crash June 7.

JAMES SHERMAN MOSHER, Williamsport; College of Physicians and Surgeons of Baltimore, Md., 1891; aged 69; died at Pittsburgh, May 10, following a cerebral hemorrhage. He was born on Jan. 24, 1867, at Sylvania, Pa., and received his education at the Troy High School. He engaged in general practice at Bentley Creek, Picture Rocks, Hillsgrove, and Williamsport, all in Pennsylvania. In 1897 he took a graduate course at the Philadelphia Polyclinic Hospital and the Wills Eye Hospital and then specialized in the diseases of the eye, ear, nose, and throat. He enlisted in the medical corps of the United States Army at the time of the World War and was commissioned captain. In 1919 he was transferred to the Public Health Service, and also served as a special examiner for the Veterans' Bureau. He was active in the American Legion and in the Association of Military Surgeons. In 1891 Dr. Mosher was married to Miss Laura Leiser of Baltimore, who died in 1927. He is survived by 3 children. He was an affiliate member of the Lycoming County Medical Society and a member of the A. M. A.

MATTHEW CUSHING O'BRIEN, Philadelphia; Temple University School of Medicine, 1908; aged 63; died May 22, of heart disease, at Temple University Hospital. The activities of Dr. O'Brien had been associated with athletics for 50 years, 25 of which were at the Boys' Central High School, Philadelphia. Since 1926 he has been at Overbrook (Philadelphia) High School. Dr. O'Brien was born in Philadelphia, Oct. 7, 1872, and for 19 years was a teacher and principal in the Philadelphia public schools. During his high-school career he won more than 50 cups and medals in athletic contests. He organized and captained the first basketball team to be formed in the Philadelphia area and in 1893 became assistant physical director at the Central Y. M. C. A.; then he became physical director of the Northwest Branch Y. M. C. A. in 1894, after which time he was associated with athletics in Cambridge, Mass., where he remained until 1900. He was then transferred to San Francisco where he did Y. M. C. A. work until 1903 when he returned to the Boys' Central High School. He was very efficient in his athletic teaching as evidenced by the number of championships won by those who were trained by him. In 1905 he received the degree of Pharmaceutical Chemist in Temple University. At various times he was instructor in clinical surgery and anatomy at the Temple University Medical School, Temple University Dental School, and Normal School of Physical Education at Temple University. He was a member of the Henry H. Houston Post, American Legion, his county and State medical societies, and a Fellow of the A. M. A. He is survived by his wife.

CHARLES ALBERT ORR, Crafton (Allegheny County); Jefferson Medical College, 1901; aged 65; died June 6. Dr. Orr was born in Jackson Center, Pa., in 1871. He was a member of his county and State medical societies and a Fellow of the A. M. A.

CLARENCE A. PATTEN, Philadelphia; Jefferson Medical College, 1916; aged 46; died June 2, from heart dis-

ease. Dr. Patten was born in Maine. Following graduation in medicine he started practice in Philadelphia and was associate professor of neurology in the Graduate School of the University of Pennsylvania and was neurologist to the Philadelphia General, Lankenau, and Orthopedic hospitals. During the World War he served as a captain in the United States Army Medical Corps. He was a member of his county and State medical societies; a Fellow of the A. M. A.; member of the American Neurological Society, the American Psychiatric Society, and the Association for Research in Mental and Nervous Diseases. He is survived by his wife and 3 children.

CHAS. MANVILLE PRATT, Towanda; University of Pennsylvania School of Medicine, 1882; aged 77; died May 23. Dr. Pratt was a member of his county and State medical societies and a Fellow of the A. M. A. He had retired from the practice of medicine.

LOUIS P. REIMANN, Philadelphia; University of Pennsylvania School of Medicine, 1883; aged 84; died of pneumonia in Lankenau Hospital, June 1. Dr. Reimann was born in Buffalo, N. Y., and is survived by his wife and a son, Stanley P. Reimann, M.D., of Philadelphia.

JOHN A. ROTH, Red Hill (Montgomery County); University of Pennsylvania School of Medicine, 1876; aged 82; died May 23. Dr. Roth was active in his profession until his fatal illness, and would have celebrated his sixtieth anniversary as a practicing physician in September. The last 33 years of his practice were devoted to Red Hill and nearby sections. Dr. Roth was a member of his county and State medical societies.

LEE MONTE SANKEY, Jeannette; Cleveland-Pulte Medical College, Ohio, 1908; aged 55; died May 14. Dr. Sankey was a member of the Westmoreland County Medical Society from 1915 to 1935, when he dropped his membership due to a serious heart ailment. During the World War he was in the service for 22 months.

STANLEY ARNOLD SEIGLE, Wyncote; University of Pennsylvania School of Medicine, 1932; aged 26; died Mar. 27, of Hodgkin's disease and cerebral embolism.

WALTER W. SENN, Williamsport; University of Pennsylvania School of Medicine, 1907; died on May 15, of heart disease. He was born in Holland, N. Y., on Aug. 21, 1880, and received his preliminary education at Bucknell University. He practiced at various times at Muncy, Williamsport, and Pittsburgh. He was formerly a member of the Lycoming County Medical Society and had retired from active practice. He is survived by his widow, his mother, and one brother, Carl H. Senn, M.D., who is practicing in Williamsport.

ALFRED P. STODDART, Orangeville; Hahnemann Medical College of Philadelphia, 1880; aged 78; died Feb. 6, of cerebral hemorrhage.

KATHARINE W. ULRICH, Chester; Woman's Medical College of Pennsylvania, 1909; died May 18. Dr. Ulrich was a member of her county and State medical societies and a Fellow of the A. M. A.

WILLIAM H. WALLACE, Callery (Butler Co.); Homeopathic Hospital College, Cleveland, 1884; aged 72; died Feb. 20, of cerebral hemorrhage and arteriosclerosis.

Miscellaneous

DR. GEORGE W. REESE, superintendent of the Shamokin State Hospital, Shamokin, Pa., has submitted his resignation.

DR. GAIL K. RIDELSPERGER, a graduate of the University of Buffalo Medical School, has opened an office in Warren.

DR. WILLIAM DEVITT, Devitt's Camp, Allenwood, was recently re-elected president of the Federation of American Sanatoria.

DR. CATHARINE MACFARLANE, of Philadelphia, was elected president of the Medical Women's National Association for 1936.

DR. FRANCIS R. PACKARD, of Philadelphia, was elected president of the Library Company of Philadelphia at a meeting held May 21.

DR. ARTHUR P. NOYES, Howard, R. I., has been appointed superintendent of the Norristown State Hospital, succeeding Dr. Annie R. Elliott.

DR. W. TRALL DONCASTER, of Jeannette, is taking courses in resident surgery and operative gynecology at the New York Postgraduate Medical School, Columbia University.

DR. ZOE ALLISON JOHNSTON, of Pittsburgh, was installed as president of the American Radium Society in Kansas City during the week of May 11-15. This is the first time a woman has been thus honored.

IN THE *Journal of the American Medical Association*, June 13, 1936, page 2098, there is an article on "County Medical Society Leadership in Public Health Education," which will prove of interest to our readers.

THE ANNUAL STATE CONVENTION of the Pennsylvania Health Association, the State Public Nursing Association, and 2 allied state bodies, which should have been held May 19 in Reading, will be postponed until September.

DR. ESMOND R. LONG, of Philadelphia, was elected president of the National Tuberculosis Association at the annual meeting held in New Orleans, Apr. 23. Dr. Charles J. Hatfield, of Philadelphia, was re-elected secretary.

A TESTIMONIAL DINNER was given to Dr. William H. Teller, Philadelphia, by the Staff and Ex-residents Association of the Jewish Hospital, May 20, at the Warwick, in recognition of 50 years of continuous service to this institution. Dr. Norman S. Rothschild has been elected to succeed Dr. Teller.

THE POSTGRADUATE MEDICAL ASSEMBLY under the auspices of the Harrisburg Academy of Medicine met at the Penn-Harris Hotel, May 6. There were 502 physicians registered in attendance. At noon luncheon was served to 162 physicians.

WE ARE VERY GLAD to announce that Dr. Walter F. Donaldson, secretary of The Medical Society of the State of Pennsylvania, has been reappointed to succeed himself as a member of the Judicial Council of the A. M. A. for a term of 5 years.

DR. JOHN L. LAIRD, of Philadelphia, has been discontinued as head of the health laboratory in the State Department of Health. Dr. Louis Tuft, of Philadelphia, has been appointed to succeed Dr. Laird. Dr. Tuft is associate in immunology in Temple University School of Medicine.

A MEETING OF THE BOARD OF DIRECTORS of the Pennsylvania Tuberculosis Society was held at Devitt's Camp, Allenwood, May 20. Dr. Charles J. Hatfield, of Philadelphia, reviewed the recent research work of the National Tuberculosis Association. Dr. C. Howard Marcy, of Pittsburgh, gave a short address.

DR. JOSEPH MCFARLAND was retired on age limit, June 30, as professor of pathology in the School of Medicine of the University of Pennsylvania. Dr. McFarland still holds the chair of professor of pathology in Evans Dental Institute, and the Veterinary Medical School of the University of Pennsylvania.

AT THE ANNUAL MEETING of the Philadelphia Laryngological Society held June 2, the following officers were elected: President, Dr. Herman B. Cohen; vice-president, Dr. Robert J. Hunter; secretary, Dr. Benjamin H. Shuster; treasurer, Dr. Douglas Macfarlan; librarian, Dr. Henry A. Lacssle. Dr. Samuel R. Skillern, Jr., was elected to the Executive Board.

THE EASTERN SECTION of the American Congress of Physical Therapy was held May 27-28, at the Philadelphia County Medical Society Building. The evening session of May 27 was a joint meeting with the Philadelphia County Medical Society. The session of May 28 was an all day affair at the Jefferson Hospital.

THE FIFTEENTH ANNUAL MENTAL HYGIENE DAY meeting, sponsored by the Danville State Hospital, was held May 29, at the Danville State Hospital. The morning was devoted to visitation of the Diagnostic Clinic, and an instructive and entertaining program was presented during the afternoon. Luncheon was served, followed by a program of music by the hospital band.

AT THE MAY MEETING of the Philadelphia Urological Society, the following officers were elected for 1936-1937: President, Dr. Albert E. Bothe; vice-president, Dr. Francis G. Harrison; secretary-treasurer, Dr. Theodore R. Fetter; executive committee, Drs. Lloyd B. Greene, chairman, Edward W. Campbell, David M. Davis, Wilbur H. Haines, and C. H. deT. Shivers.

HOSPITAL DOCTORS MUST BE LICENSED.—Mr. John D. Pennington, Secretary of Welfare of Pennsylvania, made an announcement on May 18 that all unlicensed physicians associated with state-owned institutions were to submit their names to him. This action was taken because the 1935 Legislature amended the medical practice act "to require that all physicians employed in hospitals, including graduate interns on a salary, be licensed to practice medicine."

THE PRESTON RETREAT, PHILADELPHIA, celebrated the centenary of its chartering on June 14. This institution was originated by Dr. Jonas Preston as a "lying-in hospital for indigent married women of good character." The corner stone of the building was laid July 17, 1837, and the building completed in 1840. Lack of income on the endowment prevented its opening until 1865. Dr. John Cooke Hirst, 2d, is now physician-in-charge.

ACCORDING TO THE Associated Press of June 6, Professor Herbert Olivecrona, celebrated Swedish surgeon, performed his one thousandth operation for brain tumor. The report states that he has operated on more than 3000 heads. It is unfortunate the gentleman does not live in the United States or he might have been called in to operate upon some sore heads incident to the Republican and Democratic National Conventions recently held.

THE 1936 GRADUATE FORTNIGHT OF THE NEW YORK ACADEMY OF MEDICINE, which will be held Oct. 19 to 31, will be devoted to a consideration of "Trauma, Occupational Diseases, and Hazards." Twenty-three important hospitals of the City of New York will present co-ordinated afternoon clinics and clinical demonstrations. A complete program and registration blank may be secured by addressing Dr. Frederick P. Reynolds, New York Academy of Medicine, 2 East 103d Street, New York City.

AT THE ANNUAL meeting of the American Gynecological Society held at Atlantic City, May 26, the following officers were elected: President, Dr. Fred J. Taussig, St. Louis; first vice-president, Dr. George W. Kosmak, New York; second vice-president, Dr. Sidney A. Chalfant, Pittsburgh; secretary, Dr. Richard W. Telinde, Baltimore; treasurer, Dr. William C. Danforth, Evanston, Ill.; and members of council, Drs. Benjamin P. Watson, New York, Hilliard E. Miller, New Orleans, and Norman F. Miller, Ann Arbor, Mich.

AT THE 32D ANNUAL MEETING of the Advisory Board of Anatomists of the Wistar Institute of Anatomy and Biology held in Philadelphia, June 8, plans for the creation of a nutrition department were announced by Dr. Milton J. Greeman, director of the institution. The new department will devote special study to the food problem not only in animals but also of mankind. One branch of the department will be at the laboratory of

the Wistar Institute while another will be at the Effingham B. Morris Biological Farm, near Bristol, Pa.

AT THE NINETY-SECOND ANNUAL MEETING of the American Psychiatric Association, which was held in St. Louis, Mo., May 4 to 8, the following officers were elected for 1936-1937: President, Dr. C. Macfie Campbell, Boston, Mass.; president-elect, Dr. Ross McC. Chapman, Towson, Md.; secretary-treasurer, Dr. William C. Sandy, Harrisburg.

The ninety-third annual meeting will be held in Pittsburgh, Pa., at the William Penn Hotel, the latter part of May or the beginning of June, 1937, the exact time to be fixed at a later date.

ACCORDING TO THE *Philadelphia Inquirer*, the commencement exercises of the Federalsburg (Md.) High School were spread over 3 evenings. At the formal commencement exercises, instead of a guest speaker, 4 members of the class were selected to speak briefly on "The Functioning of the Principles of Education in Our High School"; "Health"; "Worthy Home Membership"; and "Worthy Use of Leisure Time."

It is most interesting that the subject of health was included. This local group is to be congratulated upon the far-reaching effects of this type of commencement exercises.

AT THE CLOSE OF THE PRESENT ACADEMIC YEAR, Dr. Elias P. Lyon, dean of the Medical School, retires from active service at the University of Minnesota. During his administration, covering a period of 23 years, the Medical School has exhibited steady and continued growth. As a fitting tribute to his stimulating leadership, the alumni and faculty of the Medical School propose to establish in his honor the Elias Potter Lyon Medical Lectureship at the University of Minnesota. The fund for this purpose is to be raised through subscriptions by alumni, faculty, students, and friends. Contributions to the Lyon Lectureship fund may be sent to Mr. William T. Middlebrook, Comptroller, University of Minnesota, Minneapolis.

CRAWFORD W. LONG MEMORIAL PRIZE COMMITTEE REPORT.—Inasmuch as no essays were submitted to this committee for consideration during the past year, there will be no award made of the Crawford W. Long Memorial Prize. The committee expresses the hope that there will be a large number of contestants this coming year.

The committee has decided to consider all essays read at the annual convention of this Association as being in the contest for this prize, unless the author of some particular essay especially desires to withdraw his essay from that contest. The requirements of the contest are that each essayist shall submit 5 copies of his essay, in order that each member of the committee may independently pass on the essay. These essays must be submitted by Oct. 1, following the annual convention of the Association. The secretary is requested to communicate by letter with each essayist requesting his 5 copies and urging him to send them to the chairman of this committee by Oct. 1. The secretary is also requested to state these requirements in the *Journal*, so that the essayists will be doubly reminded.—*The Journal of the Medical Association of Georgia*, May, 1936.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY announces the following election of officers to become effective July 1, 1936: President-elect, William Egbert Robertson; vice-president, Louis H. Clerf; associate vice-presidents, John DeCarlo, Robert J. Hunter, Franklin A. Weigand, Benjamin H. Shuster, and Leon Felderman; secretary, Henry G. Munson; treasurer, R. Powers Wilkinson; directors (elected for 3 years), Stanley P. Reimann, Edward L. Bortz, Francis F. Borzell; (elected for 1 year), Michael A. Burns; censors (elected for 5 years), William E. Hughes; (elected for 3 years), Charles F. Nassau; district censor, W. Wayne Babcock; delegates, Francis Ashley Faught, Ruth Hartley Weaver, Joseph T. Cadden, David J. Boon, Basil R. Beltran, Paul J. Pontius, Frederick S. Baldi,

Edward W. Beach, Herbert T. Kelly, Myer Solis-Cohen, and Walter S. Cornell.

MOSES TAYLOR HOSPITAL.—Nearly 200 physicians from all parts of northeastern Pennsylvania joined the staff of the Moses Taylor Hospital, Scranton, on the occasion of the formal opening of the new and remodeled wings of that institution on May 22. A buffet luncheon was served. Dr. J. Norman White, surgeon-in-chief of the institution, introduced as guest of honor Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, who delivered an address on some of the problems of medical and hospital care.

All the improvements to the hospital were provided by the beneficence of Mrs. Moses Taylor, New York, whose father-in-law, Moses Taylor, Sr., was the philanthropist who created the original endowment with which the hospital was founded. Moses Taylor Hospital serves the medical and surgical needs of employees of the Lackawanna Railroad and the Glen Alden Coal Company, both of which companies make contributions to the expenses of the hospital.

THE FOLLOWING PENNSYLVANIANS were elected to office during the meeting of the American Medical Association held in Kansas City: Section on Laryngology, Otology, and Rhinology, Dr. Robert F. Ridpath, of Philadelphia, chairman; Section on Pediatrics, Dr. Ralph M. Tyson, of Philadelphia, chairman; Section on Gastro-enterology and Pathology, Dr. Harry L. Bockus, Philadelphia, vice-chairman, and Dr. Frank G. Ruinyeon, Reading, alternate delegate; Section on Radiology, Dr. Willis F. Manges, Philadelphia, delegate to the fifth International Congress of Radiology.

Awards in Class 2 were made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of excellence of presentation. Under this class the silver medal was awarded to Drs. John O. Bower, John C. Burns, and Harold A. K. Mengle, Department of Research Surgery, Temple University School of Medicine, for an exhibit illustrating the treatment of spreading peritonitis complicating acute appendicitis.

In the golf tournament, the championship 6 flights low gross was won by Dr. Lloyd W. Pumphrey, of Pittsburgh, who gained the St. Louis Trophy. Another winner was Dr. Willis F. Manges, of Philadelphia.

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

MEDICAL TREATMENT OF GALLBLADDER DISEASE. By Martin E. Rehfuss, M.D., clinical professor of medicine at Jefferson Medical College, Philadelphia; and Guy M. Nelson, M.D., instructor of medicine at Jefferson Medical College, Philadelphia. 465 pages with 113 illustrations. Philadelphia and London: W. B. Saunders Company, 1935. Cloth, \$5.50 net.

Inasmuch as the commonest disorder of the upper abdomen is gallbladder disease and since many cases either are not surgical or will not submit to surgery, there is a need for a well-planned program for the medical management of this disease. The authors who have treated several thousand cases of this disease are qualified to give authoritative information on this subject.

In the first 8 chapters of this volume they describe the methods essential to diagnose gallbladder disease. The technic of each of the various methods used in diagnosis is clearly described in detail.

The rest of the book is devoted to the medical treatment of the diseases affecting this organ of digestion. This is a complete and concise discussion of the many problems essential to successful management of gallbladder disease.

(Concluded on page xiv.)



M A P H A R S E N

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BOOK REVIEWS

(Concluded from page 844.)

The book is very readable and well illustrated. It is highly recommended, especially for the general practitioner.

SURGICAL CLINICS OF NORTH AMERICA.

Issued serially, one number every other month. Vol. 16, No. 1. Chicago Number—February, 1936. 356 pages with 78 illustrations. Per clinic year February, 1936, to December, 1936. Paper, \$12; cloth, \$16 net. Philadelphia and London: W. B. Saunders Company, 1936.

This volume constitutes the Chicago number. The 7 articles which make up the symposium on Cancer of the Cervix are most laudable contributions from the Department of Obstetrics and Gynecology of the University of Chicago, and the Chicago Lying-In Hospital.

An article by Dr. Arthur Dean Bevan on "The Present Status of the Problem of Appendicitis" contains a very informative history of appendicitis.

There are other articles covering various topics pertaining to surgery.

CLINICAL HEART DISEASE. By Samuel A. Levine, M.D., F.A.C.P., assistant professor of medicine, Harvard University Medical School; senior associate in medicine, Peter Bent Brigham Hospital, Boston; *etc.* 445 pages with 97 illustrations. Philadelphia and London: W. B. Saunders Company, 1936. Cloth, \$5.50 net.

The problem of heart diseases is always well out in front, and a valuable treatise on this subject is always acceptable.

This volume covers most efficiently the clinical aspects of heart disease. Each chapter is completed as to the subject matter it covers.

This book is recommended to all physicians.

ALLERGY OF THE NOSE AND PARANASAL SINUSES.

A monograph on the subject of allergy as related to otolaryngology. By French K. Hansel, M.D., M.S., assistant professor of clinical otolaryngology, Washington University School of Medicine; Fellow of the Association for the Study of Allergy, the Association of Resident and Ex-resident Physicians of the Mayo Clinic, the American Laryngological, Rhinological, and Otolological Society, and the American Academy of Ophthalmology and Otolaryngology. With 58 text illustrations and 3 color plates. St. Louis: The C. V. Mosby Co., 1936. \$10.

Essentially a treatise for the otolaryngologist who is interested in allergy, this volume contains 35 chapters, one of which is devoted to "Allergy and Immunity in Ophthalmology."

Beginning with a review of the fundamental principles of pharmacology, biochemistry, immunity, and histopathology of allergy as related to the nose and paranasal sinuses, the author continues with the different phases relating to allergy of the nose. He is to be complimented upon the special attention given to the allergy and infection of the paranasal sinuses in children.

Hay fever is carefully reviewed in 3 chapters—the chemistry of pollens, immunology, symptomatology, diagnosis and treatment are presented. The discussion of the various forms of treatment to date is well handled.

Finally the writer cites a group of cases illustrating some of the clinical types, with diagnosis and treatment of allergy of the nose and paranasal sinuses.

Concentrating in one volume a comprehensive review of the subject to date, this book offers a valuable addition to the otolaryngologist's library.

PASSIVE VASCULAR EXERCISES AND THE

CONSERVATIVE MANAGEMENT OF OB-LITERATIVE ARTERIAL DISEASES OF THE EXTREMITIES. By Louis G. Herrmann, A.B., M.D., assistant professor of surgery, College of Medicine of the University of Cincinnati and the Cincinnati General Hospital; director of the Vascular Disease Clinics of the Cincinnati General Hospital and the Christian R. Holmes Hospital of the University of Cincinnati. J. B. Lippincott Company, Philadelphia.

The field of endeavor included in this monograph is demanding more and more attention of the practitioner, and this book is very satisfactory for the purpose intended. The text is amply illustrated.

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THE CLINICAL SIGNIFICANCE OF SKELETAL ROENTGEN-RAY ASSESSMENT IN CHILDREN*

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A person who confesses to making roentgen-ray examinations of more than 1000 perfectly well children annually in a program now completing its first decade should have very good reasons for incurring so tremendous a cost. These very good reasons will be outlined, for the addition of the roentgenogram to the battery of tests of fitness thoroughly justifies its cost. To be profitable, however, roentgenography of the skeleton must be carefully planned both in scope and in technic. A haphazard roentgen-ray study will give some information, of course, though strikingly little and usually equivocal. It is because roentgenography of the skeleton of the growing child has been haphazard that it has never really commanded the attention it deserves.

MEASURES OF BODILY MATURATION

Roentgenograms of the hands of 2 apparently healthy girls, age 12 (SS 1813 and SS 171 F), will show considerable discrepancy in development and give the impression that individual differences are discouragingly great. But just as 2 children of the same age may differ greatly in stature, so they may differ in maturity. That there is a real difference between these 2 is evident from the fact that the more advanced in skeletal maturity reached her menarche at age 11 years, 4 months, the other at age 12 years, 9 months. If, however, both chronologic age and stature are forgotten for the moment, each of these girls may be given a maturity rating in terms of union of epiphyses. In the more advanced union has already occurred in the epiphyses of all phalanges and metacarpals though not in the radius and ulna. In the less advanced there is no union in any of the epiphyses.

A roentgenographic comparison of the hands of 2 boys (SS 172 H and SS 3310) of identical age, namely 16, likewise shows differences of the same type. In SS 172 H all epiphyses for terminal phalanges are united, and the gaps between shaft and epiphysis on all middle and proximal phalanges are much narrowed. In SS 3310 no epiphyses are united and no gaps are narrowed.

Differences may exist not only between the stages reached by 2 girls or 2 boys of the same age but also between an adolescent boy and an adolescent girl of identical age.

The fact that we know the chronologic age of children handicaps our freedom of thought on the subject of maturity. Suppose we turn to a roentgenogram of the hand of our chimpanzee Claudius, whose mission in life is to keep in good health and tolerably adjusted, socially speaking, so that he will permit himself to be roentgen-rayed like the children at definite dates in the year. We do not know his birthdate. He came from the African jungle when he was young and has lived with us for 5 years. The stage of maturity shown in this particular roentgenogram of his hand is the same as that of the more mature of the 2 boys. But the roentgenogram of that boy (SS 172 H) was chosen because it represents the stage of skeletal maturity seen in the majority of Cleveland boys at age 16 who enjoy good constitution and reasonable economic security. We may then adopt this roentgenogram as representing a standard maturity for Cleveland boys at age 16. And we can express the maturation of the chimpanzee in human years by the same figure although at the date the ape's hand was roentgen-rayed we judge him to have been only age 7.

Thus we may set about the construction of a skeletal maturity rating table similar to the tables of height and weight. Usually there are

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

reservations on height-weight tables which assert that, although they may be adequate enough for the locality where they were constructed, they are scarcely acceptable for every locality.

If, however, these height-weight tables are considered as measures of progress rather than of status, we can make them serve our purpose in any locality by merely transposing them a year upward or downward as best fits the mass data on stature and weight of the children to whom we have to apply them.

This principle is well enough recognized in allowing the differences in skeletal maturity between girls and boys of identical age. Having obtained, as the result of investigation of a suitably large number of children, modal values of skeletal maturity for successive ages, we may assess the maturity of any child in terms of the table thus constructed. We may turn this argument around and examine the hand roentgenograms of 2 clinically healthy girls (SS 171 H and SS 3327 A) at the same phase of skeletal maturity. They are by no means of identical age. In the example chosen the larger hand is that of a girl, age 13, the smaller that of a girl, age 19, yet both are at the 13-year phase in skeletal maturity.

The question arises as to what may be the relation of skeletal to general bodily maturity. The latter is difficult to define and is usually stated in terms of sexual maturity. By far the great majority of girls in Cleveland reach the menarche when the skeletal roentgenograms show the stage of maturation defined on our standard scale as 13 years, 6 months. A leeway of 3 months is allowed on each side of this figure for errors in roentgen-ray interpretation.

There are girls who show no recognizable defects either of skeletal or general bodily maturation whose menarche does not arrive on time. The hand roentgenogram of a girl (SS 2587 C) at age 15 years, 7 months, is perfectly normal in all respects yet her menarche did not occur until age 15 years, 6 months. Rare cases like this cannot at present be satisfactorily explained. Doubtless the endocrine balance responsible for bodily maturation and appearance of the menarche is quite complex, and in this complexity lies the solution of the difficulty.

Naturally to get skeletal roentgenograms in standard form for ready analysis and interpretation a uniform technic must be employed. This has already been described under the title of "Roentgenographic Appraisalment" in Vol. IV of the White House Conference Reports on Development of the Child.

Although, as a rule, a hand roentgenogram will give most of the necessary information, the

extension of the method to elbow, shoulder, foot, knee, and hip results not only in greater confidence of appraisalment but illustrates a further and very significant feature in maturation. Some children are quite easily assessed; all the roentgenograms are rated on the standard tables as of identical maturity value. But there are children—and these are the children most likely to appear in a pediatric clinic—whose roentgen-ray assessments cover a relatively wide range, for instance, between 12 and 24 months on the standards employed. At first we considered this phenomenon to be a measure of the error of observation. After long experience, we now know that children who do not enjoy a high degree of constitutional fitness characteristically show this scatter in appraisalment. They evince a constitutional instability which, when present in more pronounced form, becomes a retardation in maturity below that of the healthy majority. It is well recognized that hypothyroidism results in retardation, but nothing could be more stultifying to the proper investigation of a retarded child than the assumption that hypothyroidism is the only cause of this defect.

So far examples of maturation have been taken from the adolescent period alone, because assessment can be made by the comparatively simple method of observing whether or not the several epiphyses are united. In the grade-school period no epiphyses are united, and it is necessary to study the problem more attentively in order to obtain reliable criteria of maturation. The epiphysis is at first wholly cartilaginous though presenting a shape practically identical with that which it will have in adolescence when it has become entirely transformed into bone. Bone appears in an epiphysis as a more or less centrally placed point of mineralization which at first grows by peripheral accretion of mineral and then gradually takes on the adult outlines as mineralization extends into the peripheral portions of the cartilage.

Comparison of standard stages in the penetration of the knee epiphyses by bone in boys, ages 6, 9, and 12 respectively, illustrates how the contours of bony epiphyses and underlying shaft ends change with progressive maturation. They are taken from a forthcoming atlas of skeletal maturation now being prepared as the result of the 10 years of study at Western Reserve University. It is easy to understand from these samples that increasing experience will enable one to assess with confidence even 6-month steps in the progress of maturation as well as to extend the standard phases downwards in earlier childhood until age 3 is reached.

Furthermore, inasmuch as epiphyses ossify in batches or sheaves at successive dates of infancy and preschool life, the occurrence of ossification in the several epiphyses enables us to appraise maturation phases in children under age 3. The interpretation of ossification in epiphyses, however, is not the relatively simple procedure that those who issue tables, usually conflicting, of epiphyseal ossification dates would imply. It is not a problem to be solved by statistical method, and the simple average leads nowhere. At this stage of childhood, when gain in body size—though not great in absolute dimension—is very considerable when expressed as a percentage of the dimension on which it is computed, the maturation value given by contour or even the occurrence of epiphyseal mineralization is subject to many disturbing factors. Just as the eruption of teeth may be erratic and show a marked deviation in sequence from that which is characteristic of the majority, so the several epiphyses may ossify in disorder.

No really helpful table of sequence can be made from the chance expressions of disorder which alone have formed the basis of all tables of epiphyseal ossification hitherto published. Reliable standards can be constructed from the accumulation of adequate data from long-term studies of children whose clinical, domestic, and economic histories are integrated into the study of skeletal maturation. It is because of the long-term nature of an investigation fulfilling these rigorous requirements that we have contented ourselves with a provisional table in the article on the skeleton published in Vol. II of the White House Conference Reports on Development of the Child. This we expect no one to accept but, on longer experience, it proves very close to truth. In that table the successive sheaves or batches of ossification centers are listed. We have not yet satisfactorily explained why some sheaves are large and others small. We know, however, that severe constitutional disturbance will wipe out a sheaf in its entirety and a less pronounced disturbance will mutilate the sheaf by holding back one or more of the centers. Once delayed in appearance the missing centers do not take precedence over those successively appearing but are first seen on later roentgenograms after a lapse of time which roughly measures the restoration of depleted mineral reserve.

MEASURES OF MINERAL RESERVE

It is clear that just as there must be stores of fat and glycogen in the body there must also be stores of mineral. These stores of mineral are in the metaphyses or subepiphyseal areas of the

bone shafts and in the so-called cartilage bones themselves.

Another glance at the hand roentgenograms of the 2 girls mentioned as exhibiting a maturation stage of 13 years demonstrates that the texture of the spongiosa in one (SS 171 H) is a suffused gray while that of the other (SS 3327) shows the network of the cancellous tissue quite clearly. The structure of SS 3327 might be likened to that of chicken wire and the texture of SS 171 H to chicken wire coated with snow. The snow on the chicken wire is the labile mineral ready for transference to areas of growth. After a severe and sudden disturbance such as fracture, the cancellous network may be denuded of its roentgenographic gray sheen in 2 weeks, and even in fulfillment of slower demands like those of pregnancy this labile mineral may be removed or restored in 6 weeks.

In order to compare roentgenograms with each other for appraisement of mineralization the processing of the roentgenograms must be carefully standardized. For this purpose a gauge of aluminum graded in steps each of 1 mm. in thickness is useful. Many forms of this densimeter or penetrometer have been devised. It is not used as a measure of density of mineralization but of comparison in processing. If the processing of 2 roentgenograms results in identical density of roentgen-ray shadows, the structure of the cancellous textures may be compared directly. The roentgenograms may show identical mineralization or, as in the instance just recorded, one may show the network of the spongiosa denuded of labile mineral whereas the other may present a network more or less heavily surcharged with reserve mineral. By this technic it is quite possible to assess qualitatively the available resources of mineral in any bone. In children who present an alimentary form of allergy there is very little labile mineral reserve. The labile reserve is also liable to great depletion in infancy, pregnancy, and lactation, all being periods of life when mineral absorption is apt to be inadequate.

The controlling influence over this mineral reserve seems to be bound up in the pituitary-parathyroid-vitamin D complex. Vitamin D appears to bear a special relationship to the mineralization of growing bone ends and epiphyseal ossifications. This difficult and complex problem cannot be discussed in this paper; its exposition must be set forth in other communications. Rickets is not a simple deprivation of mineral from the growing ends, a condition which is often met with apart from clinical symptoms. Indeed the first clinical indication

may be spasmophilia. But again we must leave a fascinating theme upon its very threshold.

MEASURES OF CONSTITUTIONAL DISTURBANCE

When a young animal undergoes long-continued partial starvation, the growth pattern is first dislocated. That is to say gain in dimension is inhibited. This is readily shown in animals on an inadequate ration of some essential food element. The animal may be receiving adequate amounts both of mineral and of vitamin D but, in consequence of its undernutrition, does not gain in dimensions though both mineralization of the bones and histologic integrity of the growing areas are maintained.

If the disturbance of growth is quite temporary, a condition readily produced by deprivation of water as shown by H. A. Harris (*Bone Growth in Health and Disease*, London, 1933, pp. 36-38), mineral is concentrated at the temporarily inhibited growth face of the shaft instead of being distributed over an adequate area. This results in the formation of a transverse line or scar of dense mineralization described by E. A. Park and J. Howland in the *Bulletin of the Johns Hopkins Hospital*, 1921, Vol. 32, pp. 341-344.

Such lines follow any disturbance sufficient to cause temporary growth inhibition. The cause may be dietetic, directly or indirectly affecting the alimentary canal, or it may be due to trauma

of the limb such as fracture or operative procedure. Interference lasts only a week or so and no permanent disability ensues. The line is ultimately absorbed, but until its disappearance it may be identified in roentgenograms taken at intervals as a white mark receding from the growing shaft end and thus registering the velocity of dimensional gain. By this method it is possible to identify accurately the rate of gain in that particular bone. Studies of this type carried out by W. B. Seymour and myself show a remarkable and unexpected constancy of annual growth in the several long bones of the limbs. It is a method which will be of great service in guiding the orthopedist in his plastic operations on the limbs.

SUMMARY

The clinical significance of skeletal roentgen-ray assessment in children finds expression under 3 main headings.

1. Appraisalment of the bodily maturation phase and evaluation of constitutional fitness as a check upon stature, weight, and age.

2. A measure of the mineral reserve and integrity of the growing areas.

3. A record of disturbances in dimensional gain and a measure of the rate of growth of individual bones.

2109 Adelbert Road.

ARTIFICIAL ANKYLOSIS OF JOINTS*

JOHN A. HEBERLING, M.D., PITTSBURGH

The artificial ankylosis of joints, or arthrodesis, was first performed in 1878 by Albert of Vienna, who successfully fused the joints of the tarsus for paralytic deformity of the foot. In 1911 Russell Hibbs of New York demonstrated that the knee joint destroyed by tuberculosis could be successfully fused, and soon afterward Fred. H. Albee developed the bone graft to a high degree of efficiency and made practical the extra-articular fusion. In 1931 DeForest Smith and Cleveland of New York demonstrated the practical application of arthrodesis of the knee joint in destruction following neurotrophic arthropathy, the Charcot joint.

INDICATIONS FOR ARTHRODESIS

The chief indications for arthrodesing and stabilizing operations on the various joints are

- (1) instability and deformity, (2) disease, (3) static deformities, and (4) trauma.

Infantile paralysis produces the greatest number of cripples and is the chief source of unstable and deformed joints which require fixation of one type or another. In these cases the operation is a physiologic one. Its aim is to restore stability to the weak member and at the same time correct existing deformities which may be present and fix the joint in the best possible position for function—whether it be weight bearing or the ability to use better the non-paralyzed muscles of the affected member, which may be fairly useful with the flail joint fused.

Spastic or cerebral paralysis produces unstable, deformed, and poorly functioning extremities. In these cases fixation or stabilization not only enables the patient to walk better and use the upper extremities to better advantage, but also improves the mental outlook and

* Read before the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

decreases the tendency to general nervous instability.

In congenital deformities 2 objects are accomplished: The malformation is corrected as well as possible and a more nearly normal appearance is produced, and the member is fixed in a position which will result in the best possible function.

In joints which are unsound because of disease, the operation of arthrodesis is a corrective measure and should be regarded as an internal splint, preventing motion, making the process intra-osseous rather than intra-articular, and giving nature a chance to heal the lesion. Resection of joints, however, is in a sense curative and does remove a certain amount of diseased tissue, but it is best for those cases in which mixed infections are present.

Tuberculous joints, chronic arthritis with disintegration and proliferation, and neurotrophic joints cover the field of joint disease in which arthrodesis or fusion is useful. Joint tuberculosis, until rather recently treated by orthopedic surgeons by conservative methods, has become almost universally a surgical problem, even in children. The ideal end result in any tuberculous joint is complete bony fusion, and the slightest degree of motion in any joint affected by this disease is harmful because of the tendency to perpetuate the process. It is important to make a positive diagnosis in suspected tuberculous lesions, and microscopic examination of tissue removed from the joint in question offers the only safe and positive method. This procedure, if properly performed, carries no danger with it and can be easily done on most joints.

In many patients suffering from chronic arthritis with marked spur formation and disintegration, particularly when the process is limited to a single joint or region, fusion is indicated. Relief from pain and improvement in function are to be expected in these cases.

Joint fusion for neurotrophic arthropathy or Charcot joint is relatively new, and too much dependence should not be placed upon this procedure until more cases have been reported. The use of this method should be continued, however, for anything which can be done to relieve this bugbear of orthopedic surgeons is to be encouraged.

In static deformities, pronated and flattened feet form the chief field for fusion operations. Conservative methods should be carried out first in all cases, but if extreme deformity and disability exist or if the use of nonoperative methods has produced no results, operation should be done.

Trauma furnishes a large field for fusion operations. The conditions which commonly call for this type of treatment are crushing fractures of the vertebral bodies without cord damage; fractures of the os calcis into the subastragalar joint (this is the most frequent type); and old, malunited, painful fractures about the ankle joint which afford little hope of normal reposition and function but in which fusion of the ankle joint is likely to result in a useful, painless foot.

METHODS

Intra-articular arthrodesis is the most commonly used and the best method for most purposes. It should be avoided in diseased joints whenever possible, but for complete fixation it produces a much more secure union than the extra-articular method.

Extra-articular fusion produces obliteration of the joint by the construction of bony bridges outside the joint. This method is less secure than the true arthrodesis, but it has the advantage that there is no interference with the joint itself and that the infected area is not opened and disease allowed to disseminate or mixed infection to occur.

Arthrodesis is often combined with tendon transference to considerable advantage. The use of tendons alone as a means of fixation or stabilization is almost never successful. It is probably true that the chief result accomplished by transference of tendons to new attachments, whether bony or to other tendons, lies in the loss of their power as a deforming agent and not in much increase in power after transference.

ANATOMIC LOCATION

The Foot.—Simple subastragalar fusion, subastragalar fusion combined with midtarsal arthrodesis (fusing the astragaloscaphoid and the calcaneocuboid joints), panarthrodesis of the astragalus, and the astragalectomy of Whitman are the most useful in this region.

Subastragalar fusion is rarely of much benefit when used alone except in mild paralyses with some tendency to lateral deviation of the foot at the heel. This operation, when combined with fixation of a portion of the tendo achilles through the tibia, drilling the hole from the back to the front and cutting off about one-half of the tendon 4 to 5 inches from its attachment to the os calcis, is very good for calcaneus deformity with a short leg. The foot can be fixed in the necessary amount of equinus to compensate for the shortening, and the implanted tendon effectively checks dorsal flexion.

The most useful method of fusing the foot is probably the triple arthrodesis or fusion of the subastragaloid joint combined with the astragaloscaphoid and calcaneocuboid arthrodesis. This operation prevents lateral deviation of the foot as a whole by fixing the subastragalar or calcaneo-astragalar joint, inversion of the forefoot by fusing the cuboid to the calcaneus, and eversion by fixing the scaphoid to the astragalus. A single incision can ordinarily be used, starting just below the external malleolus and running forward and dorsalward to the head of the astragalus. Some difficulty may be encountered in reaching the astragaloscaphoid joint with an everted foot, and in this case a small incision on the inner side is useful. It is also possible to strip the ligaments attached to the astragalus and displace the foot backward if there is some weakness of the calf with a tendency to calcaneus.

Panastragalar arthrodesis finds its chief use in the completely paralyzed foot without much deformity and with some power in the knee flexors, as paralysis of the quadriceps group is no contraindication to this operation. Many patients walk well with the foot fixed in equinus by locking the knee. The astragalus is completely removed from the tarsus and denuded of cartilage; the articular surfaces of the tibia, fibula, calcaneus, and scaphoid are cleaned off and the bone replaced. The chief difficulty in this operation lies in obtaining a firm fusion of the ankle joint. Care should be taken to place the foot in the right amount of equinus to compensate for the shortening. With the foot fixed at a right angle there is too much chance of the development of a calcaneus deformity, and this position also necessitates the use of an unsightly high-soled shoe.

The Whitman astragalectomy with backward displacement of the foot finds its chief use in paralytic calcaneus, either with valgus or varus deformity, old congenital clubfoot, and in some fractures of the astragalus. After the astragalus is removed, the important features in carrying out the operation are effective stripping of the ligaments attached to the posterior and lateral surfaces of the lower tibia and fibula, the proper fashioning of beds in the tarsus to receive the malleoli, and the correct position of the scaphoid in order to procure effective blocking against the tibia.

In all arthrodesing operations upon the foot the use of a tourniquet is almost obligatory in order to procure a bloodless field. No damage has ever been observed and both feet have been operated upon at one sitting with an Esmarch bandage in place longer than an hour. No such

liberties should be taken with the arm however. The secret of a good fusion lies in extending well through the joint from one side to the other and in thoroughly "chewing up" the articular surfaces with a small gouge after the cartilage has been removed. Wound closure can be well done with plain or chromic catgut in the skin. No inspection of the wound is necessary for 4 weeks, at which time it is our custom to change all casts and fix the foot in the position in which it is to remain. All casts are split entirely through from top to bottom, on one or both sides, shortly after operation and the extremity kept elevated for several days. Fixation for about 12 weeks is necessary, and weight bearing with the cast on may be begun about the tenth week. The best results are obtained if the patient is age 10 before the operation is performed.

In disease of the ankle, joint fusion can be accomplished by the intra-articular method, cleaning out the diseased area and removing the cartilage through 2 lateral incisions. Extra-articular fusion can be done by sliding down 2 grafts from the tibia into the tarsus, or the two methods may be combined. Extensive tuberculous disease of the tarsal bones may be treated by resection through the diseased area, but where there is no other bone focus, amputation is the better treatment.

The Knee.—The knee is fused most often for disease; the joint is not only stabilized but most of the diseased bone and infected soft tissue are removed as well. The U-shaped incision is made, the patellar tendon is cut through and the patella reflected upward, all diseased synovial membrane and fat pads are dissected out, the tibial and femoral articulations are denuded and shaped to mortise well, and the inferior surface of the patella is cleaned off and embedded at its lower border into a groove in the tibia. Considerable difference of opinion exists as to the best position of fixation and probably 5 to 10 degrees of flexion is the right answer.

The knee joint should not be stabilized in paralysis except in rare instances, marked back knee with increasing deformity being possibly some excuse. The knee fused in extension is useful in walking but is a decided handicap in sitting and a light brace answers all the necessary requirements.

The Hip Joint.—Arthrodesis of the hip joint is performed for 2 reasons: Stabilization, and obliteration of the joint in disease. There is occasionally the necessity for fusing a dislocated flail hip, but often reduction and hip shelving produce a result more to be desired and without the inconvenience of a stiff hip.

Extra-articular fusion of the hip joint is extremely useful in tuberculosis and extensive and painful osteo-arthritis. The use of the trochanter as a graft, shifting it upward and placing it in a bed prepared in the femoral head and the ilium, is an excellent method. The approach is easy, the joint is not opened, and a good fusion is usually obtained.

The Spine.—Fusion of the spine is conditional upon tuberculosis, scoliosis, certain fracture deformities, and some structural and congenital anomalies.

In tuberculosis of the spine all adults' and most children's spines should be fused. Certainly bony union does not occur in adults, and in children the fusion operation hastens the time of recovery and produces a stronger spine and one less liable to be the seat of recurrence.

The Hibbs method is by all odds the best in children and in most adult cases. The bone graft is useful in the cervical and lumbosacral regions and in some patients with extensive destruction where a sufficient amount of bone cannot be utilized from the vertebrae alone. In our clinic the diseased area and one healthy vertebra above and one below are fused. The patient is kept in bed 3 months and the spine protected by a cast or brace for 12 months.

Fusion of the spine for paralytic scoliosis is being used more extensively than ever before. The method of Hibbs is the best and may be combined with the use of small osteoperiosteal grafts or with small bone chips from an astragalus removed from another patient on the same operating day. Several fusions may be planned for the same day when an amputation is done, the only precaution necessary being a negative Wassermann reaction. The extent of the fused area is greater than in tuberculosis, the patient a much poorer operative risk, and the operation itself much more difficult to perform because of the distortion of the musculature. The deformity should be corrected as much as possible before operation, and after operation the patient should be placed in a bivalved cast prepared beforehand. In most cases this operation maintains the correction obtained and in many does away with the necessity of wearing a brace.

Among the congenital deformities of the spine amenable to treatment by fusion should be mentioned lumbarization and sacralization, large and impinging fifth lumbar transverse processes, congenital wedge-shaped vertebrae, spina bifida occulta, and spondylolisthesis.

Reduced fractures and dislocations in the cervical region and crushing fractures of the vertebral bodies are the common injuries to the spine requiring fusion.

Fusion of the sacro-iliac joint should be reserved for sprains and injuries resisting conservative treatment and for tuberculous disease of the joint.

The Upper Extremity.—In the upper extremity the shoulder is the most frequent location for arthrodesis. The flail shoulder is the principal indication, but a careful study of the scapular muscles should be made before operation is decided upon. If the muscles which rotate the scapula, the trapezius, and serratus magnus are preserved, a good functional result may be expected. The ability of the patient to shrug the shoulder makes the case a suitable one. In an arm paralyzed at the elbow and wrist, the operation is useless. The method is both intra- and extra-articular, the glenoid fossa and the head of the humerus are denuded, and the acromion is partly divided and placed in a bed in the humerus. The operation is best deferred until the patient has reached age 12.

Arthrodesis of the elbow is rarely done. In extensive tuberculous disease in adults a formal resection of the joint is performed and the elbow fixed at a right angle.

Fusion of the wrist is useful in both poliomyelitis and spastic paralysis, in faulty position due to destructive arthritis, and in tuberculous disease. The best position for fixation is a moderate amount of dorsal flexion. Transplantation of the flexors of the wrist to the extensors of the fingers and vice versa may be done advantageously in combination with wrist arthrodesis. The best method is the removal of a wedge from the radius and the proximal carpal bones, the scaphoid and the semilunar, and fixation with catgut through drill holes.

7046 Jenkins Arcade.

ABSTRACT OF DISCUSSION

PAUL B. STEELE (Pittsburgh): In considering the question of arthrodesis, the position of the ankylosed joint has to be taken into consideration in every case. Dr. Heberling mentioned the transplantation of tendons, particularly the tibialis posticus, into the tibia. This is not a serious operation—it involves children chiefly—but we must be very careful about the future outlook. Some years ago we transplanted the tendon of Achilles into the posterior portion of the tibia for calcaneous deformity, also lengthened the tendon as the tendon will not grow after it has been transplanted into the bone itself.

There was another question in Dr. Heberling's paper that was rather new, and that is the fusion of Charcot's joints. I do not believe in fusing them. In fact, I could never get a fusion and have thought that it was more or less a futile attempt. With the application of a walking caliper the knee joint will heal very favorably and look almost like a normal joint. At present we have 3 or 4 of these cases that have been treated conservatively, and the joints have returned to practically a normal condition.

Dr. Heberling very properly stressed the extra-articular fusion in infected joints. To ankylose the chronic arthritic joint is a very difficult procedure. After operating upon these cases the question of ankylosis is doubtful. If these joints are scarified a little they will fuse better, but a year later they sometimes still have a little motion. This is due to the fact that the operator is opening into the infected tissue rather than taking an extra-articular graft between the trochanter and ilium. This can be done by using the trochanter, turning the ilium down on the trochanter, or transplanting the trochanter upwards so that it meets with the acetabulum. In tuberculosis, fusion is the proper method of treatment under all conditions, particularly in tuberculosis of the spine, hip, and knee joints.

The most difficult joint to be ankylosed with arthrodesis in tuberculosis is the ankle joint. We have exposed and denuded them, and put grafts down across the joint, also connecting the os calcis with it; but the most successful results were obtained by making a posterior incision, taking a graft out of the posterior part of the tibia, drilling a hole down through the lower end of the tibia and into the os calcis, and countersinking the graft. These have fused invariably. Why the others did not fuse I do not know unless it is that we exposed too much tissue area.

The question of getting fusion in the shoulder joint is comparatively easy after it has been exposed. All that is necessary in the great majority of cases is to cut off the acromion process and sink it into the head of the humerus. Whether the patient is a working man or a child is very important in considering the position. The position is about 45 degrees and about 10 or 15 degrees past the longitudinal plane of the body. This permits the patient to bring the arm up and to reach around.

The ankylosis of the elbow depends upon whether the

patient is left- or right-handed and whether he is a laborer or not. The sex of the patient is also important. With a laborer holding a shovel in the right hand, it can be put at a lower angle. These things are all important to the individual.

The wrist joint is best when put in a position where the fist can be clinched tightly. There is then no difficulty in using the arm to the greatest extent.

In fusing the spine we prefer the Hibbs fusion to the bone graft. It eliminates an extra operation, exposes the articular facets, and eliminates the possibility of not getting a good solid foundation, which I have seen occur with large bone grafts.

In the cervical region or bodies of the vertebrae, it is very important to remove the articular facets. Thus a complete bony ankylosis is secured.

DAVID E. HOFF (Harrisburg): We all have trouble in arthrodesing the ankle joint. Consequently I decided to try a bone graft operation on either side of the joint, taking a graft from the tibia and cutting that graft in two lengthwise, extending it from the internal malleolus to the internal cuneiform on the inner side, and from the external malleolus to the cuboid on the outer side.

In tuberculosis of the knee joint, as well as all other joints, especially if the vitality of the patient is low, the more promptly operation is done, the more likely good results of fusion will occur.

DR. HEBERLING (in closing): Dr. Steele spoke of the fact that in transplanting the Achilles tendon it is often necessary to do a tenotomy. It is true that this has to be done occasionally, but that is a slight operation. I still believe that this fixation operation is a good one.

The fusion of the ankle joint is a difficult operation not only in the paralytic but also in the others, and the bone graft is very good.

BLOOD PICTURES IN MIDDLE EAR INFECTION*

With Special Reference to Differential Diagnosis and Prognosis

MAX M. STRUMIA, M.D., BRYN MAWR, PA.

One of the commonest pitfalls of the medical man is the generalization of an observation, that is, if a certain case or few cases have run a similar course and have for one reason or another greatly impressed the clinician, the tendency is to expect that all other cases of the same nature will run similarly. The same may be said of morphologic blood examinations. In order to avoid generalization of findings from a single case or from few cases in this presentation, the findings of the blood morphology of 113 cases of middle ear infection with mastoiditis will be analyzed, averaged per day of disease, and expressed graphically in order to obtain a comprehensive view of the findings and therefore enable us to draw more definite conclusions.

Previously the writer presented a paper on the value of the blood picture in infections in general.

However, the blood picture assumes particular significance in certain groups of diseases; it also varies with age. Therefore, this presentation will be limited not only to a disease but also to subjects from age 2 to 12. Although there are variations in this age group, these are not of such magnitude as to invalidate the analysis of results.

It has been erroneously believed that in children the neutrophilic picture, and especially the nuclear shift, is under normal conditions and in disease vastly different from that of adults. Very careful studies to this effect have definitely proved that the nuclear shift of children is similar to that of adults except that the limits of the variations allowed both under normal conditions and in infection are about twice the magnitude of those of adults. Thus, if the percentage of young neutrophils found in the adult runs to a maximum of 5 per cent, in the child we allow up to 10 per cent, although both these figures occur

* Read before the Section on Eye, Ear, Nose, and Throat Diseases of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

only exceptionally. In children the blood reaction is generally much more imposing than in adults. It is to be expected, therefore, that a similar stimulus will produce in the child a much greater reaction than in the adult, the character of the reaction remaining very similar.

Although it is essential that in interpreting the blood picture of patients suffering from infectious disease all the possible data should be utilized, certain elements of the blood formula are far more important and reliable than others. All of the data that may be derived from the study of

smaller group the Schilling index is taken into consideration, and in an even smaller one all 3 groups of data are properly evaluated.

It is the purpose of this presentation to show the relative values of these 3 groups of determinations with special emphasis on the third group, that is, that dealing with the occurrence of degenerated neutrophils in the circulating blood of children suffering with otitis media and mastoiditis, for the purpose of diagnosis and prognosis.

In the percentage of young cells will be in-

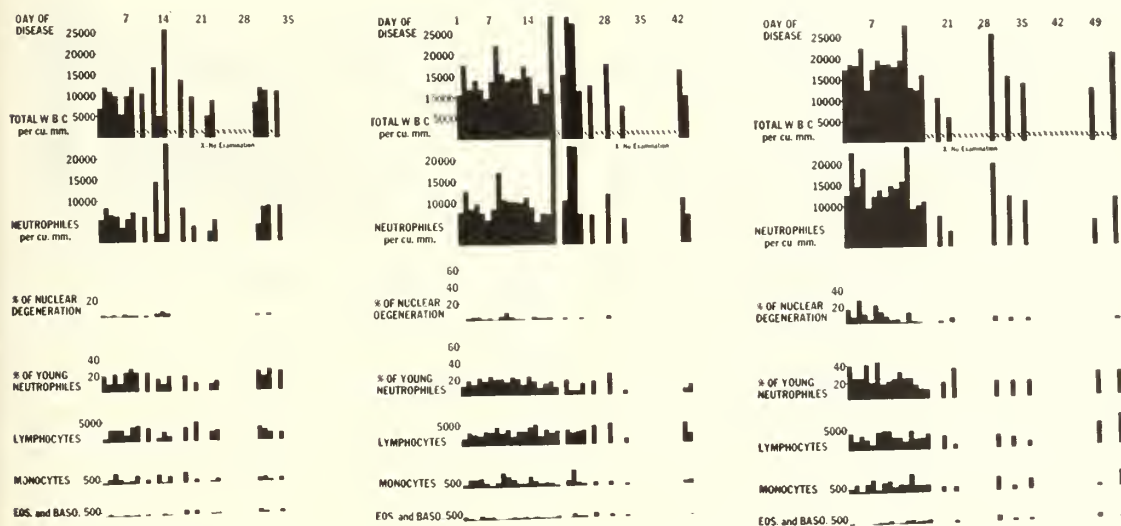


Chart 1.—Showing 23 mild uncomplicated cases. Average duration—17 days. Six patients operated upon. Of 6 cultures, 3 showed bacterial growth.

Chart 2.—Showing 37 moderately severe uncomplicated cases. Average duration—22 days. All patients operated upon; 33 showed bacterial growth.

Chart 3.—Showing 13 severe uncomplicated cases. Average duration—30 days. Eleven patients operated upon. Of 11 cultures, all showed bacterial growth.

circulating leukocytes may be grouped into 3 groups. First, the numeric variations expressed in absolute figures and the absolute number per cubic millimeter of the various types of cells, that is, the total leukocyte count, neutrophils, lymphocytes, monocytes, eosinophiles and basophiles. In the second group is placed the number of young cells of the neutrophilic series, that is, the percentage of not perfectly mature cells. This enumeration is usually referred to as the nuclear shift and comprises a number of schemes, such as the Arneth index, the Schilling index, *etc.* Finally, the third group includes the variations in the state of preservation of the neutrophils, that is, the percentage count of the number of cells that show alterations from the normal type of cell. The percentage of young neutrophils and of degenerated cells refers to the percentage referred to the total number of neutrophils and *not* to the total leukocyte count.

In the greatest majority of morphologic blood examinations the studies are more or less limited to the first group, that is, numeric counts. In a

cluded myelocytes, metamyelocytes, and rod-nuclears. The degenerative changes of neutrophils may be divided in 3 groups, hyperchromia of the granules, cytoplasm alterations, and nuclear degeneration. In studying otitic infections, Dr. Rosenwasser and Dr. Rosenthal came to the conclusion that a very important prognostic point may be derived by the occurrence in the neutrophilic cells of what they term toxic granules. It is stated in their paper that when 80 per cent of the neutrophilic cells show such granules this is indicative of an extremely grave prognosis. There has probably been some confusion between the 2 commonest forms of alteration of the granules of neutrophils. The first, already mentioned under the name of hyperchromia of granules, is the earliest sign of alteration occurring in the neutrophils during a toxemia. This alteration is a reversible process and does not necessarily mean that the cell is damaged in so far as function is concerned. It may, as a matter of fact, be an expression of hyperactivity such as is found in many other cells. These granules

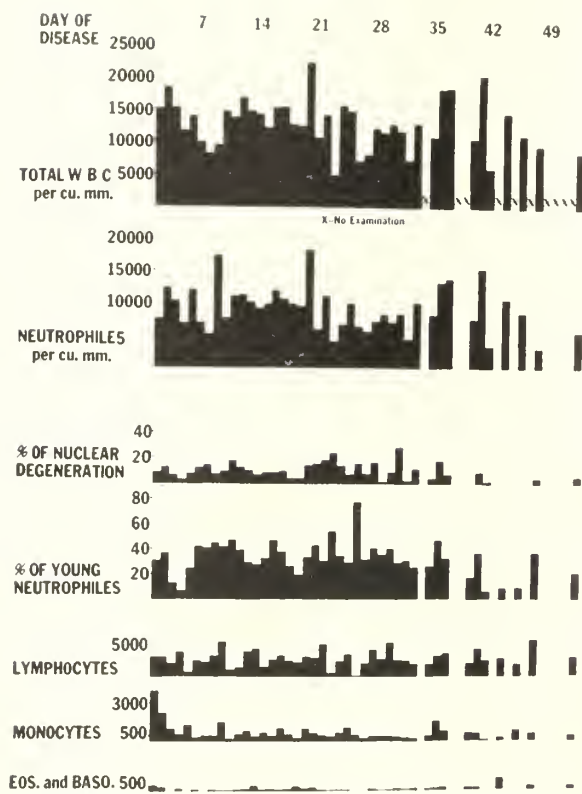


Chart 4.—Showing 11 very severe, often critical cases. Average duration—55 days. Two patients had hemolytic streptococcal septicemia. All patients operated upon. All 11 mastoid cultures showed bacterial growth.

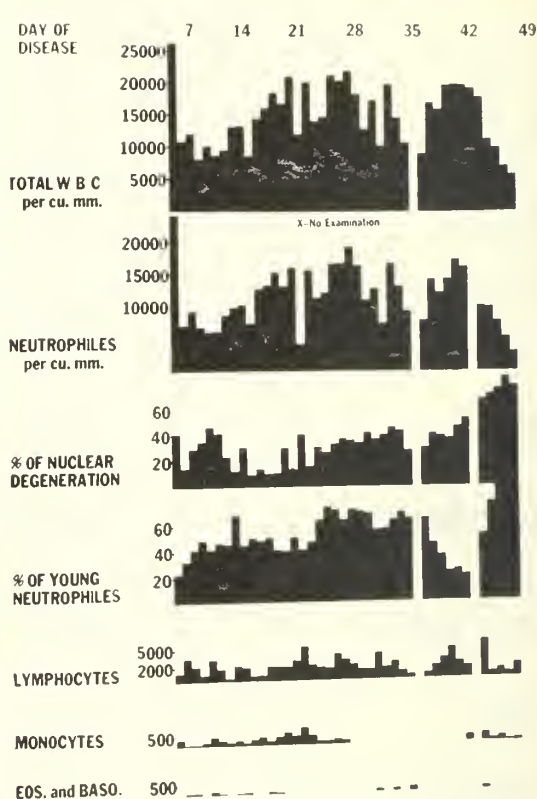


Chart 5.—Showing 6 fatal cases, 4 with severe terminal pulmonary complications and 2 with septicemia. Average duration—19 days. Five patients operated upon. Three cultures showed bacterial growth; one remained sterile; in one case no culture was made.

simply occur as somewhat larger neutrophilic granules staining a little more blue than the ordinary neutrophilic granule.

The other type of granule alteration is the appearance of very large, coarse, irregularly shaped granules which appear in the cell only when more severe changes of the cytoplasm and nucleus have already occurred. Inasmuch as there is some danger of confusing these 2 types of lesions in speaking simply of toxic granules, it is preferable to refer to the graver degenerative changes of the leukocytes as cytoplasm changes, which include swelling of the cytoplasm, colloidal dispersion, loss of granules, fusion of granules, vacuolation, and nuclear degeneration either with coagulation necrosis or the more common terminal swelling of the nucleus. The nuclear degeneration presents itself as a definite irreversible process of necrobiosis. Inasmuch as nuclear degeneration is not only the easiest to detect but the most constant in appearance, for practical purposes it is well to limit the study of the degenerated cells to this group; in this presentation nuclear degeneration means the percentage of neutrophilic cells showing an irreversible degenerative process of the nucleus. Any good Romanovsky stain should bring out these degen-

erative changes. It is, however, necessary that the cells be not overstained and that the smear be done in such a way as to avoid artificial breaking-up of cells, which might in a careless observation be interpreted as degenerative changes.

For the staining we prefer our own modification of the May-Grünwald-Giemsa method which stains the neutrophils rather lightly but delicately.

The 113 cases of middle ear infection have been divided in 7 groups. The first 5 groups are divided according to the severity of symptoms presented, the duration of the course, and the outcome. Thus Group 1 includes the mildest forms with a short, uncomplicated course, and Group 5 includes the fatal cases. Groups 6 and 7 are those showing, respectively, mild and severe pulmonary complications in the course of an otitis media. For each one of these groups the morphologic blood picture is studied under 7 headings, that is, total leukocyte count, absolute number of neutrophils per cubic millimeter, percentage of degenerated neutrophils, percentage of young neutrophils, absolute number of lymphocytes per cubic millimeter, absolute number of monocytes, and absolute number of eosinophils and basophils, always per cubic milli-

meter of blood. An average of more than 5 complete counts was done in each of the cases studied, and the findings of various cases in the same groups averaged for each day of disease. This was done to minimize individual variations in the counts. These same cases were also studied by plotting each individual curve without making daily averages, and the final conclusions were similar to those presented but somewhat more difficult to demonstrate.

In Group 1 there are the combined findings in 23 cases of mild uncomplicated middle ear infection with clinical and roentgen-ray findings of mastoiditis. The average duration in this group was 17 days. There were 6 patients operated upon; of these 6, 3 showed growth in bacterial cultures from the mastoids. The blood picture showed a white cell count between 10,000 and 15,000 for the entire duration of the disease except for occasional peaks to 15,000 and 25,000. The neutrophiles per cubic millimeter follow a course very parallel to the total white blood cell count, the neutrophile count being as a rule twice that of normal subjects of the same age group. However, the percentage of nuclear degeneration shows minimal values, barely above normal and only occasionally reaching 5 per cent. The percentage of young neutrophiles, on the other hand, remained constantly high, the mean values being

20 per cent throughout the duration of the disease. The absolute lymphocyte, monocyte, eosinophile, and basophile counts may be considered normal or slightly above normal throughout the duration of the disease.

In Group 2 are placed 37 cases of moderately severe uncomplicated course, the average duration being 22 days. All of these patients were operated upon, and 34 of the mastoid cultures showed growth. In these and all of the following groups the total white blood cell count and the total absolute number of neutrophiles per cubic millimeter are definitely higher than in the preceding group although not excessively so. The percentage of nuclear degeneration is somewhat greater, but values are as a rule hardly above the normal and always below 5 per cent. The percentage of young neutrophiles is very similar to the preceding group, and it has a tendency to remain even throughout the course of the disease. The lymphocytes, monocytes, eosinophiles, and basophiles in absolute figures are normal or slightly above.

In Group 3 there are summarized 13 cases showing a severe uncomplicated course. The average duration of this group is 30 days. Eleven patients were operated upon, and all showed bacterial growth in the mastoid cultures. The total white blood cell count and the total number of

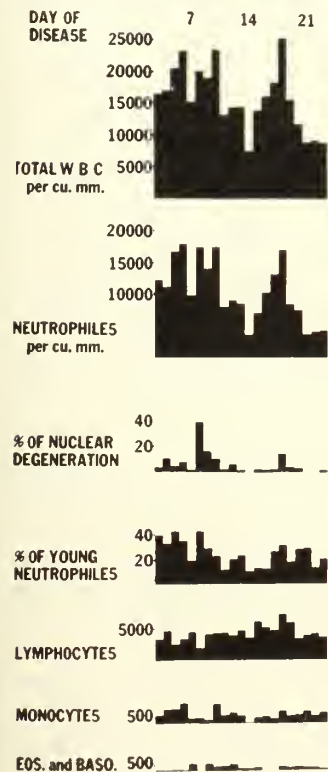


Chart 6.—Showing 13 cases with mild pulmonary complications. Average duration—20 days. Five patients operated upon; 4 showed growth in the mastoid cultures.

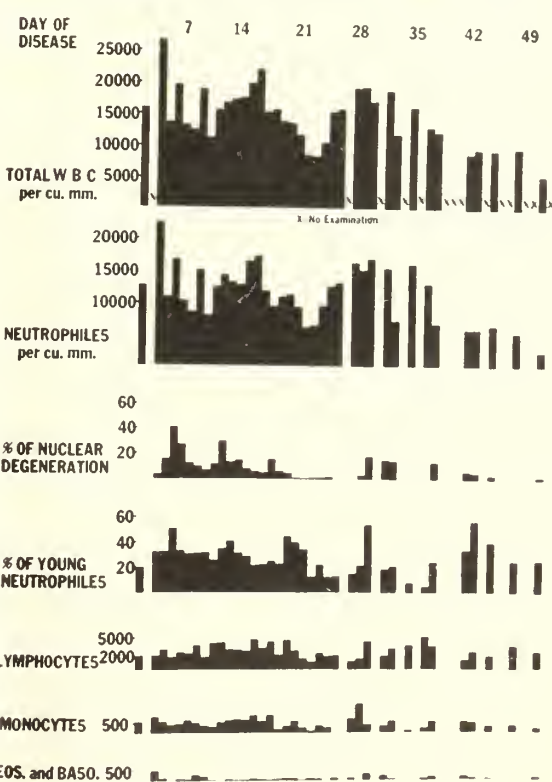


Chart 7.—Showing 10 cases with severe pulmonary complications. Average duration—51 days. Four patients operated upon. All mastoid cultures showed bacterial growth.

neutrophiles per cubic millimeter are slightly higher than in the preceding group although in the practice the difference is too small to be of much service. The percentage of nuclear degeneration is definitely higher, going occasionally above 20 per cent, but it has a tendency to drop rapidly and in all cases by the second week to figures comparable with those of the preceding groups. The percentage of young neutrophiles has a tendency to remain even throughout the duration of the disease, the minimum value being between 20 and 40 per cent. Lymphocytes, monocytes, eosinophiles, and basophiles show no characteristic changes from the preceding groups.

Group 4 includes 11 cases showing a very severe, often critical course. All of these patients were operated upon, the cultures from mastoids showing growth in every case. Two patients had streptococcic septicemia. The total white blood cell count and the neutrophiles per cubic millimeter are almost identical with the findings of Group 2, a much milder group. The figures for the nuclear degeneration are not higher than in the preceding group, but they have a tendency to remain high for a longer period of time. However, from the fourth week on they show a typical decrease, which is less evident and much delayed in the case of the percentage of young neutrophiles. Nothing is found in the behavior of the lymphocytes, monocytes, eosinophiles, and basophiles to set this group apart from the previous groups.

In Group 5 are 6 fatal cases. Two of these patients had hemolytic streptococcic septicemia; 4 showed severe terminal pulmonary complications. Of these, 3 patients were operated upon; all showed bacterial growth from the mastoids. The total leukocyte count and the total neutrophiles are in no way different from most of the preceding groups. However, in the percentage of nuclear degeneration, there is very faithful index of the progression of the toxemia in these cases. Note that the value of the percentage of nuclear degeneration is very high for approximately the first 10 days, shows a temporary decline mostly following operation, but increases thereafter steadily, reaching maximum values in the last weeks of life. It is exactly in this progressive increase in the percentage of nuclear degeneration that the most important unfavorable sign lies. In studying the percentage of young neutrophiles, you will note that these have a tendency to remain constant in levels except for some irregularities preceding and during the last few days of life. The absolute number of lymphocytes shows a slight decrease as compared with previous groups. The monocytes, eosinophiles, and basophiles also appear to be somewhat lower

in this group than in preceding ones. As a rule these differences are not large and not constant enough to be of much value in diagnosis or prognosis.

By reviewing the 5 groups together, the value of the various determinations at once becomes apparent.

The last 2 groups to be considered, that is, Groups 6 and 7, are cases showing pulmonary complications. Group 6 includes 13 cases of middle ear infection with mastoiditis complicated by mild pulmonary lesions. The average duration of these cases was 20 days; 5 patients were operated upon, 4 showing bacterial growth from the mastoids. The total white blood cell count and the neutrophilic count do not offer anything worthy of notice. The percentage of nuclear degeneration is below 20 except for one day, but has the usual tendency of cases with favorable course to drop rapidly. Once more the percentage of young neutrophiles shows a tendency on the contrary to form a rather flat plateau, that is, the values remain rather constant from day to day regardless of the progress of the disease to a favorable end. In the lymphocytes, monocytes, and eosinophiles there appears to be no typical change.

In Group 7 there are 10 cases of mastoiditis complicated by severe pulmonary lesions. The average duration was 51 days. Four patients were operated upon, and in all of these cases bacterial growth was obtained in culture from the mastoids. This group is strikingly similar to the preceding one except that the high values for the various types of cells are maintained over a longer period of time. Here the rapid drop of the percentage of nuclear degeneration forecasting favorable outcome is very striking. It appears to occur at a time when all other cellular groups showed practically no change, particularly the percentage of young neutrophiles. Comparison of Groups 6 and 7 readily shows the points already mentioned.

It will be seen that the only features of the morphologic blood examination which can be relied upon in all cases are the percentage of nuclear degeneration of neutrophiles and the percentage of young neutrophiles. The percentage of nuclear degeneration is by all means the best prognostic agent, being a very delicate index of toxemia actually existing. The percentage of young neutrophiles is somewhat better as a diagnostic index responding more readily to slight stimulus (toxemia of infection) but less reliable in the prognosis as it usually remains high even if favorable clinical changes have taken place. The reverse occurs more rarely. In fatal cases

there is a slight diminution of lymphocytes, monocytes, eosinophiles, and basophiles.

Bryn Mawr Hospital.

ABSTRACT OF DISCUSSION

CURTIS C. EVES, Philadelphia: From the standpoint of the surgeon the newer laboratory studies of the blood in acute middle ear and mastoid infections are most important. They afford a more definite picture of the resistance of the patient during the progress of the disease.

In many children suffering from acute mastoiditis the

temperature and leukocyte count are misleading. I have long believed that the interpretation of the leukocyte count should be revised. Dr. Strumia has shown that the total leukocyte count cannot be depended upon to assist in the very ill patient, but that the neutrophilic changes are of definite value.

If, as has been indicated, these newer studies of the blood in mastoiditis definitely point out to the otologist, before the clinical indications, when his patient is doing badly, then Dr. Strumia has done a great service.

This paper again emphasizes the importance of the close co-operation of the otologist and the laboratory.

NONCALCULOUS DISEASE OF THE GALLBLADDER*

GEORGE P. MÜLLER, M.D., PHILADELPHIA

Appendicitis and biliary tract disease, in frequency and importance, top the list in most surgical clinics. The problem in appendicitis concerns itself with the elimination of conditions causing pain in the right iliac fossa of a chronic or recurrent type and not arising from the appendix. Extreme care must be taken, however, to let no case of acute appendicitis escape early operation through an attempt to be overfine in diagnosis.

There can be no question regarding the necessity for operation in acute infection of the biliary tract, for established evidence of gallstones or for tumor. The problem of conservation revolves about the significance of chronic noncalculous cholecystitis and the justification of operation in this group.

It is difficult to develop an argument on physiologic grounds. There is no doubt that the gallbladder may be considered as a "factor of safety" in digestion and, when normal, regulates the pressure in the biliary passages, stores bile for purposes of digestion, and may have some influence in regulating the formation of bile. On the other hand, the removal of an anatomically normal gallbladder apparently does not produce a series of injurious effects. A certain proportion of patients suffering from symptoms attributed to the gallbladder recover completely and seem to remain well after cholecystectomy, the gallbladder appearing normal. The recovery has been attributed by some writers to the psychotherapeutic effect of the operation itself. Frank S. Mathews, some years ago, showed that cholecystectomy did not materially increase the life insurance hazard. More exact studies are needed to settle this issue between the physiologic and clinical point of view.

Apparently, the problem is one of correct diagnosis and adequate treatment, medical or

surgical, because the frequency of failure of cholecystectomy to relieve the symptoms of the patient with a noncalculous gallbladder showing minor lesions evidently is due to the fact that the symptoms are caused by a lesion other than that in the gallbladder. Osteo-arthritis of the spine, duodenal ulcer, spastic colitis, intermittent hydronephrosis and other diseases of the right kidney, or a high misplaced appendix, may be considered as important causes of confusion. In addition we must develop the recognition of certain irregularities in the action of the biliary tract itself brought out by Westphal and emphasized recently by Charles Newman, namely, a dyskinesia of either a spastic or atonic type. A knowledge of the important progress that has been made for some years concerning the physiology and functional pathology of the biliary tract gives a clearer understanding, as Newman puts it, of those cases of gallstone symptoms without gallstones, of "cholecystitis" with a normal gallbladder at operation, of hepatic neuralgia (hepatitis!), and of return of symptoms after cholecystectomy.

The main symptoms of biliary tract disease may be grouped under pain, jaundice, and flatulent dyspepsia. If the obvious group of stone colic with or without jaundice and the acute type of so-called empyema of the gallbladder are eliminated, there remains a large group of cases in which the symptoms embrace more or less clear evidence of colic, vague pain in the gallbladder region, flatulent dyspepsia, and certain laboratory findings as revealed by cholecystography and duodenal tube drainage. If the roentgen-ray evidence of stone is negative, the cases are grouped under the title of chronic cholecystitis with or without stones, the percentage of nonrecognition of stones by roentgen ray being high, as is well known.

Recently I examined a patient who 2 years previously had an attack of acute gangrenous

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

appendicitis, was operated upon, and the surgeon noted that the gallbladder contained many stones. Since the operation for appendicitis, she has had gallstone attacks with increasing frequency and yet cholecystography revealed a gallbladder with "impaired" functional action but no visible gallstones. The case is typical and surgical treatment obvious and imperative. But let us suppose, in another case, that the patient suffers from occasional colic and flatulent dyspepsia, and cholecystography shows a normal or impaired function of the gallbladder without evidence of stones. Are we justified in refusing operation because of the roentgen-ray findings, or shall we depend upon the clinical evidence? In the case cited the evidence was absolute, but ordinarily we are obliged to decide as to whether the symptoms are due to a chronic infection of the gallbladder with or without stones, to a dyskinesia of the biliary tract function, or to some disease other than that of the biliary tract.

There is no typical picture of gallbladder disease except the occurrence of stone colic coming in attacks with periods of vague distress and belching indigestion in between. A mere uncomfortable feeling in the epigastrium extending under the right costal margin, digestive disorders, especially after the taking of fatty foods, and other vague symptoms of this nature must be considered as atypical. Several years ago Brooks analyzed a small series of cases and found that when the clinical picture was typical there was marked pathologic change in the gallbladder in 84 per cent, whereas when the clinical picture was atypical the figure was 53 per cent. Fortunately in these atypical cases certain laboratory procedures are of great aid in diagnosis. There is no reason to discuss cholecystography in detail. It is an established procedure. It is important to note that cholecystographic evidence of a normally functioning gallbladder does not exclude the possibility of a pathologic gallbladder, but generally such a finding in a case of atypical evidence of chronic cholecystitis indicates the necessity for the rigid exclusion of lesions outside of the gallbladder or the study of the patient from the standpoint of dyskinesia. Typical clinical signs and evidence of a non-functioning gallbladder are sufficient to make the diagnosis, but in the absence of typical symptoms the gallbladder may often show an absent or faint shadow upon one examination.

Duodenal drainage is of diagnostic value when the drainage reveals the presence of calcium bilirubinate and cholesterol crystals, but in the group under discussion—the noncalculous gallbladder—a high percentage of negative results will be obtained.

In a group of cases studied some years ago the van den Bergh reaction averaged 0.87, which is almost latent jaundice, but this is not of importance as a diagnostic test. The barium-meal examination of the stomach may give indirect evidence of gallbladder disease by showing the presence of adhesions between the duodenum. Naturally an active or healed duodenal ulcer must be excluded.

To repeat, pain is the major symptom by which the patient will seek relief. Associated will be an indigestion described as belching, epigastric fullness, pyrosis, mild nausea, *etc.* Generally, cholecystography and duodenal drainage should be done to aid the diagnosis. In a typical case of gallstones an operation is indicated. In an atypical case without the evidence of gallstone colic and without the evidence of functionless gallbladder, the case must be studied with extreme care to avoid errors in diagnosis.

A muscular tract is under nervous control and, as such, is subject to spasm from various causes. Furthermore, a hollow organ subjected to distention is liable to atony. From this premise we may conclude that the so-called sphincter of Oddi may go into spasm and the gallbladder ultimately become atonic. The effect of the first may be compared to pylorospasm. Newman describes spastic dyskinesia as producing moderate pain spreading across the costal margin. Although primarily right-sided, it may spread across to the left side and even radiate to the back. The most common confusion is with duodenal ulcer. Extra systoles are common. Cholecystography reveals a functioning gallbladder with delayed emptying. The stomach is hypertonic with pylorospasm. The gastric acidity is high normal. This spastic dyskinesia may be diagnosed with the above findings, the absence of ulcer on roentgen-ray examination, and the association of other findings suggesting a high-strung "spasmodic" temperament.

Atonic dyskinesia is most common in those patients of a viscerotonic type. There is continuous aching pain over the gallbladder and epigastrium. There is flatulence, poor appetite, and constipation. The stomach is hypotonic and relaxed and gives a low acidity. Cholecystography shows a long thin shadow with poor emptying power of the gallbladder. Probably in some cases the gastrohepatic omentum remains fixed and acts as the obstructing point when the liver and gallbladder ptose, producing a chronic distention and atony of the gallbladder. Gallstones rarely occur in the ptotic individual in spite of the gallbladder stasis.

Duodenal ulcer may resemble gallbladder disease by reason of the occurrence of attacks of

pain and gastric distress after eating. Pylorospasm, a penetrating ulcer, or adhesions to the gallbladder induce these symptoms. The pain attacks rarely are sufficiently severe to require morphine, and the sequence is more regular in its relation to food and food relief. The gastric analysis mostly reveals a high acidity. As this finding is very rare in chronic cholecystitis, its occurrence must be followed by roentgen-ray studies of the stomach and duodenum.

Chronic appendicitis with symptoms suggesting chronic cholecystitis is hard to differentiate. Probably the symptoms are largely those of spastic colitis. If the appendix is under suspicion, the barium enema is helpful not only in diagnosing the spastic colon but also in locating the high position of the appendix. An unrotating cecum, a mobile cecum, and a midline cecum are readily visualized and will aid in determining the position of the appendix even if this is not visualized.

As most patients with chronic gallbladder disease are in middle life, intercostal neuralgia from osteo-arthritis of the vertebrae will be encountered occasionally. The subject is rather complex and is covered in Carnett's paper published in 1927. Frequently the presence of bony changes in the spine will be detected by the roentgen-ray examination during cholecystography. These patients have various pains along the distribution of the sixth to the tenth right intercostal nerves, which may be attributed to a diseased gallbladder. If the presence of parietal tenderness is detected, attention should be paid to the possibility of this neuralgia. The pain is the important thing and not the indigestion, because very few normal persons of middle life are entirely free from some of the symptoms of dyspepsia.

Stone in the kidney and more particularly intermittent hydronephrosis simulate gallbladder disease. In the atypical case with a normally functioning gallbladder to cholecystography, a roentgen-ray investigation of the kidney and examination of the urine should be part of the diagnostic procedure.

What is termed spastic colitis or the irritable colon is also responsible for pain phenomena in the upper right quadrant of the abdomen. Colitis can be determined by the usual roentgenologic findings of spasticity in the early stages and the smooth, unstriated colon in the later stages. Last spring a physician presented painful attacks in the upper right quadrant and a roentgen-ray examination of the gallbladder showed gallstones. A cholecystectomy was done. Very shortly after the operation he presented similar symptoms and there was mucus and some blood

in the bowel movements. A barium enema showed the presence of a carcinoma of the transverse colon towards the splenic flexure. No doubt this patient had a quiescent gallbladder and the symptoms were those of distention of the colon behind the obstructing cancer.

Sometimes coronary occlusion gives symptoms which are mistaken for gallbladder disease. Mostly the patients are over age 50, the pain is more continuous, and it is apt to radiate to the arms. A previous history of angina pectoris is strong presumptive evidence of coronary occlusion. Dyspnea, râles, cyanosis, edema, and enlargement of the liver favor the diagnosis of coronary occlusion. The electrocardiogram may show conclusive changes.

Very recently I operated upon a patient who had symptoms of gallbladder disease and probable stones. Cholecystography showed a non-functioning gallbladder and there were indirect signs to the barium meal. The electrocardiograph suggested arteriosclerosis of the coronary vessels. It was thought that this patient would be best treated by removal of the gallbladder containing the stones, thus relieving him of the attacks of pain. At operation the gallbladder was found to be thin-walled and hardly diseased. Attention here might be called to the recent paper by Thomas Fitzhugh in which a number of cases are reported with marked benefit of the heart lesion after cholecystectomy.

In the case of supposed chronic gallbladder disease with atypical symptoms and especially if such are accompanied by a normal cholecystography or a shadow which is faint or which empties poorly, we should hesitate before advising operation until all means have been exhausted in locating a possible lesion outside of the biliary tract or until we are satisfied that the patient is not in the dyskinesia group. If the latter is of the spastic type much can be accomplished by regulation of the diet, particularly by avoiding the admixture of starches and fats and by giving belladonna. It is essential to know the gastric acidity. It seems to me that the diet need only be a well-balanced one designed to avoid irritation of the digestive tract as a whole. The matter of regulation of the fat content should be experimented with until the patient is taking that which is the most comfortable.

The atonic gallbladder should be treated along the lines of the treatment of visceroptosis with an endeavor to increase the weight, hold up the abdomen, and improve tone. When the cholecystographic response is poor and especially when the gallbladder shows no function, a cholecystectomy may relieve the patient by removing

an organ which anatomically produces trouble by reason of atony.

Further studies will show that the poor results after cholecystectomy of the noncalculous gallbladder occur mostly in the spastic dyskinesia group and in those patients who have a lesion other than that in the biliary tract.

1930 Spruce Street.

ABSTRACT OF DISCUSSION

EDWIN P. BUCHANAN (Pittsburgh): There is no question regarding the necessity of operation for acute infections of the biliary tract and for gallstones. The problem of the noncalculous gallbladder, however, is more difficult of solution. A fairly large percentage of these cases remain uncured following operation.

Dr. Muller has pointed out the importance of thorough study in these cases and the advisability often of medical treatment before operation. Some cases are so definite that operation is clearly indicated, but there are others in which the symptoms are extremely vague. In this group there should be ruled out lesions of the gastro-intestinal tract, urinary tract disease, coronary disease, arthritis of the spine, and neuritis. In other words, the trouble should be localized to the biliary tract. The necessity then arises of determining whether the symptoms are on a pathologic or functional basis.

In a series of 467 operative cases of gallbladder disease, 141, or 30 per cent, were of the noncalculous variety. Sixty-seven, or approximately half of these, had more or less typical attacks. The others complained of indefinite distress and gastric disorders.

In the instance of a sufficiently clear history of pain and definite localized tenderness, operation is justified. In recent years, cholecystography has aided greatly in diagnosis in the indefinite case. Unless there is definite stone shadow, however, diagnosis should not be made by roentgen-ray alone. Too often cholecystectomy is performed on the roentgen-ray findings in the absence of sufficient clinical symptoms. For example, a number of years ago I examined a patient who had been studied in a diagnostic clinic; on the strength of a roentgen-ray diagnosis, cholecystectomy had been advised. He gave a history of back injury followed by pain in the back but had no symptoms whatsoever referable to the abdomen. Dr. Muller has pointed out that proven calculi do not always give roentgen-ray evidence. It has more frequently been my experience that we imagine stone shadows where actually no stone exists.

In the absence of all jaundice or bile in the urine, the van den Bergh reaction is of no diagnostic value.

Furthermore, I have never placed much reliance on biliary drainage as an aid to diagnosis in noncalculous gallbladder disease.

If stones cannot be definitely proven by roentgen ray and the symptoms of pain and tenderness are not sufficiently clear to make a diagnosis, I do not urge operation. It has been said by some that the time to cure the gallbladder patient is before the formation of stone. I always have a feeling of satisfaction when a stone is unexpectedly found. Let the indefinite case continue with medical treatment until the patient is assured that he is not being benefited. He will then seek the surgeon and request operation even with the understanding that cure is not a certainty.

I regret that Dr. Müller did not discuss operative findings in noncalculous cholecystitis as this is important. Formerly I was much perplexed as to the proper procedure upon finding, at operation on the patient with indefinite symptoms, a relatively normal-looking gallbladder and would at times employ a middle course, namely, drainage. I have since changed my tactics.

A small percentage of these cases show unquestionable signs of fibrosis, a larger percentage show adhesions, some show enlargement of the regional lymph nodes, but in the great majority little or no gross pathology can be demonstrated. The surgeon who claims "thickening" in all gallbladders he removes is not honest with himself. I am frank to admit that, with the noncalculous gallbladder in my hand, I frequently cannot determine the presence of disease. Even the strawberry gallbladder, the removal of which generally cures the patient, cannot be diagnosed without examining the mucosa, and many gallbladders which are normal in appearance contain very small stones not palpable through the wall.

After having eliminated preoperatively all other possible lesions and having decided to operate, I remove the gallbladder regardless of its gross appearance unless other definite pathology capable of producing the symptoms is found.

The pathologist usually is kind to the surgeon, diagnosing most such gallbladders as chronic cholecystitis. But such a diagnosis does not guarantee the patient's cure. On the other hand, an occasional patient is completely relieved of symptoms by cholecystectomy in cases in which the pathologist has reported a normal gallbladder. I do not agree with the explanation of psychotherapeutic effect of operation.

If all the poor results following cholecystectomy in the noncalculous gallbladder occur in the spastic group, ruling out extrabiliary tract lesions, should we not adopt the procedure, as advised by Allen, of dilatation of the sphincter of Oddi accompanying cholecystectomy?

THE HISTIDINE TREATMENT OF PEPTIC ULCER*

FRANKLIN A. WEIGAND, M.D., PHILADELPHIA

The nature of peptic ulcer and the management of its treatment are under constant consideration by the thoughtful practitioner. Despite the tremendous amount of study as to its etiology, the underlying cause is yet to be dis-

covered. Various theories have been advanced, those occupying chief consideration at present being constitutional, neurogenic, infectious, vascular, and mechanical. No single theory, however, suffices to explain the many cases that occur. In most instances infection, emotion, or fatigue appear as causative factors with such

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

frequency that they must be constantly borne in mind in any attempt at treatment.

It is the nature of this disease to be chronic, evidencing activity which is more or less periodic. Untreated cases often become quiescent, while treated cases frequently experience a return of the symptoms. This characteristic of the disease adds to the difficulty of evaluating therapeutic measures aiming specifically at control.

Opinion at present is that peptic ulcer, fundamentally, is a problem for medical management. Thorough history and physical examination of the patient, including urinalysis, gastric and stool analysis, Wassermann test, blood-sugar determination, and roentgen-ray study, are essential. Because of the apparently close connection of infection, fatigue, and emotion, the search for foci and the consideration of the patient's economic and social environment is most necessary. It is the patient with an ulcer—not the ulcer alone—that is to be treated.

Adequate medical treatment is considered to demand rest in bed with dietetic, drug, and careful nursing supervision. This is obviously impossible for many patients. The prime requisites in treatment are rest, the avoidance of mechanical irritation by the use of a nonirritating diet, and alkalinization. Preparations of gastric mucin have been recently added to the philosophy of the bland, nonirritating diet in an effort to protect the damaged mucosa against mechanical trauma and hyperacidity. Sodium bicarbonate has given way to magnesium and calcium carbonate, and newer antacids such as colloidal aluminum hydroxide have been introduced. However, the most skillful utilization of these measures has only too often resulted in failure.

Repetition of the Mann and Williamson technique in the production of experimental gastric ulcers in dogs led A. G. Weiss and E. Aron to the conclusion that disorders of nutrition play a large part in the production of the ulcer. Study of the metabolism of these animals led to the conclusion that the digestive mucosa was deprived of substances essential to its resistance. These substances were amino-acids which the organism itself cannot form: Cystine, lysine, tryptophan, and histidine. Injection of these after operation led to the realization that only histidine could prevent the evolution of the experimental ulcer.

This treatment was then carried out on patients, most of whom were in an acute attack. Clinical and radiologic improvement followed the use of histidine in the treatment of these cases. Treatment consists of the daily intra-

muscular injection, for 24 days, of 5 c.c. of a 4 per cent solution of histidine monohydrochloride. No specific dietary régime is used other than the avoidance of foods obviously so rough as to promise possible mechanical injury. The patient is ambulatory during this treatment and is able to follow his usual daily routine. Symptoms subsided rapidly and the pain usually retrogressed after the fourth or fifth injection.

Treatment with this measure was utilized in the following series of cases in the medical department of the Lankenau Hospital. The cooperation of Drs. Edward L. Bortz, Richard F. Gerlach, and Frederick L. Hartmann, permitting inclusion of several cases in this series, is gratefully acknowledged.

CASE REPORTS

CASE 1.—H. G., male, age 49, sought relief in October, 1934, from epigastric pain of 2 months' duration. There had been a sleeve resection and excision of an ulcer on the lesser curvature of the middle third of the stomach in February, 1927, since which time annual attacks of gnawing epigastric pain occurred in the autumn.

Roentgen-ray study on Oct. 19, 1934, revealed a penetrating ulcer on the lesser curvature of the prepyloric segment.

On Oct. 23 a series of 24 daily injections of histidine monohydrochloride was instituted. After the eighth injection there was marked relief. Thereafter distress occasionally caused him to administer sodium bicarbonate.

Roentgen-ray study on Jan. 24, 1935, indicated pyloric stenosis with moderate gastric hyperperistalsis and moderate reduction in tonicity. The ulcer crater was not demonstrable at this examination, and there has been no recurrence of the chief complaint.

CASE 2.—J. L., male, aged 43, when seen in October, 1934, had suffered from epigastric pain for 17 years. Toward the end of this period, surgical intervention was utilized on 3 occasions: May, 1932 (duodenal ulcer); May, 1933; and January, 1934 (marginal ulcers).

Beginning on Oct. 23, 1934, 39 daily injections of histidine monohydrochloride were given. There was slight improvement after the third injection with more marked improvement after the fifth. The pain varied a great deal in intensity and frequency throughout treatment.

At the end of January the pain failed to respond to medical treatment. A Polya-type gastro-enterostomy was performed on Feb. 26, 1935, at which time a perforating ulcer was found. Two weeks later the patient died from subhepatic abscess, wound infection, and lung abscess.

CASE 3.—E. P., female, age 31, sought relief in November, 1934, from epigastric pain and nausea. There had been similar autumnal attacks since 1930. Roentgen-ray studies on Jan. 3, 1935, revealed a gastric ulcer on the lesser curvature in the prepyloric segment.

Histidine monohydrochloride therapy was then instituted. After the seventh injection there was an improvement in the symptoms, which varied in intensity throughout administration of the first 24 injections.

Roentgen-ray study on Apr. 2, 1935, indicated that

the crater area had been reduced. A second series of 24 injections was then instituted, although subjective symptoms had subsided. Roentgen-ray studies in May revealed further reduction in the size of the ulcer, and a third series of injections was commenced. Roentgen-ray studies on July 8, 1935, failed to show the crater, there being no local spasm or hyperperistalsis. Subjectively the marked improvement and relief as noted after the first series of injections has continued.

CASE 4.—R. F., male, age 32, sought relief in January, 1935, from gnawing epigastric pain of 18 months' duration. Roentgen-ray studies on Jan. 23, 1935, revealed moderate increase in gastric tone and peristalsis, and persistent deformity of duodenal cap, suggesting underlying ulceration.

On Jan. 29 a series of 24 daily injections of histidine monohydrochloride was instituted. After the fifth injection there was some improvement subjectively; this was marked after the eighth injection.

Roentgen-ray studies on Feb. 27 revealed that the spasticity had been considerably reduced while peristalsis was normal.

When last seen, the patient complained of a bloated feeling, occurring once or twice monthly. There has been no recurrence of the original gnawing pain.

CASE 5.—E. K., male, age 57, sought relief in February, 1935, from postprandial epigastric pain occurring periodically for 3 years. Tarry stools had been noted on one occasion. Since November, 1934, he had been receiving antisyphilitic treatment. Roentgen-ray studies on Feb. 8, 1935, revealed increased gastric tone and peristalsis, and a persistent spastic deformity in the first portion of the duodenum indicating ulcer in this segment. Further roentgen-ray study revealed a penetrating ulcer in this area.

Histidine monohydrochloride was administered daily for 24 days, beginning Mar. 1. Relief from epigastric pain was complete after the eighth injection. Roentgen-ray examination on July 30 revealed no increase in gastric tone or peristalsis; the first portion of the duodenum was deformed and showed moderate spasticity indicating persistence of the old ulceration.

Since there has been no return of the original pain and the roentgen-ray studies indicate improvement, it is planned to keep this patient under observation.

CASE 6.—J. M., male, age 26, sought relief in February, 1935, from continuous epigastric pain of 4 months' duration. For 3 years similar attacks occurred each spring. Roentgen-ray study on Mar. 1, 1935, revealed moderate increase in gastric tone and peristalsis, and a persistent spastic deformity of the first portion of the duodenum.

A series of 24 injections of histidine monohydrochloride was commenced Mar. 8. The patient began to feel better the following day, with complete relief after the fourth day. After 2 weeks the pain recurred, to disappear again upon completion of this series. Roentgen-ray studies on Apr. 22 indicated persistence of the ulceration.

A second series of 24 injections was instituted on May 2. Very occasional nocturnal pain remained. Roentgen-ray studies on May 27 indicated decidedly less spasticity.

When last seen in July, 1935, this patient was subjectively improved with no complaint other than occasional nocturnal pain.

CASE 7.—T. B., male, age 32, sought relief in July, 1934, from epigastric distress of 3 days' duration which responded to sedative treatment. Recurrence of the

complaint in December led to roentgen-ray study which revealed a gastric ulcer in the posterior wall near the lesser curvature of the prepyloric segment.

On Jan. 10 a series of 24 injections of histidine monohydrochloride was instituted. There was marked relief after the fourth injection, a return of the distress after the seventeenth injection, and its relief again after the twenty-third injection.

Roentgen-ray study on Feb. 19 revealed gastric tone and peristalsis to be essentially normal. Subjectively there have been no complaints.

CASE 8.—E. G., male, age 65, sought relief in April, 1935, from epigastric distress of 2 weeks' duration. Hematemesis and melena had been noted in the short time since the onset of his complaint. Roentgen-ray study on Apr. 12, 1935, revealed a penetrating ulcer in the middle third of the lesser curvature.

A series of 24 daily injections of histidine monohydrochloride was instituted on Apr. 25. There was marked subjective relief after the fourth injection.

Subsequent roentgen-ray examination revealed moderate deformity on the lesser curvature with moderate local spasm. When last seen in June, 1935, the patient had no complaints.

CASE 9.—H. W., male, age 47, sought relief in November, 1934, from epigastric pain and hematemesis of 2 weeks' duration. There had been occasional attacks since 1917, and for 2 years previous to admission the patient had been under treatment for severe hypertension. Roentgen-ray study in December revealed persistent spastic deformity of the first portion of the duodenum with gastric hyperperistalsis indicating an active duodenal ulcer.

A series of 24 daily injections of histidine monohydrochloride was instituted. After the sixth injection there was marked relief from the epigastric pain. Later admission for treatment of the hypertension afforded opportunity for roentgen-ray study on Apr. 30, 1935. This revealed normal gastric peristalsis and persistent spastic deformity with partial fixation of the first portion of the duodenum suggesting adhesions from former ulceration.

CASE 10.—M. K., female, age 48, sought relief in April, 1935, from generalized abdominal discomfort with nausea and vomiting of one week's duration.

In 1906 a gastro-enterostomy had been performed for peptic ulcer.

Roentgen-ray studies in May, 1935, revealed that the gastro-enterostomy functioned normally but that the pyloroduodenal canal was deformed and quite irritable, very suggestive of underlying ulceration.

Histidine monohydrochloride therapy was commenced on May 14. There was marked improvement after the eighth injection, and on discharge the patient was subjectively improved.

Roentgen-ray studies on June 29 revealed persistent deformity with considerable local spasticity in the pyloric segment, suggesting irritation from adhesions or reactivated ulcer. Jejunal ulcer was not demonstrated, although the efferent loop was irritable and spastic.

CASE 11.—C. D., male, age 53, sought relief on May 1, 1935, from epigastric pain of 4 months' duration. There had been similar attacks in 1930 and in 1934.

Roentgen-ray study on May 3 revealed moderate spasticity of the duodenal cap.

A series of 24 daily injections of histidine monohydrochloride was instituted on May 6. Relief was noted after the fifth injection. The series was completed by

the family physician who reported complete subjective relief.

CASE 12.—K. M., male, age 40, sought relief in May, 1935, from epigastric pain. Of 6 months' duration this attack had been preceded by similar occurrences for the previous 6 years. In 1930 a perforated ulcer in the first portion of the duodenum was closed by purse-string suture. In 1933 a posterior gastro-enterostomy was performed.

Histidine monohydrochloride was administered daily for 24 doses. Marked relief occurred on the seventh day of treatment with complete absence of epigastric pain after the tenth injection. Roentgen-ray study on June 3, 1935, revealed that the gastro-enterostomy functioned well; the pyloroduodenal canal showed persistent deformity and stenosis; there was no evidence of active gastric disease; gastric tone and peristalsis were normal, and no crater was detected.

CONCLUSIONS

This relatively small series of cases, followed for a comparatively short time, represents a cross section of those occurring in general practice. Predominantly male, the patients ranged from age 26 to 65, with the first onset of symptoms varying from 2 weeks to 29 years previously. In 4 cases, surgery had been resorted to; one of these was not checked in its downward path, whereas the other 3 obtained relief from histidine therapy.

In 3 of the 12 cases more than the suggested 24 injections were given. In those cases in which it was possible to compare gastric analysis before with that after treatment, no marked change in acidity was noted. The final criterion of improvement was roentgen-ray study, since the promptly appearing symptomatic relief was not dependable.

It is not considered that these cases constitute a fair criterion for determining the effectiveness of the histidine treatment of peptic ulcer because of the small number of patients and the short time interval of observation.

The following conclusions, however, seem justified:

1. Histidine monohydrochloride intramuscularly should be further studied as a therapeutic measure in the treatment of peptic ulcer.

2. In cases in which recurrence has occurred after surgical intervention, its use should be given consideration.

3. Because of the prompt symptomatic relief afforded, emphasis must be placed upon thorough roentgen-ray follow-up in addition to the customary clinical observations.

Sixteenth and Jefferson Streets.

ABSTRACT OF DISCUSSION

CLEMENT R. JONES (Pittsburgh): No new treatment can be evaluated in a period of less than several

years. The neurasthenic type, which was first described by Eppinger and Hess as the vagotonic type, is the peptic ulcer type.

In the past 20 years there have been many new procedures advised in the treatment of ulcer of the peptic tract. Not one has proved to be a cure or a treatment which could be relied upon to give permanent relief. In the difficult or intractable cases, all are successful in giving relief to a large percentage of sufferers from this mural involvement.

A local ulcer, due in most instances to some interference with the control of local blood vessels, results in a hypertonic contraction, a blocking-off of the circulation to an area of mural surface of peptic mucous membrane, and a resultant breakdown of the resistance of the mucous membranes to peptic digestion and the formation of an ulcer.

Nearly every medical journal in the land today is carrying full-page advertisements of a preparation of histidine for intramuscular injection in the treatment of peptic ulcer, with the most extravagant claims one could imagine: No modification of the diet, no treatment necessary other than the intramuscular injection.

If the etiology were known and if histidine be the one thing needful to replace that which is lacking, then credence might be given to the claim of the manufacturer.

The complicating conditions of ulcer are: Vagotonia aggravated by focal infection of teeth, tonsils, gallbladder, appendix, *etc.*; emotional maladjustment; grief; emotional instability at menopause; shock from burns or accidents; nicotine poisoning; *etc.* Could these varied conditions be relieved by the one brief course of treatment of any drug no matter how potent it may be in promoting the healing process?

I have used histidine in a number of cases as an adjunct to other measures. A fair percentage of patients have improved while using the histidine treatment, but the percentage has not been larger than with the intravenous or intramuscular use of emetine, or with the use of insulin, or with the older dietary and alkaline measures.

Exactly the same claim is made by Samintzsky and Feasley for insulin that is made by the advocates of histidine. The use of any of these measures may encourage some to believe that a specific remedy has been found. I have had patients with recurrence of ulcer symptoms once or twice a year with relief and long periods of freedom from distress with no treatment at all. The thing that makes the problem one of great difficulty is that there are no uncomplicated cases of peptic ulcer. Either local anatomic complications involving gallbladder, gall ducts, pancreas, or appendix; systemic complications such as constitutional blood diseases; or, above all, the neurasthenic vagotonic nervous constitution, are present.

The problem of management of peptic ulcer is not so much that of choosing the method of treatment by which we may help the ulcer heal as it is of discovering the complications, removing them if possible, and keeping the ulcer from recurring.

If histidine is lacking in the body and must be injected to heal the ulcer, then should not a continuous supply be made available to keep the proper balance in the body?

There is reason to believe that the work done by histidine will be productive of some advancement in the therapeutics of peptic ulcer, but do not discontinue the measures proved valuable by many years of experience.

PITYRIASIS RUBRA PILARIS*†

With Particular Reference to Vitamin Medication and Dietary Control

MASHIEL F. PETTLER, M.D., BEAVER FALLS, PA.

Observations of the beneficial results of treatment have been the basis by which possible etiologic factors of pityriasis rubra pilaris have been assumed.

The following are some of these observations: P. E. Bechet in 1921 reported a case of pityriasis rubra pilaris in a patient with a typical Fröhlich syndrome, whose skin eruption was somewhat improved by the use of pituitary extract. Levin and Smith in 1921 reported a case of pityriasis rubra pilaris in a patient who also presented symptoms of hypothyroidism with an apparent cure of the skin eruption with thyroid extract. E. P. Zeisler in 1923 reported 4 patients (father and 3 children) with the familial type of pityriasis rubra pilaris who were all improved by the use of thyroid extract. In further support of the endocrine disturbance as a possible etiologic factor in this disease, C. Ryll-Nardzewski studied a typical case under hospital supervision for 4 months, and by the Abderhalden reaction, tests of all the endocrine glands were made. He found considerable disturbance of the entire system of glands. Without treatment the deviation from normal disappeared as the symptoms retrogressed. He concluded that it is very probable that this disease is related to the functioning of the endocrine system and that the endocrine system may spontaneously recover its normal function after being temporarily disordered.

Danilewskaya and Berko assumed a nervous etiology of this disease by reason of the concurrence of a vitiligo in a case of this disease.

In 1901 Milan theorized that the disease was of tuberculous origin by reason of the fact that a number of the patients who suffered from pityriasis rubra pilaris also had tuberculosis or gave positive tuberculin reactions. He considered the disease a perifollicular tuberculid.

Lowenthal in 1933 described a new cutaneous manifestation in the syndrome of vitamin A deficiency in which he observed the following marked characteristics: Dryness of the skin associated with roughness and a grayish black pigmentation, itching, a papular eruption almost invariably found on the extensor surfaces of the arms and thighs, and a folliculitis in which there is an inflammatory swelling of the hair follicle without the formation of pus and usually

presenting a broken hair projecting from its center.

Condensing Lowenthal's detailed description of the micropathology we find the following: The papules arise from a pilosebaceous follicle; the mouth of the follicle is sealed with a dense mass of horny tissue. The plug occurs in the shape of an inverted pear and the outer layers of the plug show parakeratosis. The skin adjacent to the follicle in the epidermis shows thickening of the stratum lucidum and granulosa. In the prickle-cell layer there is a marked acanthosis in the perifollicular region. During the active stage the amount of pigment per cell is slightly diminished in the basal layer of the epidermis, but owing to the acanthosis and wrinkling of this layer, it is probably increased per unit of surface, thus producing the striking blackness of the papule. In the corium there is evidence of irritation with congestion, edema, and cellular infiltration strictly limited to the neighborhood of the follicle. He concludes the description with the statement that the histologic changes in the papules in the syndrome of vitamin A deficiency are precisely the same as those in the papules of pityriasis rubra pilaris.

The following 2 cases were studied to ascertain the vitamin influence on this disease:

CASE REPORTS

CASE 1.—F. V., age 38, Italian, was admitted to the Department of Dermatology of the Falk Clinic on Nov. 10, 1934. About 6 months prior to admission he developed a pruritus on the extensor surfaces of the legs and forearms, and about 3 months later he noticed the skin becoming very much darker, starting as pin-head-sized areas on the face and then the dorsum of the hands. These became confluent and rapidly spread over the face and to the neck, and from the hands to the forearms.

At age 31 he had attacks of rheumatism which confined him to bed for 3 months. He had had no other illness of importance and the general health had been very good. No other members of the family had this skin affection. The skin was obviously pigmented, grayish black and mottled in appearance, with the pigmentation most marked on the face and forearms. The typical keratotic, closely set papules with the "nutmeg-grater-like" feel appeared on the dorsal surface of the hands and especially on the dorsum of the phalanges. Similar pigmentation and follicular involvement was found on both sides of the trunk and neck.

General medical examination was negative for tuberculosis and revealed no gross abnormalities aside from the skin disorder. Laboratory examinations showed the urine to be free from arsenic and otherwise normal. The blood chemistry and blood count were normal. The basal metabolic rate was plus 4.

* Read before the Section on Dermatology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 1, 1935.

† From the Department of Dermatology, University of Pittsburgh.

The patient was instructed to keep an accurate and complete list of the foods he ate, no suggestions as to the foods being given him at this time. The following is a résumé of the diet from Nov. 28, 1934, to Feb. 10, 1935: A typical breakfast consisted of either coffee or



FIG. 1, Case 1. Showing follicular papules on hands on admission.

tea only. A typical lunch consisted of 1 or 2 fried eggs or pressed ham sandwich, fried or boiled potatoes, cake or pie, and wine or whiskey. A typical supper consisted of soup, spaghetti or macaroni with grated cheese, dried beans, and green pepper cooked in tomato sauce.

The uncooked items in the diet for the entire time and the number of times noted were: Butter, 6; pears, 4; milk, 4; tuna fish, 2; apples, endive, lettuce, tomatoes, tomato juice, beets, olives, and oranges, once each.

Meat was eaten infrequently. Fried codfish and sardines were the fish items, but only twice in each instance.

On Dec. 12, 1934, he was instructed to take one A-B-D vitamin capsules twice daily, but no changes in his diet were ordered. There was no appreciable change in the appearance of the skin until about 2 months later, when there was somewhat less pigmentation and roughness. During the following 2 months there was continuous improvement, the pigmentation becoming decidedly lessened and the follicular plugging less prominent. About 6 months after the beginning of the vitamin medication there was almost a complete disappearance of the follicular plugging on the dorsum of the hands and fingers, and at the end of 8 months these follicles appeared quite normal.

At this time the patient noted that he perspired from areas of the skin from which he had not perspired before. All the affected areas shared in the improvement by the lessening of the pigmentation and the disappearance of the follicular prominences.

CASE 2.—T. A., age 42, Italian, was admitted to the Department of Dermatology of the Falk Clinic on May 8, 1935. He was transferred from the medical department, where he had been under treatment for arthritic pains since Apr. 17, 1935. About 2½ years previously he began to have transitory arthritic pains in the elbows, ankles, and toes; at the same time he first noticed a peculiar discoloration of the face. This was followed by an eruption first on the forearms and then the legs.

The face appeared mottled with a brownish gray pigmentation, especially on the cheeks and forehead. On the dorsum of the hands and fingers there were prominent hyperkeratotic follicular papules with the "nutmeg-grater-like" feel.

The same eruption was noted on the forearms, neck, and shoulders. There was a slight tendency to prominent follicular orifices over the back and the abdomen. All the affected areas were very pruritic and pigmented. The mucous membranes were free from pigmentation. There was an erythematous painful swelling over the right external malleolus and over the left great toe.

The urinalysis showed albumin 2 plus and a trace of sugar. The blood uric acid was 6.1 mg. per 100 c.c. All other findings were within normal limits.

The patient was instructed to keep an accurate and complete diet list of the foods that he ate. The following is a résumé of the diet from May 9, 1935, to June 25, 1935: A typical breakfast consisted of coffee or tea and a piece of cake. A typical lunch was made up of eggs or meat with macaroni or potatoes. A typical dinner was meat with macaroni, bread, and an occasional vegetable. The uncooked items in the diet and number of times noted were: Butter, 8; spinach, 4; bananas, 5; apples, 4; onions, 9; dandelion leaves, 3; cabbage, 4; lettuce, 10; green beans, 3; oranges, fish, tomatoes, peas, and peaches once each.

The principal foods eaten during this period were meat, macaroni, tea, and coffee.

On May 29, 1935, he was instructed to take one A-B-D vitamin capsule twice daily, to eat plenty of fresh fruits and vegetables, and to drink milk and orange juice.

One week later he reported that the itching was greatly lessened. Two weeks later the follicular papules were decidedly flattened with much less roughness. This improvement was progressive, and 4 months after the start of the increased vitamin intake there was almost complete disappearance of the follicular papules and an appreciable lessening of pigmentation.

COMMENTS

The cases just described so closely resemble the symptomatology and micropathology of the cutaneous manifestations in the syndrome of vitamin A deficiency that the deficiency of vitamin intake may be an etiologic factor in pity-



FIG. 2, Case 1. Showing the disappearance of the papules after vitamin administration.

riasis rubra pilaris. This is further supported by the marked and rather rapid improvement noted both clinically and histologically in the cases just described. In Case 1 the rapid disappearance of the follicular plugging and the lessening of pigmentation was most striking. In

Case 2 the itching, which was intense on admission, had practically ceased after vitamin capsules had been taken for one week.

Both cases also demonstrate the occurrence of the rheumatic or articular symptoms which are often associated with the eruption of pityriasis rubra pilaris as described by Rayer and later by Besnier.

SUMMARY

Pityriasis rubra pilaris closely resembles both clinically and histologically the cutaneous manifestations in the syndrome of vitamin A deficiency.

Two cases of pityriasis rubra pilaris are de-

scribed in which the diet was markedly deficient in vitamin A before treatment, and improvement promptly followed the administration of sufficient vitamin.

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ABSTRACT OF DISCUSSION

ROBERT L. GILMAN (Philadelphia): I am convinced that Dr. Pettler has described in good detail 2 bona fide cases of Devergie's disease. Dr. Pettler has given a note of reserve in his discussion of these cases and their treatment. He has struck a significant lead in etiology—a lead that others might do well to follow not only here but in other cases: A more careful, painstaking history of the dietary habits of patients.

AN UNDESCRIBED LESION OF THE SHOULDER GIRDLE OF FREQUENT OCCURRENCE*

With Special Reference to Sprain of the Rhomboideus Minor Muscle

JOSEPH P. REPLOGLE, M.D., JOHNSTOWN, PA.

Because of its peculiar anatomic make-up, a freely movable ball-and-socket joint capable of performing a greater variety of movements than any other joint of the body, held in place not by strong ligamentary attachments but deriving its security to the trunk mainly through its muscular coverings, the shoulder joint is probably more susceptible to traumatic lesions than any other joint. Textbooks have practically nothing to say in regard to the physical position of muscles in relation to their mechanical effect when a joint is affected by some lesion of the shoulder or its immediate neighborhood. The ligaments have comparatively little clinical importance. The muscular and fibrous planes, bursae, and nerves are, therefore, exposed to manifold injuries either from overstretching or direct blows. There is no joint so likely to provide traps for the unwary surgeon, and a patient who cannot raise his arm high enough to fasten the collar or brush the hair remembers the surgeon daily and not with gratitude, usually feeling he has suffered neglect.

How often have diagnoses of "sprain of the shoulder" been made merely to satisfy a patient's anxiety concerning his injury! He puts his doubt at rest and usually fails to follow the physician's orders with resultant treatment by home remedies such as poultices, rubbing, or the application of a radio-exploited product.

How seldom is a conscientious attempt made to diagnose a sprain with some degree of localization of the structures involved with the idea

of applying appropriate treatment so as to rest or splint that particular overstretched muscle or ligament! The term sprain applied to the shoulder means no more than the term peritonitis applied to the abdomen, and the treatment of a sprain of the shoulder, as does the treatment of peritonitis of the abdomen, demands measures appropriate for that individual type of pathology.

The literature describes the classical acute lesion of the shoulder girdle sufficiently to require emergency treatment, such as dislocation or fracture; but, excepting the description of subacromial bursitis, very little is said of the patient who presents himself a day or two after an accident on account of pain or disability, or who seeks advice in a week or two because improvement under home remedies has been so slow that he fears the injury is more serious than he at first supposed. The profusion of medical literature on the subject of shoulder injuries is aptly illustrated in the preface of E. A. Codman's book on *The Shoulder* when he says, "Now start in and read the best book there is on the human shoulder. It is the only one."

An analysis of 250 successive cases of shoulder injury observed at the Bethlehem Steel Hospital, Johnstown, Pa., excluding burns and minor injuries, revealed 26 varieties of lesions in and about the shoulder. As would be expected, severe contusions with accompanying temporary palsy or periostitis of such a superficial bony prominence as the acromion process or spine of the scapula make up 30 per cent of the lesions. About 25 per cent of the lesions are sprains of

* Read before the Section on Surgery of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

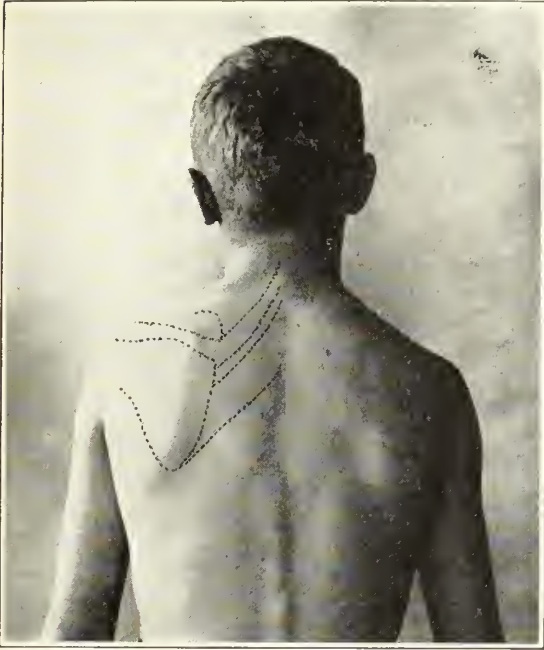


Fig. 1. Normal position of scapula and rhomboid muscles.

various individual muscles or muscle groups. Dislocations and fractures make up about 18 per cent whereas only 6 per cent are diagnosed subacromial bursitis.

Twenty-five per cent, therefore, of the lesions are sprains. One of the frequent traumatic lesions of the shoulder is sprain of the rhomboideus minor muscle. Because of its frequency of occurrence and its remarkably constant symptomatology, a description of this particular sprain is important.

It occurs usually in those performing heavy or strenuous labor such as swinging a sledge, firing a furnace, or lifting a heavy weight. At the time of the sprain the patient feels a sudden knife-like, sticking, or stabbing pain just median to the base of the spine of the scapula. Occasionally he states that it felt as though he "pulled a leader." Pain bothers him for 15 or 20 minutes, but he usually resumes work and finishes out the day. That night he notices aching between the shoulder blades, and disability begins the following day when pain and aching accompany the use of the arm.

Examination reveals a very definitely localized point of tenderness about the size of a quarter just internal to the base of the spine of the scapula. Pain and limitation of motion occur only in certain movements. For instance, he can abduct the arm about 90° (Fig. 3), at which point he suddenly feels aching pain referred to the point of tenderness. Further elevation of the arm aggravates the pain, which is

worse when the arm is fully abducted and passed anteriorly over the chest so that the hand rests upon the opposite shoulder with the elbow at height of the brow. Aching between the shoulder blades at night is a common symptom. With the head rotated to the side of injury, if it is tilted on its axis to the opposite side, the patient will complain of pain referred to the point of tenderness. Standing with the body erect and shoulders thrown back is the most comfortable position for him.

In order to explain the symptomatology it is well to review the muscular action in raising the arm. Abduction is mainly produced by the interaction of the deltoid, the trapezius, and the serratus magnus, and we have learned recently by contraction of the supraspinatus. (See Fig. 2.) The serratus magnus, arising from its 9 or 10 fleshy digitations from the upper 8 or 9 ribs and passing backwards to be inserted along the vertebral border of the scapula, serves to keep the scapula closely applied to the thoracic wall and draws it laterally. Since the portion inserted into the inferior angle is the strongest, a fulcrum action is produced and the scapula rotates, raising the lateral angle. By this action the serratus plays an important part in abduction of the arm. In the first place, by fixing the scapula it allows the deltoid and supraspinatus

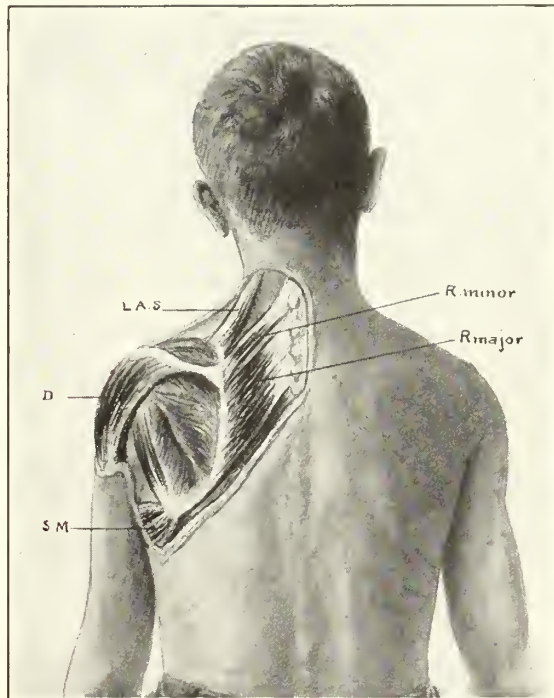


Fig. 2. Dissection showing normal position of interscapular muscles, the skin, trapezius, and latissimus dorsi having been removed. Note almost horizontal position of spine of scapula, also origin and insertion of rhomboideus minor muscle where tenderness is found.

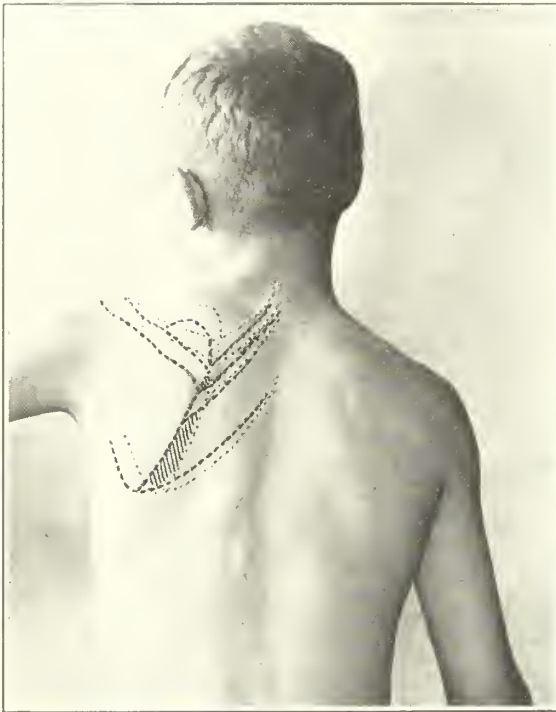


Fig. 3. Arm at 90° from chest wall, normal position of scapula and rhomboides shown by white dotted line. Black dotted line shows change in position with arm abducted to 90°, shaded area showing increase in length of rhomboides. Pain is first experienced at this degree of abduction.

to expend their action on the humerus; and, in the second place, after the deltoid has completed its action and has raised the arm through about 90 degrees, further elevation through another 90 degrees is accomplished by rotation of the scapula resulting from the combined fulcrum action of the serratus and the trapezius. It is by this muscular combination that the interscapular muscles—the rhomboides minor and major and the levator anguli scapulae—are overstretched.

To offset the strong muscular force of the serratus, the deltoid, and the trapezius combined, there is a much weaker counteraction produced by the interscapular muscles—the rhomboides major and minor and the levator anguli scapulae—plus the force of gravity due to the weight of the arm.

It is not unusual, therefore, that a sudden contraction of the stronger muscle bellies of the deltoid and serratus would overstretch this weaker interscapular group. The rhomboides major, having a wide origin from the spinous processes of the 4 upper thoracic vertebrae and intervening interspinous ligaments and a wide insertion into two-thirds of the vertebral border of the scapula and being stretched the least, suffers the least whereas the band-like rhomboides minor, arising from the spine of the sixth cervical vertebrae and inserting into the

vertebral border of the scapula at the base of the spine of the scapula, with more obliquity to its fibers, is overstretched more with a resulting avulsion of fibers at its insertion into the spine of the scapula, where the tenderness is found.

Examination into the causes of this injury, such as swinging a sledge, firing a furnace, lifting a heavy object, sudden pulling upon objects with arms extended, discloses that pain occurs at the end of the pitch of a shovel or at the end of the swing of a sledge; in other words, at the position where the lateral angle of the scapula is raised and the rhomboides minor is on the greatest tension (Fig. 4).

Clinically pain is produced only on these movements which elevate the lateral angle of the scapula, change the angle of the spine of the scapula, and depress the base of the spine of the scapula, producing tension on rhomboid muscles.

Occasionally there is slight pain and tenderness near the spinous process of the last cervical vertebrae at the origin of the rhomboides minor. In 30 per cent of the cases there was slight tenderness along the vertebral border of the scapula below the spine in the region of the rhomboides major.

It may be deduced, therefore, that any muscular movement producing elevation of the lat-



Fig. 4. Arm fully abducted, showing further increase in length of rhomboides from 90° to full abduction indicated by solid black area. Cross shading indicates position of muscle in Fig. 3 and plain shading the normal length of interscapular muscles. Note almost vertical position of spine of scapula.

eral angle of the scapula, especially when occurring suddenly, overstretches the interscapular muscles and gives potential etiology for sprain of the rhomboideus minor.

The treatment is simple and based on anatomic lines to cause relaxation of the overstretched muscle. The shoulders are thrown back so as to lessen the interscapular space and wide criss-cross adhesive straps are applied for the maintenance of this position. The arm is placed in a sling and a small pad placed under the adhesive over the point of tenderness to hasten the absorption of the serous effusion at the point of rupture or strain.

This treatment gives immediate relief from aching, and pain on abduction is greatly reduced. We have several times removed the cross strapping too early and patients have requested its reapplication to obtain relief.

The frequency of occurrence of sprain of the rhomboideus minor, the unusually constant symptomatology and clinical picture, the efficacy of simple and proper treatment, together with the fact that it is of sufficient seriousness to cause industrial disability, justify a description of the lesion and demand caution in its diagnosis.

United States Bank Building.

ABSTRACT OF DISCUSSION

CALVIN M. SMYTH, JR. (Philadelphia): This lesion of the shoulder, unless recognized by careful examination, will undoubtedly result in protracted disability. I recently had 2 such cases in my own practice. The patients were both stevedores, and both gave the history of sudden lancinating pain immediately following attempts at lifting heavy boxes. Roentgen-ray examination was negative in both cases, but pain persisted. Adhesive plaster strapping relieved the symptoms but incompletely. We did not employ a sling, which I believe is important in the light of Dr. Replogle's paper.

In the past, unjustified suspicion of malingering has been cast upon the industrial worker because of what appeared to be an unwarranted prolongation of disability following an indefinite injury to the shoulder region. Because of negative roentgen-ray findings and the fact that subacromial bursitis could be ruled out, the surgeon has been inclined to regard the patient as a faker. As long ago as 1903 Codman first drew attention to this in the literature and has contributed a number of papers on the subject since that time. He has recently compiled the results of his experience in book form. Every surgeon treating industrial cases can learn much from this book. Rupture of the supraspinatus tendon gives a clinical picture sufficiently constant to be recognized if possibility of the lesion is kept in mind. With more careful examination of the traumatic shoulder other individual lesions should be placed upon the same basis in the near future.

In the presence of definite history of injury with negative roentgen-ray findings and persistence of pain over a period of 2 or 3 weeks, the well-equipped surgeon should not hesitate to resort to exploration. With a careful technic such an exploration can do no harm. In spite of a certain percentage of negative findings, the discovery of an otherwise undiscoverable lesion will more than justify the procedure. The application of appropriate treatment when, for example, a ruptured supraspinatus tendon is discovered will result in great saving of time and money to worker and employer alike. To permit these patients to remain idle and to continue baking, massage, *etc.*, until finally a true traumatic arthritis develops would appear in the light of our present knowledge to be indefensible.

EDWARD PARDOE (Johnstown): I have seen some of Dr. Replogle's cases and have had several of my own since I first heard him describe the condition several years ago. The treatment outlined will cure the condition.

DR. REPLOGLE (in closing): In most industrial plants this lesion is overlooked. Formerly these patients were brought to the dressing station or hospital and the physicians saw all of these cases, but nowadays unless the injury is particularly severe or there is a laceration the physician usually does not see the patients until they develop considerable disability and pain. They should be attended to promptly and helped very much earlier. Nurses in industrial plants are doing a lot of first-aid work, hence only the more severe cases are referred to the surgical staff.

INFLAMMATION OF THE URINARY BLADDER*

Report of a Case of Gangrenous Cystitis

WILLIAM CULLEN BRYANT, M.D., PITTSBURGH

A review of the literature of cystitis might lead to the conclusion that practically everything worth-while has already been said. However, we have not as yet reached the end of the trail. A brief review of this subject and the report of a few rather unusual cases should stimulate further interest in the study of inflammation of the urinary bladder.

Cystitis is synonymous with inflammation of the urinary bladder, and the terms are used interchangeably. The fact that cystitis is so frequently secondary to other pathologic conditions seems to have had an inhibitory effect on the study of cystitis per se. With the exception of a number of valuable articles on the rarer types of cystitis, much less has been written on this subject in the past few years than formerly. The all too prevalent belief that, in cases in which

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

inflammation of the urinary bladder is secondary to other pathologic conditions, the removal of the primary cause will restore the bladder to normal is entirely in error.

That we have not reached the end of the trail is evidenced by the fact that there are still many unsolved problems. For example, we know that in the great majority of bladder infections the colon bacillus is the offending organism. This arch enemy of the urologist is perfectly harmless as long as he stays in "his own back yard." His itinerary from his legal residence to the urinary bladder is still a matter of dispute. The usually accepted theory of a blood stream infection to the kidneys was attacked by Feissinger and Hutet in a paper read before the Congress on Colon Bacillus Infections in Paris, Dec. 3, 1934. Reference to this can be found in *The Journal of the American Medical Association*, Dec. 29, 1934.

The following is a case in point:

A large healthy appearing, unusually active man, age 71, complained of urgency during the day. He was seldom bothered during the night. The urine was so loaded with pus that it had almost a muddy appearance. Cystoscopy was performed on Dec. 1, 1934. There was no residual urine. Cystoscopy showed no obstruction, but it did show an intensely congested bladder mucosa. The question arose as to why this patient did not have more urinary dysfunction. He was sent to Columbia Hospital, where he was again cystoscoped. Both ureters were catheterized, and pyelograms by the intravenous route were made. The pathologist found the bladder urine full of pus and fairly teeming with colon bacilli. The specimens of urine obtained by the ureteral catheters were carefully studied and cultured. These specimens did not contain pus or bacteria.

Once the colon bacillus invades the bladder, its eviction is most difficult. In fact, it seems to thrive on a diet of urinary antiseptics, but is imperiled by a ketogenic diet. A most valuable paper on this phase of the subject by Dr. Albert M. Crance was published in *The Journal of the American Medical Association*, Jan. 26, 1935. In this article Dr. Crance pointed out the important fact that there are 2 types of colon bacilli, namely, the *Escherichia coli* and the aerogenous varieties. The importance of differentiating these 2 types, which can be done only by cultural methods, is that the ketogenic diet is of value only in the type known as *Escherichia coli*. The name of this bacillus is derived from Theodore Escherich, German physician, 1857-1911, who first described it. The *Escherichia coli* does not produce gas in saccharose, but the aerogenous varieties do. It is unfortunate that there is some confusion in medical nomenclature regarding the description of these 2 types. The *Escherichia* type is also called *Bacillus coli* com-

munis, and the aerogenous type is called *Bacillus coli communior*. The important point to remember is that the *Escherichia* type, the *bacillus coli communis*, which does not produce gas in saccharose, is more amenable to treatment than the aerogenous, the *Bacillus coli communior*, which does produce gas in saccharose. Once it is determined that the colon bacillus is the offending organism, a very simple method will differentiate the 2 types. If a tube containing saccharose is inoculated and no gas is produced in 48 hours, the *Escherichia* type is present. Fortunately this type represents about 75 per cent of colon bacillus infections.

That the colon bacillus is an important factor in cystitis is well recognized. Efforts to eradicate this organism by the administration of urinary antiseptics have been disappointing. The changing of the pH of the urine from the alkaline to the acid side by the ketogenic diet marked the most important attack on the colon bacillus. The difficulty in this method of treatment is that in the majority of cases the patient must be hospitalized to carry it out successfully.

In a more recent article published in *The Journal of Urology*, June, 1935, Dr. Crance and Dr. Maloney have reported a very simple method of changing the pH of urine by the administration of nitrohydrochloric acid. The formula used by Dr. Crance and Dr. Maloney is as follows: Acid nitrohydrochloric (not the dilute) drams 2½, and aqua qs ounces 2. Sig. One teaspoonful in ⅔ glass of water followed by another glass of water after meals and late at night. We have used this formula with very satisfactory results in a number of cases, especially the one referred to above. As the changing of the pH of the urine to the acid side seems to be the most formidable attack on the colon bacillus, it is necessary to keep a careful check on the pH by use of a standard pH comparator. In order to avoid errors of pH values the urine should be tested as soon as possible after voiding and should not be transported in bottles with cork stoppers unless the corks have been previously soaked in melted paraffin. Whether the ketogenic diet or the nitrohydrochloric acid is employed a pH value of 5.1 is necessary to obtain results.

The dysfunction of the bladder in which the presence of inflammation is a factor also presents unsolved problems. Even the factors involved in that apparently simple, but in reality very complex, act of voiding by a normal person is not definitely settled. A review of the opinions held by various authors will corroborate this statement. When pathologic conditions are present, the act of voiding becomes more complex.

Pathologic conditions may be present in the urinary bladder for a long time before the clinical symptoms are sufficiently marked to cause the patient to consult his physician.

There is no condition in the human body in which there are so many hazy, indefinite, and frequently erroneous ideas as cystitis. To corroborate this statement we need only refer to the fact that urinary antiseptics, as well as other drugs, are so often prescribed without a careful urologic survey of the patient being first made. The study of any morbidity of the urinary bladder must be based on the anatomy and physiology of that organ in health. There is probably no organ in the body which can continue to function under more adverse conditions than the bladder.

The remarkable adaptability of the transitional epithelium to varying degrees of distention is phenomenal. In the normally distended bladder this epithelium is composed of 3 layers of cells. When the bladder is collapsed there are as many as 8 or 10 layers of cells. This change occurs without any break in the histologic structure. The urinary bladder is well supplied with blood vessels. Under normal conditions the veins are capable of carrying away the blood pumped in by the arteries and thereby a normal balance obtains. The normal bladder is capable of a certain amount of stretching, due to varying degrees of distention, without any imbalance in the function of the veins and arteries. There is a point, however, when this stretching of the bladder disturbs the normal balance of the vascular supply. Any condition which interferes with the normal physiologic function of the bladder, i. e., the emptying of that viscus without any undue exertion of the detrusor muscle, must produce an imbalance in the vascular system. The detrusor muscle of the bladder is stimulated to overactivity by obstructive lesions and also by many other factors which increase the sensitivity of the bladder. The sensitivity of the bladder may be increased by various infections and also by the presence of irritating substances in the urine. Very little is known regarding the origin and chemistry of these substances, but Rost has stated that chemical substances derived from the food and excreted in the urine may cause vesical irritation. The effect of the aniline dyes in producing irritation of the vesical mucosa has long been recognized. Although urologists recognize the importance of the obstructive uropathies as factors of bladder dysfunction and the inevitable pathology which always results from hypertonicity of the detrusor, yet we often make the mistake of think-

ing too much about obstructive lesions and forgetting the importance of other factors.

We, as urologists, are entirely too much obsessed by this obstructive theory. When the bladder of a patient who has no obstructive uropathy exhibits trabeculation and evidence of chronic cystitis, the detrusor of that bladder has been overstimulated by some factor other than obstruction. Trabeculation is not always a sign of difficult urination. That the hypertonicity of the detrusor is a factor in disturbing the normal balance of the vascular system of the bladder cannot be denied. In the beginning of pathologic processes in the bladder, just as in pathologic processes in any other organ or structure in the body, the first change noted is vascular disturbance. The factors involved in hypertonicity of the detrusor present a maze of intricate problems, many of which are as yet unsolved.

In attempting to describe inflammation of the urinary bladder it is difficult to avoid reference to some simple facts which may seem elemental or unimportant. But no matter what morbidity the bladder presents, there must be a constructive hypothesis upon which to correlate the essential facts necessary to the visualization of the clinical symptoms resulting from pathologic conditions in the urinary bladder. To illustrate this point the fact need only be mentioned that sometimes after the removal of obstructive lesions performed under the most perfect surgical technic—whether the operation be perineal, suprapubic, or resection—there are a few cases in which bladder dysfunction still persists. Neurogenic disturbances entirely separate from the bladder may be a factor. However, the dysfunction in most of these cases can be traced to the disturbance of the nerve supply resulting from chronic inflammation.

A few years ago Prof. Ludwig Aschoff, of Germany, delivered a most instructive address on "The Concept of Inflammation" at Mercy Hospital in Pittsburgh. Prof. Aschoff emphasized the important fact that any organ which is once the site of inflammation never again regains its original pristine histologic structure. Prof. Aschoff also states that this is particularly true in infectious processes. Naturally the extent of the pathologic damage depends on the intensity and the chronicity of the inflammatory conditions. In many cases the inflammatory processes are either slight or transitory and no interference in the function of the organ is apparent. However, vascular disturbance in the urinary bladder may be present long before any clinical symptoms of dysfunction are noted. The ability of the bladder to resist infection is phe-

nomenal. We are greatly indebted to Dr. Hugh Cabot for his observations and study of this subject.

Some years ago, when delivering the R. W. Stewart Memorial Address before the Pittsburgh Academy of Medicine, he called attention to the development of infection following a too sudden emptying of the overdistended bladder. Later in the *Journal of the Indiana State Medical Association*, January, 1928, and in the *Year Book of Urology*, 1933, under reports from The Mayo Clinic, he demonstrated some important facts. That bacteria may be introduced into the normal bladder without producing infection is a fact well known. This is evidence of the inherent ability of the normal bladder to resist infection. Cabot made the interesting observation that bacterial study of the urine in normal bladders showed the presence of bacteria after the simplest urologic procedures. He found bacteria in the urine even after the passage of a catheter under the strictest aseptic technic. In normal bladders the bacteria disappeared in a few days. Cystoscopy is often necessary in the diagnosis of obscure conditions. If the bladder happens to be normal and no infection follows, we must not imagine that our surgical technic has been so perfect that no bacteria were introduced into the bladder. However, when the bladder is unable to function in a normal manner, whether the cause be obstruction, overdistention following surgical shock, or neurogenic factors, the soil for the reception and development of bacterial infection is prepared.

In the study of any morbidity of the urinary bladder brief reference must be made to the following fundamentals: Anatomy, nerve supply, and stimuli. As regards the anatomy, only 4 structures will be mentioned, namely, the detrusor, the external sphincter, the internal sphincter, and its important ally—the trigonal muscle. This latter muscle seems to have assumed more importance in the last few years than it formerly enjoyed. The external sphincter is, comparatively speaking, a fairly powerful striated muscle innervated by the pudic nerve. It is under voluntary control. The detrusor is the most powerful muscle concerned in the act of micturition. It is composed of 3 layers of smooth muscle which are so interwoven that they really constitute a functional unit. The internal sphincter, the weakest of the 3, plays a leading rôle in normal voiding, and when pathologic conditions arise it assumes still more importance. Both the detrusor and the internal sphincter are innervated by the hypogastric (sympathetic) and the pelvic (parasympathetic) nerves. Under normal conditions, impulses coming via the

parasympathetic nerves produce relaxation of the internal sphincter and contraction of the detrusor. Impulses coming via the hypogastric produce exactly the opposite effect, namely, contraction of the internal sphincter and relaxation of the detrusor. In view of the fact that the internal sphincter has a certain inherent degree of tonus, the possibility of dysfunction from apparently trivial conditions is apparent. When the internal sphincter refuses to relax at the psychologic moment, the powerful detrusor cannot empty the bladder. This illustrates the well-known antagonism between the two divisions of the autonomic nervous system, namely, the sympathetic and the parasympathetic nerves.

Inflammation of the urinary bladder is a factor in producing an imbalance in the functions of the nerves concerned in the physiology of the bladder by increasing the sensitivity of that organ. The question as to the possibility of any voluntary control of the internal sphincter and the detrusor is still a matter of dispute. H. Dennig in 1924 (*Ztschr. f. Biol.*) stated that voluntary impulses may be conveyed directly to the bladder through the parasympathetic nerves. That this must be true to only a limited extent is indicated by the clinical picture of retention. The ineffectual and often agonizing efforts to void do not indicate much voluntary control. We have a fairly accurate knowledge of the anatomy of the urinary bladder, but our knowledge of the nerve supply is not quite so complete.

The production of the stimuli necessary in the act of voiding is a matter about which there is some difference of opinion. It is still uncertain how the desire to urinate originates. The 3 theories which have received the most attention are:

1. When the bladder has reached a certain degree of fullness, urine is forced into the prostatic part of the urethra. This distention of the posterior urethra, which is still closed by the external sphincter muscle, causes the desire to urinate.
2. The distention of the bladder itself is felt, and this incites the desire to void.
3. The sensation inciting the desire to void results from contraction of the vesical musculature.

It is the opinion of Rost that none of these theories are tenable because our knowledge of the sensitivity of the bladder is not definitely established. He also states that certain sensations which influence the voiding of urine arise within the bladder, and he notes the fact that numerous ganglion cells in the bladder wall give that organ a certain degree of automatism,

proved by animal experiments, so that even after all afferent nerves have been severed the bladder will continue contracting periodically. Another factor in the stimulation of micturition is the reflex relationship of the complex nerve supply of the bladder with sensory tracts on the body surface. For example, patients suffering from inability to void are often seen making traction on the genital organs to stimulate the micturition reflex.

At the January, 1935, meeting of the Pittsburgh Urological Society, Dr. George H. Wright gave a very interesting and instructive address on the influence of cortical disturbances on the function of the urinary bladder. His statement that there is a bladder center in the brain is in accord with the observations of other neurologists. Dr. Wright cited a most interesting case of brain tumor in which loss of voluntary control over the external sphincter had a definite bearing on the correct diagnosis. It is interesting to note that Muller asserts that the urinary bladder is the only visceral organ known to have a cerebral center.

GANGRENOUS CYSTITIS

Although gangrene of the bladder was described almost 3 centuries ago, the reports of only a little over 200 cases have found their way into the literature. A most exhaustive article on this subject by Stirling and Hopkins was published in the *American Journal of Urology*, April, 1934.

CASE REPORT

E. M., age 66, was admitted to St. Joseph's Hospital Sept. 13, 1933. He had had some difficulty in voiding for 2 weeks previous to entering the hospital. On admission he was suffering from retention. He was catheterized and the bladder irrigated for several days. Cystoscopy was attempted Sept. 17, but due to obstruction it was impossible to pass the instrument. On the night of Sept. 30, the intern found it impossible to pass a catheter. On the morning of Oct. 1, I was called to see the patient. This was the first time I had seen him because he was not on my service. The bladder was greatly distended. As I was not able to pass a catheter, he was immediately taken to the operating room and, under abdominal field block with 1 per cent novocain, suprapubic cystostomy was performed. After the bladder was exposed, a trocar was plunged into it to withdraw as much of the urine as possible without soiling the wound. Immediately there was an escape of foul gas, which seemed to be under pressure, and this was followed by a quantity of foul-looking and foul-smelling fluid. Very solicitously the intern whispered "intestine." However, I enlarged the bladder wound and immediately there appeared something I had never seen before. It seemed to push itself up into the wound, and I removed it. It was a large sheet of pus, which was apparently a complete cast of the bladder. Enough of it was salvaged for the path-

ologic examination, and the pathologist's report was gangrenous cystitis. A growth found at the bladder neck was the cause of the obstruction. This was later removed by my associate, Dr. Hartung, and the patient made a complete recovery.

The chief predisposing factors in the development of gangrenous cystitis are retention of urine and the presence of infection. These factors were present in the case just reported. The treatment of the condition is prompt surgery to provide thorough drainage. Stirling and Hopkins suggest that in every case of severe chronic cystitis the possibility of gangrene should not be overlooked. They also suggest that more necropsies might reveal that this condition is not so rare as usually supposed.

Jenkins Arcade.

ABSTRACT OF DISCUSSION

BENJAMIN R. ALMQUEST (Pittsburgh): Appropriate to the discussion of Dr. Bryant's paper is the following quotation from Dr. Hinman's new book: "As a distinct entity cystitis is of the greatest rarity, and the use of the term easily can be abused. Involvement of the bladder is part of the general picture and should not be regarded or treated separately."

Granted that individually we are capable of making a diagnosis and classification of the more common inflammatory conditions, yet many of us probably fail to make a proper diagnosis in certain obscure cases of bladder dysfunction. It is deplorable that the application of cystographic and cystometric study is not a more common procedure so that we might all become proficient in their application and interpretation.

Again quoting Hinman: "In the study of individuals past age 50, we should not lose sight of the fact that certain atrophic changes, irrespective of hypertrophy, occur in the muscles of the bladder together with an increase in the interstitial connective tissue and the elastic fibers. The growth of elastic tissue compensates the muscular atrophy. Arteriosclerotic changes in the blood vessels no doubt often exist. Finally, inflammatory processes frequently institute or aggravate such local substitution of connective tissue."

Under treatment, Dr. Bryant calls attention to the necessity of differentiating the 2 types of colon bacillus and a simple laboratory procedure for the same.

The therapeutic use of nitrohydrochloric acid in producing the necessary pH of the urine is certainly more simple and much less discomfiting to the patient than the ketogenic diet. The question whether the seemingly large dose of acid may in some individuals have a tendency to produce acidosis may be raised. As to the estimation of pH, some day there will probably be an indicator paper as simple to use as litmus paper for practical guidance in producing the desired acid state of the urine.

In the urologic service in a general hospital many problems present themselves. We should not lose sight of peri- and paravesical pathology arising in the adnexal tissues in both sexes, including inflamed hemorrhoids, rectal fissures, proctitis, and coccygodynia, with associated nerve reflexes transmitted through association fibers to those supplying the bladder and giving rise to vesical symptoms.

URETERAL TRANSPLANTATIONS*

GEORGE V. FOSTER, M.B., PITTSBURGH

Until 1912 ureters were being transplanted into various parts of the intestinal tract from the cecum downward with a mortality of 55-66 per cent. These implantations were of the direct type, a mere hooking-up of the ureter with the bowel, without any thought of the valve action which was later to be developed. R. C. Coffey of Portland, Ore., was impressed by the high death rate in cholecystectomies when the bile duct was inadvertently cut and bile poured forth onto the abdominal wall, and he set to work to find a method of transplanting the bile ducts into the intestine. In December, 1909, while doing experimental work along this line to determine if the valve action which nature provided in the opening of the bile duct into the intestine could be duplicated by surgery, Coffey did the first experimental ureteral transplantation. He had noted that the valve action of the bile duct into the intestine was similar in action to the valve action of the ureter into the bladder. This work he reported at the meeting of the American Medical Association in St. Louis in 1910, and it is noteworthy that this preliminary work was based upon such a firm foundation that the original illustrations made in 1909, showing transplantations of bile duct into the intestine, are being used to illustrate the most sound method of ureteral transplantation 25 years later in one of the leading surgical textbooks. It was left to Charles H. Mayo in 1912 to place this method known as Coffey No. 1, submucous transplantation of the ureter, into actual practice and to him and Waltman Walters we are indebted, not only because of their numerous refinements of technic but also for their assurance to the general surgeon and urologist by their report of 99 cases of exstrophy of the bladder that the method was safe and provocative of no greater mortality than an intestinal resection done under favorable circumstances. Like any other worth-while surgical procedure, the indications for this operation have gradually widened to include carcinoma of the bladder, exstrophy of the bladder, complete epispadias without sphincter control, vesicovaginal fistula, and tuberculous cystitis. These are conditions from which relief is being sought more and more commonly by diverting the flow of urine into the sigmoid. The relief from the incontinence of bladder exstrophy and the acute suffering of tuberculous bladder and the chances of avoiding the rapid fatality of bladder carcinoma far out-

weigh the rather remote chance of an ascending kidney infection or the even more remote possibility of an operative death.

PROCEDURES

Through a gradual evolution which any new operative procedure may be expected to pass during 25 years, changes have been made in the technic by Coffey himself with his procedures No. 2 and No. 3, by minor modifications at Mayo Clinic, by Higgins of Cleveland Clinic, Brenizer, and others. These will be considered.

Coffey Technic No. 1; Mayo-Coffey Technic; Submucous Uretero-intestinal Anastomosis.—

This operative procedure is carried out in 2 stages in order (1) to cut down the operative time and subsequent shock; (2) to accustom the lower bowel to acting as a reservoir for urine; (3) to prevent uremia in case both transplantations should fail to work; (4), to safeguard against kidney infection, which would not be so overwhelming if only one ureter were transplanted as though both ureters had been transplanted simultaneously. The technic is as follows:

Through a right rectus incision with patient in a Trendelenburg position, the bowel is packed upward in the peritoneal cavity, the ureter located by its writhing motion when stroked, and an incision 3 inches long made over it. The ureter is freed, clamped doubly close to the bladder, the distal end touched with carbolic acid and alcohol, tied, and returned beneath the posterior peritoneal wall. The peritoneum is closed beneath the exposed ureter leaving sufficient freedom for it to be connected to a convenient portion of the lower sigmoid without tension. It is cumbersome and unnecessary to place intestinal clamps on the portion of the sigmoid approved for anastomosis; it is good judgment to choose a portion of the sigmoid which can be readily reached without tension on the ureter rather than the very lowest portion which can be reached through pulling on both the sigmoid and the ureter. The selected portion of the sigmoid is surrounded by saline or Dakin's packs and an incision 1½ inches in length made through the coats of the bowel in any region except the longitudinal band, this incision to be carried down to the mucosa. Four Lembert sutures are passed through the 2 outer coats of the bowel wall but not pulled tightly nor tied. An 18-inch length of O catgut with curved intestinal needles on either end is put through the distal end of the ureter in a loop stitch and this

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

held in readiness for the opening into the bowel proper. This opening through the mucosa is made with a pair of curved scissors and the needles attached to the ureter passed through the opening of the mucosa, the ureteral clamp is removed, and—the patency of the ureter being assured—its lower end is pulled under the Lembert sutures and into the sigmoid by the loop of catgut with double needles attached. These needles are brought through the bowel wall 1 inch distal to the opening made to receive the ureter, and the attached catgut is then tied. The Lembert sutures are tied over the ureter and an anchor suture is put in, the intestine being sewed to the ureteral wall. A further row of interrupted intestinal sutures are put in place over this line of sutures so that any leakage may more effectively be sealed off. The sponges are then removed, all instruments used up to this point discarded, the site of the anastomosis cleansed, and the omentum pulled down over it. The abdomen is closed in layers without drainage. Team work is essential in this as in any other difficult surgical procedure. The operation should be planned exactly according to steps and the assistants should know the step ahead. There should be no traumatism of the viscera nor spilling of the bowel content. The anesthetic should be adequate so that there is no undue movement of the abdominal contents. Unlike the practice in the larger clinics where the patients are frequently far from home and interrupted hospitalization would be expensive, I prefer that my patients go home for 3-5 weeks between transplantations so that they may completely regain their strength.

The principle of the valve mechanism is to prevent the reflux of gas and liquid feces from the bowel up the ureter, thus causing a pyelonephritis. If a pyelonephritis does not develop, it is good evidence that a proper valve has been built. At the Mayo Clinic only 50 per cent showed any evidence of kidney infection following this method. Pyelograms made following the intravenous injections of dye show that, if there is no clinical evidence of hydronephrosis or hydro-ureter, none exists and the kidneys function normally. If the operation is done after age 3, when sphincter control is present, the child should not pass urine more often than every 3-4 hours during the day and every 6-8 hours during the night.

Coffey Technic No. 2.—In 1925 Coffey became dissatisfied with the 2-stage operative procedure described above and by Technic No. 2 devised a method which he hoped would diminish the chances of peritoneal soiling emanating

from the opening in the intestine. The technic is as follows:

The abdomen is opened low in the midline, the upper end of the movable sigmoid is clamped with a stomach clamp, a sigmoidoscope is inserted through the anal opening, a good-sized cannula inserted through the wall of the sigmoid, and the sigmoid thoroughly cleansed with sterile water through the cannula. The cannula is removed, and the rectum and sigmoid are packed with gauze. The ureters are located, severed near the bladder, and held with mosquito forceps. No. 8 ureteral catheters are prepared by tying a rubber cuff three-quarters of an inch in length about them; the ureters slip over the catheters up to the cuff, are sutured to the cuff, and are tied down to the catheter. Both ureters are fixed in this way and inserted through 2 openings as low in the sigmoid as conveniently possible. The gauze is removed from the rectum and the catheters drawn down. The urine flows immediately, and in 8-16 days after the operation the part of the ureter in the intestine sloughs away and the catheters are passed through the anus. The valve principle is used in this operation as in technic No. 1. The principal uses of this procedure are in carcinoma of the bladder and in tuberculous cystitis where one kidney has already been removed. Coffey used this method in 8 cases of carcinoma of the bladder with satisfactory results.

The disadvantages are many: (1) The catheters become blocked with salt deposits; (2) the method prolongs the operation unduly and necessitates considerable handling of tissues; (3) the pressure of the catheters predispose to infection.

Coffey Technic No. 3; Necrosing Suture Method.—In a further endeavor to cut down the possibility of peritoneal infection this technic was devised.

The end of the ureter is ligated with OO chromic catgut and the peritoneal and muscular layers of the bowel wall opened for a distance of 2 inches. The lower end of the ureter is anchored in the lower angle of this incomplete bowel incision. A fine needle holding a doubled linen suture transfixes the ureter through its center about one-half inch from the distal end to an adjacent one-fourth inch of the full thickness of the mucous membrane of the bowel wall and is tied tightly. The 2 outer layers of the intestinal wall are closed over the ureter in the manner necessary to provide valve action. The transfixion suture cuts through in 2-4 days.

Theoretically this should be the method of choice, because if it is correctly performed the chances of peritoneal contamination would be considerably lessened. Sufficient reports of this

operative procedure have not yet been received and judgment must be withheld.

There are disadvantages:

(1) Bilateral transplantation cannot possibly be done by this method; (2) the necrosing suture must penetrate both the intestinal lumen and ureteral lumen; otherwise the opening will not form and back pressure will be exerted on the corresponding kidney, causing its destruction; (3) the suture must be tied with sufficient tightness to strangulate the tissue but not enough to cut completely through, and this delicacy of touch is difficult to acquire.

Brenizer has modified this procedure to make it as mistake-proof as possible. He passes a metal ring through the rectum up to the site of the necrosing suture, and the necrosing suture passes into the lumen of the ureter, through the mucous membrane of the intestine, through the ring, and back through the mucous membrane. This ensures that the suture passes into the bowel lumen.

Higgins of Cleveland has modified Coffey technic No. 3 in such a manner that the ureters are left running into the bladder and a lateral strangulating suture is made between the ureter and the bowel at the original operation. The urine continues to run down through the unobstructed ureter while the cutting-through ligature establishes a lateral anastomosis. At a subsequent operation the ureter beyond the anastomosis is tied off and the stump buried. However, at the second operation the ureter is sometimes found detached thus defeating the purpose of the operation. The difficulty in Higgins' technic is in drawing the uncut ureter over to the site of anastomosis.

In the cases reported, the Coffey technic No. 1 was used throughout. There are a few general factors which may play a part in the successful care of these patients. Medication in the form of acid sodium phosphate and urotropin is given routinely for one week preoperatively and recommenced when the anesthetic nausea subsides. Spinal anesthesia is ideal in children over age 6, due to the splendid relaxation which it gives. The lower bowel is well cleaned out with enemas the evening and morning before operation. The patient is propped up on a back rest soon after operation. The Mayo catgut urine guide is not used as it is more apt to cause blocking of the ureter than prevent it.

CASE REPORTS

CASE 1.—T. S., age 12, was admitted in June, 1932, with a diagnosis of exstrophy of the bladder and absence of the vagina. At operation an effort was made to implant the ureter as low in the sigmoid as possible

with a consequent spilling of intestinal contents. The child developed general peritonitis and died 10 days later. Following this experience no effort was made to use the lowest portion of the sigmoid but rather the most convenient position.

CASE 2.—J. F., age 4, was admitted in September, 1932, with a diagnosis of bladder exstrophy. The right ureter was transplanted and the appendix removed in September, and the left ureter was transplanted in November, 1932. The bladder mucosa was removed and subcutaneous tissues closed over it in March, 1933. The child never had pyelitis, and has excellent urinary control.

CASE 3.—G. H., was first admitted in June, 1930, at age 16 months with diagnosis of bilateral direct hernia and bladder exstrophy. The hernias were repaired at that time. The patient returned in January, 1933, when the right ureter was transplanted and the appendix removed. There was no infection in the kidney pelvis, but at the end of 10 days, the muscle wall being congenitally weak and the child obstreperous, the incision separated. It was resutured immediately and the child made an uneventful convalescence. The left ureter was transplanted in June, 1933, and convalescence was uneventful except for scarlet fever, which occurred 5 days after operation. In October, 1933, a partial cystectomy was done and the epispadias repaired. For one year after the left ureter was transplanted, the child had acute abdominal pain recurring irregularly but without fever, as though there were a kink in the left ureter. He has been free of this for the past year, and there apparently is no kidney infection. There is good urinary control.

CASE 4.—S. F., age 2. The diagnosis was exstrophy of the bladder. The right ureter was implanted and the appendix removed in October, 1932. There was a mild right-sided pyelitis, which was easily controlled. In December, 1932, the left ureter was anastomosed to the sigmoid without subsequent complications. In February, 1933, a partial cystectomy was done. There is good urinary control and no evidence of kidney infection.

CASE 5.—G. C., age 5. The diagnosis was exstrophy of the bladder. In February, 1934, the right ureter was transplanted and the appendix removed. In October, 1934, the left ureter was transplanted. No marked reaction followed either procedure. In May, 1935, a partial cystectomy was done, which was completely healed in 6 weeks; the child has good urinary control. Until the time of operation this child was looked upon as a boy by the parents.

CASE 6.—H. L., age 3, was admitted in August, 1932, when the right ureter was anastomosed to the sigmoid and the appendix removed. The child had a severe right-sided pyelitis for 4 days following operation, but this subsided under urinary antiseptics, heat, and forcing fluids. In January, 1933, the left ureter was transplanted without reaction. Partial cystectomy was done in July, 1933. This child has good control through the day but wets the bed almost nightly. It is believed that this is largely a matter of habit.

CASE 7.—C. H., age 5, was admitted in August, 1933, with a diagnosis of double indirect inguinal hernia with epispadias without sphincter control. The hernias were repaired and the child readmitted in December, 1933, when the right ureter was transplanted and the appendix removed. In January, 1934, the left ureter was transplanted. In September, 1934, the epispadias

was satisfactorily repaired. This child never showed any symptoms of urinary infection, and has good urinary control.

CASE 8.—H. M., age 2, was admitted in May, 1934, with a diagnosis of bladder exstrophy. The right ureter was transplanted and the appendix removed. There was a moderate rise in temperature and pain in the region of the right kidney, which rapidly subsided. In October, 1934, the left ureter was transplanted without difficulty. As the abdomen was being closed 30 minutes after the operation commenced, the child died suddenly, undoubtedly an anesthetic death.

CONCLUSIONS

From these relatively few cases, the following conclusions are formed:

1. Patients with bladder exstrophy should never be refused operation unless some other factor enters into the case. No parents are so grateful as those whose child is changed from one who constantly has his clothes soaked with urine, who is an object of ridicule by his playmates, and who becomes acutely conscious of his defects into one able to take his normal place in life.

2. The Coffey technic No. 1 is a safe and reliable procedure. It makes very little difference where in the sigmoid the transplant is done. The most essential point is to prevent peritoneal contamination.

3. If a satisfactory valve action is formed at the anastomosis, the chance of pyelitis is small, and—if such occurs—usually improves quickly with plenty of fluids and urinary antiseptics.

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ABSTRACT OF DISCUSSION

ALEXANDER RANDALL (Philadelphia): The various technics of ureteral transplantation have the same 2 cardinal features—to produce an aseptic method, and to produce proper drainage. A few weeks ago I saw Dr. Hinman do a bilateral ureteral transplantation. I asked him whether asepsis or drainage came first. I disagreed with him, particularly because of his new technic, which aims towards the ultimate in asepsis. I asked him whether he did not think that proper ureteral drainage into the bowel is the greatest safeguard against infection, and he agreed that it is. The third Coffey technic certainly is an unusually interesting method. Those who have not been successful with it evidently have not followed the technic closely.

The Higgins technic is extremely interesting. Transplants can be done on both ureters in one operation. The patient who must have a third operation under the Coffey technic needs only a second one. We had a woman with carcinoma of the bladder on whom we performed a simultaneous bilateral ureteral transplantation, following the Higgins technic. After that we performed a cystectomy and panhysterectomy. On examination 10 months after the operation a hard nodule was found in the upper vagina and I am trusting to roentgen-ray therapy to take care of this. The ureteral transplants are functioning perfectly.

Hinman's new technic, which will be published soon, appears complicated while reading his description but it is not really complicated. His approach is the usual one—both ureters are freed, lifted up, and made ready to implant. The only feature to emphasize is that having ligated the ureter he prepares its bed, puts in all fixation and closure sutures which number only 6, and incises a centimeter eye in the ureteral lumen. With a probe holding the ureter stiff, all sutures are held, a cautery puncture is made through the rectal mucous membrane, the assistant puts in the ureter, the second assistant pulls taut the 6 sutures, and the operation is completed. This is the closest procedure yet to aseptic implantation.

There is an enormous field to surgery awaiting the time when there will be perfected a satisfactory one-stage bilateral ureteral transplantation.

CARLYLE N. HAINES (Sayre): In 1926 I reported before this society the case of a woman who had 14 unsuccessful operations elsewhere for urethrovesicovaginal fistulae and who was relieved of her incontinence by bilateral ureteral transplantation into the pelvic colon (Coffey technic). This patient remained well 7 years and led a very active life as the wife of a farmer. She died 2 years ago, however, as the result of kidney failure, a typical uremic death.

THE GREATEST MEDICAL LIBRARY

During recent years a large proportion of the medical profession has become library-conscious. More physicians are realizing that medical progress is based on facts established in the past, and the only means of obtaining this information is through familiarity with medical literature. No physician can hope to acquire a sufficient number of books to provide adequate facilities for study and investigation. This knowledge can be attained only by access to a medical library abundantly equipped with books and especially with files of medical journals. The inspiration for establishing such libraries is found in the incomparable Army Medical Library in Washington, whose one hundredth anniversary is being celebrated this year. The growth and development of this library were due primarily to the leadership and constant efforts of John Shaw Billings who served as librarian from 1868 to 1895. At the present time this great library has accumulated nearly a million volumes, the greatest collection of medical books in existence. These include books and medical journals in all languages of the world. Practically everything in medical literature is on file in this institution. An interesting feature of this library is the collection of books known as incunabula, from the Latin word for cradle, referring to books printed before 1500 when printing was in its infancy. While some 600 medical incunabula are known to exist, this library has copies of about 450. Every library treasures its incunabula above all volumes in its possession.

The most important work instituted by Dr. Billings and carried on persistently to the present time is the Index Catalogue of the Library of the Surgeon General's office. This index contains information obtainable in no other published volumes. The first series, completed in 1895, assembled information on every medical topic on which anything had been published to the date of completion of each volume. Thus, under "clavicle, fractures of," there were listed books, theses, articles in medical journals of the world, and everything that had been collected on this topic from early days down to the date when this particular volume was

printed. Since that time, at intervals of about 15 years, the second and third series have been published. Volume I of the fourth series will soon make its appearance. Every topic in each of these series lists everything which has been published since its appearance in the preceding series. The library now receives about 2000 medical journals, indexing every worth-while article in every issue of every journal of almost every country in every civilized language. In addition to these are indexed books, theses, pamphlets, and documents.

Years ago Osler told of the worn and bethumbed volumes of the Index Catalogue in foreign medical libraries. It is said to be the working tool in constant use in the cities of Europe, Asia, and South America. In the British Museum this Index Catalogue is regarded as the greatest ever achieved, being more complete than any other subject index ever published. Welch stated that the 4 great contributions of this country to medical knowledge were discovery of anesthesia, discovery of insect transmissions of disease, development of modern public health laboratory, and the Army Medical Library with its Index Catalogue, and the last one enumerated, he added, is the most important of the 4.

Mention should be made of the Index Medicus which Billings established in 1879. This was published monthly, presenting in an abbreviated form material similar to that of the Index Catalogue. In 1927 the Index Medicus was merged with the Quarterly Cumulative Index, founded by the American Medical Association in 1916. The Quarterly Cumulative Index Medicus now published by the American Medical Association is the practical working index, indispensable in every working library. These facts are but a few pertaining to the Army Medical Library suggestive not only of its supreme value to the medical profession of the United States, to which it is indispensable, but also of its importance to the medical profession of the world.

In reviewing the history of this great library one is impressed by the personality of Billings, the great work which he accomplished, and the regard in which he was held by library workers throughout our land. Not alone in medical libraries, but in public libraries in various parts of the country, his services were enlisted and his advice sought. He had charge of the vital and social statistics of the Tenth and Eleventh Censuses, and it is stated that his efforts had much to do with the transformation of the old Marine Hospital Service into the modern United States Public Health Service.—Editorial, *Northwest Medicine*, May, 1936.

"DOCTORS ARE A CINCH"

These words are alleged to have been spoken by the young hoodlums who lured Dr. Silber C. Peacock from his home one evening on the pretext of seeing a sick child that did not exist, and then brutally murdered him.

Finding themselves in the toils of the law, they nonchalantly unburdened their souls somewhat after this fashion—"Yeah, doctors always come when they are called and they never mind where they are told to go. Easy to get them to go to the sticks and way out in funny places. We could do 'em up good there."

No truer word ever was uttered and, to drop for a moment into the gang's vernacular, "they said a mouthful."

The profession consists of Peacocks, men who heed gladly every call for help that comes to their ears,

without thought of personal comfort or of convenience or of remuneration. In other words, the spirit of altruism ever determines the doctor's course. When, however, a virtue is carried to the nth degree, as it is by us, it becomes an absurdity, if not a vice, and reduces those who practice thuswise to the status of suckers.

Faith in humanity is not always rewarded by our fellow men as we expect it to be. To be sure, calls upon errands of mercy fortunately do not culminate, as a rule, in murder of the physician, but too often he is robbed. Robbed of his rest, time, leisure, skill, and fee, for, far too frequently, the bill never is paid. By whom? By persons without much conscience in *all walks of life* whose commercial credit rating is fair or good but whose medical credit rating is zero minus. With brazen impertinence they demand a service for the payment of which they simply manifest a supreme indifference. When sickness again overtakes them, they appeal to another altruistic ass (synonym for doctor) whom they have not fleeced previously, with the same result so far as the doctor is concerned.

The remedy for correcting this outrageous situation, in part at least, lies with the medical profession. It consists in tempering mercy for others with justice to them and to ourselves; in preserving our self-respect and dignity as a profession by assuring ourselves reasonably well whom we are serving *at the beginning of treatment*, by inquiry into their ability and willingness to pay, through the organization of a medical credit system comparable to that in use by merchants. This was advocated by me during my term as president. The plan is feasible, easy of accomplishment, inexpensive, and calculated, as nothing else will, to cause all persons to improve and maintain their medical credit rating. To continue to submit to the stealing racket practiced by pirates and parasites, spongers and side-steppers, without making any effort to check an intolerable and disgraceful abuse, is to forfeit the respect of the people, including the dodgers, and to justify the use by them of the phrase, "Gee, doctors are easy. They always come when they are called."—*Maine Medical Journal*, May 1, 1936.

HOSPITALS AND MEDICAL CARE

It was very heartening to hear the following statements during the Western Hospital Association meeting in San Francisco in April, from Dr. MacEachern of the College of Surgeons and Dr. Buerki, president of the American Hospital Association:

"Hospitals cannot engage in the practice of medicine."

"Hospitals cannot profit from medical services."

"Profits cannot be derived from laboratory services (roentgen-ray and pathologic)."

"I'd prefer to have my anesthetic administered by a registered physician instead of a nurse."

"I would prefer to have my roentgen-ray examination supervised by an expert roentgenologist than by a technician."

"Profits from laboratory services must be returned to patients."

"Hospitals will cooperate with their medical staffs."

Thinking, competent hospital administrators and superintendents evidently recognize that hospital income cannot be increased by invasion into the field of medical practice and care. Exploitation of medicine cannot be engaged in to turn hospital deficits into balanced or profit-producing income.—*California and Western Medicine*, June, 1936.

EDITORIALS

THE CONVENTION

The Annual Convention of The Medical Society of the State of Pennsylvania will be held at the Hotel William Penn, Pittsburgh, Oct. 5 to 8.

Those who anticipate attending the meeting and have not made their arrangements as to hotels should do so immediately. There may be other groups centering their activities in Pittsburgh at the same time. Therefore, unless hotel arrangements are immediately obtained, the procrastinators will find themselves in an awkward predicament.

Everything has been planned to make this the most successful meeting so far held by The Medical Society of the State of Pennsylvania. From the advance notices sent by the committees preparing for the convention, the meeting will be marvelous, breath-taking, stupendous, mammoth, unprecedented, overwhelming, a glittering collection of events which will place the meeting on a high pinnacle of efficiency in all respects.

RESOLUTIONS ADOPTED BY THE JOINT COMMITTEE ON HEALTH PROBLEMS IN EDUCATION OF THE NATIONAL EDUCATION ASSOCIATION AND THE AMERICAN MEDICAL ASSOCIATION

The following resolutions were adopted by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association at the meeting of that committee in St. Louis, February, 1936.

In view of the potential importance of this problem the publication of the resolutions makes it possible for each member of our State Society to read carefully and digest the same.

WHEREAS, At the annual meeting of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association held at St. Louis, Mo., Feb. 25, 1936, a presentation was made by Major Joel I. Connolly, of the Chicago Board of Health, relating to possible health hazards in apparently modern plumbing installations in public buildings, and

WHEREAS, It was manifest in the said presentation that plumbing fixtures which have been generally regarded as safe and sanitary in design may in fact constitute a real and serious health hazard by reason

of the danger of back siphonage and contamination of water supply mains, and

WHEREAS, The probability exists that such apparently modern, safe, and sanitary plumbing installations may exist in numerous school buildings in the United States, and

WHEREAS, The existence of such apparently safe, modern, and sanitary plumbing installations and reliance upon them brings about a sense of false security, therefore, be it

Resolved, By the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association that this Committee apprehends the possibility of danger to the health of school children from apparently safe, modern, and sanitary plumbing installations in school buildings, and be it further

Resolved, That the said Joint Committee earnestly recommends to all school boards and school executives that surveys be instituted by competent engineers to ascertain whether or not the danger of back siphonage and consequent pollution of water supply mains exist in plumbing installations within their jurisdictions, and that such surveys be followed by prompt corrective measures, and be it further

Resolved, That these resolutions be offered for publication to all journals dealing with public health, health education, and general education.

Too frequently those in authority consider that apparently modern plumbing needs no inspection. These resolutions show that it is unwise for those in authority to sit in smug complacency. We would urge that the subject matter contained in these resolutions be brought to the attention of those in authority so that the dangers innocently existing may be properly corrected.

THE HUDSON RIVER CALLED RIVER OF LIQUID FILTH

In the summer season it is customary to call to the attention of travelers waters that are not considered potable. Our members do not confine their travels to the Commonwealth of Pennsylvania and when crossing the borders into other states they should be ever alert as to the use of drinking and bathing waters along the highways.

Mr. Dennis Sullivan, deputy health officer of Jersey City, N. J., has made public announcement that the Hudson River known as one of the most beautiful highways in the world is a stream of liquid filth. Mr. Sullivan included in the same category the Hackensack River, Newark and New York Bays. He issued public

warning in regard to adults and children swimming in these waters, declaring they are unfit for bathing either at high or low tide.

AN INTERPRETATION OF LIFE

It is unfortunate that human beings think more of the interpretation of life as it nears its close than at the age of maturity. The answer may be that youth is thinking more in terms of action than planning for action, while age, having acted, wonders more what it was all about. Then, too, it might be asking too much of youth to consider the organism in its broader personal and social relationship. On the other hand, we adults may be at fault. We endeavor to instill in our children, "God made you," "You must be good children," and we are content to leave their further knowledge of life and its full meaning to our educational system, which in turn says, "Let them find themselves." As a result, these young people may acquire a great deal of parrot-like knowledge, or even much factual generalized knowledge of the universe, but how much are they taught as to their relationship in thinking, feeling, and acting to the pattern as a whole? It would appear that this relationship is a basic essential to any interpretation of life and the formulation of any definite plan as to how best to live a life.

As they view the pattern of life as a whole, they are at a loss as to why it all began. The theologian answers, "It is a part of God's great plan," which appears satisfactory to such a question. Just why am I here cannot be answered but the fact remains that I am here and what am I going to do about it is the most important question of all. What I am going to do about it depends on my evaluation of life.

In the beginning (when man had a primitive brain) the only evaluation of life was a negative or positive impression. To the survival of the fittest there could be only one evaluation and that in terms of conflict, pain, and possibly some pleasure. Life had to be an active and not a passive thing. Down through the ages this evaluation holds true and on this evaluation was perhaps founded the philosophy of the pleasure-pain principle, a philosophy which forms the basic fiber for the motivation of present-day conduct and behavior.

If our interpretation of life, therefore, is that it is a dynamic, purposeful organism demanding certain objectives for the fulfillment of these purposes, how can we plan a life, thus endowed, to fit into the universal pattern as a whole? Such a problem is not as difficult as it would appear. Primarily, man is instinctively a gre-

garious creature. He cannot live alone. By virtue of this medium of community living, he has been forced through environmental factors to subordinate the fulfillment of his purposes to the good of the group as a whole with an eye to his own self-preservation.

The problem of planning a life (if we hope to conform to social standards) is not a difficult one if we keep before us a sane interpretation of life. The success or failure in life depends on our biologic make-up, our mental as well as educational discipline, the presence or absence of disease, and the establishing of objectives within the range of our potential ability.

THE BACCALAUREATE ADDRESSES

This is the open season for baccalaureate addresses to graduating classes of the various academic institutions. It is interesting to obtain a cross section of some of these addresses so that our members, especially those who have children in college or are anticipating college admission, will have some informative material.

It is of interest to note the number of graduates in law all over the country. Lawyers are easy-going persons, as a group, without regard to the consequences of their work on society, and the profession needs legal hospitals equipped as medical hospitals to take care of the cases not properly handled today.

According to the *New York Times*, June 10, 1936, Professor Zachariah Chafee, Jr., of the Harvard University Law School, who delivered the commencement address of St. John's University School of Law, at the Brooklyn Academy of Music, states that "both vision and workmanship are essential to a lawyer's success.

"One element of workmanship conspicuously lacking in the legal profession is promptness. Lawyers are said to spend more time getting a case postponed than trying it. They think nothing of putting off trials for weeks or months. There is no excuse for having so many matters hanging over in court.

"But the great danger of law is not lack of workmanship, but workmanship without vision. We do not get outside ourselves and stand off and look at our work and see what we are doing. We do not think of the consequences of our work on society. We accept our client's economic and social outlook along with his retainer. We lawyers have our epidemics, but do we exert ourselves very much to end them?

"One of these legal epidemics is automobile accident litigation. It has kept law offices busy with clients and meanwhile the courts have become hopelessly congested. If an automobile accident should occur outside this hall this minute, it would probably not be tried by a jury until 1941.

"A second epidemic is ambulance chasing. Despite numerous disbarments lawyers systematically solicit

clients among the victims of automobile accidents. Perhaps this objectionable activity persists because it is not adequately taken care of by the present methods of legitimate law practice.

"The victim needs a lawyer immediately and has to take the lawyer nearest at hand, whether competent or not. My guess is this practice will continue until we provide legal hospitals as well equipped and staffed as medical hospitals. Doubtless some legitimate accident lawyers would lose business to the legal hospital, but in compensation paid staff positions would have to be filled."

Dr. Chafee would not amplify his statement concerning legal hospitals. He said perhaps the hospital would have a ward to defend those unsatisfactorily defended, or not defended at all. He said the bar no longer could afford to close its eyes to this "running sore in urban life."

Then there is a group in their commencement addresses who believe that the powers of religion and education are outstanding weapons for the conservation of our system of government and potency to overthrow dictatorships. There are many old-fashioned enough to say that they have more faith in the power of religion and education than in the vitality of representative government and democratic institutions themselves.

To combat development of war and depression among the social classes, Dr. Douglas S. Freeman, Richmond, Va., editor and Pulitzer prize winner, said in part to the graduating class of the University of Pittsburgh, "Maintenance of existing totalitarian states seems to depend more upon the birth control practiced by oppressed classes than on any discoverable factor."

The following editorial appeared in the *New York Times*, June 16, 1936.

BACCALAUREATES AND OTHERS

President Angell was addressing the young baccalaureates of Yale last Sunday, but the subject and scope of the address and the authority with which this eminent citizen speaks made it a word of warning to the people—to the nation at the "critical crossroads" of its development, at the threshold of another "great chapter" in our national history. It is not the fate of one man or another but "the nature and quality of the social order that is involved."

The conclusion of the whole matter he presented with clarity and power, noting especially that the disposition among important groups even in our country to move in the direction of a totalitarian state is unmistakable, as is their corrosive effort to drive between classes a wedge of bitter hatred and distrust. This conclusion is that the greatest danger with which we are confronted "is the possible lack of sufficient moral insight to recognize that, if we wish to salvage the high indubitable advantages of a free democracy, we must breed a sufficiently vivid form of intelligent social altruism voluntarily to forego some of the individual prerogatives which in a simpler day we could properly and successfully claim."

There are some apparent temporary advantages in the conduct of the practical affairs of life under a dictator system (at least for portions of the population), but individual freedom disappears, "terrorism intervenes, great scholars are banished, and men dare not utter their honest convictions; the universities are emasculated."

With this address should be put for wide dissemination that of President Conant of Harvard who at the same hour was saying to the baccalaureates at Cambridge that it was more important to have men's minds actively engaged in disputing controversial points "than to have trains run on time." He would often prefer, as he said, tedious discussion of meaningless questions to the most efficient planning for the use of national resources if "coupled with the stifling though legal or extralegal methods of opinions at variance with the doctrines of those in control."

Both came in the end to stress individual character as the means of curing the social ills. President Dodds of Princeton reached the same baccalaureate conclusion in claiming that truth and beauty "do not bubble up from undifferentiated mobs"—they are the "work of individuals."

On June 10, Professor James Grafton Rogers of Yale University, in his commencement address at the University of Pennsylvania, Philadelphia, issued a warning against excess faith in ideas and urged American universities to think in longer time periods and welcome theory to their doors and indoctrinate none. He also felt that in recent years the world has become captivated with an idea, namely, that the whole aim of life is wealth and security, and by taking thought and using force on all men we can reach both goals, and that there are no other gods between these 2. He believes that this theory in its logical extreme is often communism or socialism, although it is only one dramatic form of philosophy, and that the same philosophy is represented in economic planning and fascism. Professor Rogers maintained that unless American educators took care the university graduates would be turned out so sensitively designed, so uniformly constructed, so subject to mass influences, so keyed to a single note, that excesses of nationalism or whatever else may be the current illusion will run wild.

On June 14, Dr. Harold W. Dodds, president of Princeton University, in his baccalaureate address, defined "old-fashioned liberalism on trial as outmoded and sterile philosophy." He defined old-fashioned liberalism as a way of life, a habit of mind. Liberalism insists that difficult questions are settled better by discussion than by force. His argument was that the newer activities of government have not always been wise, efficient, or even honest. There is extant a social philosophy which endorses every measure which will free individuals from social and economic handicaps, but which tests every

proposal by its probable effect upon individuals and not by some romantic conception of the nation or of society.

Addressing the members of the National Alumni Association, June 14, Dr. Frederick P. Keppel, president of the Carnegie Corporation of New York, hailed undergraduates of 1936 as a distinctly better investment than the students of 10 years ago. The significant change today is the changed attitude of the student himself which represents a fundamental change in the whole spirit of the college.

Of those obtaining university or college degrees in 1936, the number aided by the Federal Government through the National Youth Administration was 19,803.

Those receiving degrees represented 14.3 per cent of the 138,645 undergraduate and graduate students obtaining federal assistance to complete their bachelor's degrees. There were 1601 who won master's degrees, 175 who were made Doctors of Philosophy, and 1273 who received honors in professional courses.

In New York City, where there are 7792 federal-aid undergraduate and 1221 graduate students, 1221 received degrees as bachelors, 153 as masters, 26 obtained Doctor of Philosophy degrees, and 297 won professional honors.

The figures were obtained from questionnaires filled in by 1600 of the 1617 institutions participating in the NYA college-aid programs. A recent study conducted by the United States Office of Education showed that more than half of those aided were "honor" students or made average grades of A and B in their studies.

JAMES TATE MASON, M.D.

The following obituary appears in the *Journal of the American Medical Association*, June 27, in regard to the death of Dr. James Tate Mason.

James Tate Mason, Seattle, president of the American Medical Association, died June 20, at the Virginia Mason Hospital, of endocarditis with multiple emboli, aged 54. Dr. Mason was born in Virginia, May 20, 1882, the son of Dr. Clairborne Rice Mason and Mary Moore Mason of Lahore, Orange County, Va. After graduating from the University of Virginia Department of Medicine, Charlottesville, in 1905, Dr. Mason engaged in the practice of surgery first at Philadelphia, then at Franklin, Wash., and finally at Seattle, where he had practiced continuously since 1909. From 1916 to 1920 he was surgeon and superintendent at the King County Hospital. Since 1920 he had been chief surgeon to the Mason Clinic and president of the Virginia Mason Hospital. He was consulting surgeon of the United States Marine Hospital, Seattle, the American Mail Line, the Alaskan Steamship Company, and

the Northern Pacific Railroad Company. Dr. Mason was a member of the House of Delegates of the American Medical Association for 6 years, between 1929 and 1934; he was secretary of the Section on Surgery, General and Abdominal, from 1923 to 1926, when he was elected chairman, serving in that capacity for one year. Dr. Mason was a past president of the Pacific Coast Surgical Association, and in 1930 vice-president of the American Association for the Study of Goiter; a member of the American Surgical Association, Southern Surgical Association, Western Surgical Association, and the North Pacific Surgical Association, and Fellow of the American College of Surgeons. He was at one time a county coroner and a member of the state board of health.

Tate Mason was a genial, friendly man, much beloved by all who knew him. He was a builder, a true leader. During his term as president-elect he traveled widely on behalf of the Association, notwithstanding ill health and the pressure of his own affairs. During the Kansas City session, although imminently confronted by impending death, he kept in intimate touch with the progress of affairs, made the necessary appointments, and urged the promotion of high standards and high ideals. By his death American medicine loses a leader, chosen for its highest honors, who demonstrated by his life and by his death how well he merited this recognition.

May we add that Dr. Mason was married in 1910. He is survived by his widow and 3 children.

MATERNAL WELFARE

The many problems incident to maternal welfare are receiving marked attention due to the activities of the county medical societies through their special committees on maternal welfare and the State Society through its Commission on Maternal Welfare.

The *Weekly Roster and Medical Digest*, June 27, 1936, publishes the 1935 report of the Committee on Maternal Welfare of the Philadelphia County Medical Society as follows:

This committee held 15 meetings during the year for the purpose of discussing puerperal mortality. The case reports of 181 women who died in pregnancy or childbirth were presented by representatives of various hospitals or by the recorder of the committee in cases of home deaths.

The analysis of these case reports showed that there were over 153 puerperal deaths and 28 extrapuerperal or nonobstetric deaths in Philadelphia for 1935. There were 166 deaths occurring in hospitals and 15 deaths occurring in homes. There were 106 who died when over 28 weeks pregnant and 75 who died when under 28 weeks pregnant. In this connection it may be noted that there were 23,477 hospital deliveries and 6243 home deliveries, a total of 29,720 deliveries in Philadelphia in 1935. The Bureau of Vital Statistics states that there were 29,988 live births and 1111 still births, a total of 31,099 births.

The causes of death in puerperal deaths accounted for 45 abortions, 5 abortions without mention of septic condition, 11 ectopic pregnancies, 6 placenta praevias,

and 15 cases of other puerperal hemorrhages. There were 54 cases of puerperal septicemia in women over 28 weeks pregnant, 15 cases of albuminuria and eclampsia, and 3 cases of toxemia of pregnancy, and all were cases of pernicious vomiting of pregnancy. There were 4 cases of puerperal embolus and 15 deaths from accidents of labor.

The maternal death rate in Philadelphia for 1935 when calculated was 47.26 per 10,000 total births including still births. This represents a reduction from the death rate for 1934 of 51.10 per 10,000 total births including still births.

During this past year at each meeting of the committee the obstetric staff of one or another of the hospitals has been invited to attend the monthly conference. The attendance at these conferences averaged about 30 doctors.

The attendance of the members of the obstetric staffs of the various hospitals in Philadelphia at these monthly conferences is most commendable. It affords much informative material for the personnel of the various hospital staffs to carry back to their respective institutions, and shows the need for obstetric staff conferences in all institutions having a maternity service.

At such conferences it is manifestly unfair for a participant in the discussion of the case reports to make statements directly opposite to what is known to be his practice in the hospital where he is a member of the staff.

At these meetings the guiding hand of an efficient obstetrician as chairman is most essential. Those in attendance should be co-operative, bending every effort to clarify the discussion of each case.

INTER-STATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA

The International Assembly of the Inter-State Postgraduate Medical Association of North America, under the presidency of Dr. David Riesman of Philadelphia, will be held in the public auditorium of St. Paul, Minn., Oct. 12, 13, 14, 15, and 16 with preassembly clinics on Saturday, Oct. 10, and postassembly clinics on Saturday, Oct. 17, in the hospitals of St. Paul.

The aim of the program committee, with Dr. George Crile as chairman, is to provide for the medical profession of North America an intensive postgraduate course covering the various branches of medical science. The program has been carefully arranged to meet the demands of the general practitioner as well as the specialist. Extreme care has been given in the selection of the contributors and the subject of their contributions.

In co-operation with the Minnesota State Medical Association, the Ramsey County Medical Society will be host to the Assembly and has arranged an excellent list of committees which will function throughout the assembly.

A most hearty invitation is extended to all members of the profession who are in good standing in their state or provincial societies to be present and enjoy the hospitality of the medical profession of St. Paul. A registration fee of \$5 will admit each member of the

medical profession in good standing to all the scientific and clinical sessions.

A list of the distinguished teachers and clinicians who will take part on the program will appear in the September issue of this JOURNAL.

Special railroad rates will be in effect.

For further information write Dr. W. B. Peck, Managing Director, Freeport, Ill.

A RETIRING PRESIDENT'S ADDRESS

This is an abstract of the address of President Robert A. Peers, M.D., Colfax, Calif., read at the sixty-fifth annual session of the California Medical Association. Our members should read this report carefully, as much of it equally applies to any state medical society.

Any organization which, in a state of 6 million inhabitants, has 5400 members, presumably must command great influence. When those 5400 members consist of educated, cultured men and women, it would naturally be concluded that such influence would be greater than that of another group of 5400 individuals lacking such cultural and educational advantages. And when it is realized that to these 5400 members are entrusted the health and well-being of perhaps millions of the people of the state, many hundreds of thousands of whom are registered voters who look to these members for guidance in matters pertaining to public and private health, we should begin to realize the potential possibilities of that influence, if exerted en masse and solely for the good of and in the interests of society. Contemplating such mass action by a membership of such character and qualifications, we can readily envision the solution of the problems that now confront organized medicine.

The great difficulty is to secure mass action in a membership agreed among themselves as to the best measure of procedure.

It has been with the hope of securing this unanimity of action that the president and the secretary, supported by and accompanied by the other general officers and the members of the council, have, during the past year, visited every section of California and conferred personally with the officers and members of all the component county societies. As a result of these visits, much has been accomplished in the welding together of the membership and in the crystallization of opinion as to policy and action.

But there still remains much to be done. The membership needs continued instruction regarding the nature and democratic character of their organizational set-up, regarding the problems which confront them, and regarding the best methods for their solution. It is hoped that the practice of state-wide visitation, so ably and so foresightedly inaugurated by a past president and continued during the past year, will become an integral part of the duties of the officers in the years to come. If this is done and every situation and activity within and without the association clearly and frankly explained, the result will be a firmly molded and well-organized unity of action which will make organized medicine the power for good in the state to which, by its training, its experience, and its numbers, it is entitled.

It has been the great advances in medical knowledge and the employment of auxiliary services, such as hospitalization, nursing services, and the introduction of and employment of so many new and relatively expensive diagnostic procedures, that has led to most of

the troubles which, fundamentally, are based upon economics. But with all the advance, the aim of the medical profession has been the same—to give to all the people at all times, irrespective of financial consideration, the best medical and surgical care that the circumstances will permit. We have no patience with the statement, so often made in the past few years by proponents of various panaceas, that thousands of people have died because of the lack of proper medical care. It is not true. To the honor of the profession it can be said that, in good times and in bad, they have been ready and willing to give of their services freely and unselfishly to each and every sick or injured person. Nay, more; they have not only been willing to do this, but they have done so.

Added to the increased cost of sickness resulting from the introduction of the newer knowledge and of the increased utilization of (and demand for) the above-mentioned auxiliaries to medical care, there has been imposed the longest and the most severe depression in many decades, a depression not confined to this country but world-wide in extent.

Wherein does this concern organized medicine? The answer, to name only 2 items, is to be found in the demand for state medicine and in the increasing clamor for the opening of county hospitals to all taxpayers irrespective of their ability to pay for private medical care and hospitalization. It is not enough to say that these measures concern largely the taxpayers, who will be forced to pay the price of these innovations. It is not enough to deplore these trends because they will, if consummated by legislation, affect the pocketbook of every citizen. It is up to the physicians to protect the interests of their clients, the ill and the injured, whose health and well-being are at stake, if the nation, the state, or the county comes between the physician and his patient.

In opposing these demands for government aid to others than the indigent and the near indigent, organized medicine will be accused of self-interest and an attempt to fatten upon the misfortunes of the poor. No more untrue and unfounded charge could be made. One of the brightest jewels in the crown of the medical profession is the willingness of its members to extend ungrudgingly to every member of society, irrespective of social or financial status and irrespective of the hope of fee or reward, the best that medicine has to offer.

Nothing could better illustrate the attitude of organized medicine than the statement of the obligations of organized medicine as outlined by the secretary, Dr. Warnshuis, during the joint visits to the component county societies. On each occasion Dr. Warnshuis emphasized these 2 important duties of organized medicine:

1. Its obligation to bring postgraduate work to its members.
2. To enlighten the public as to what scientific medicine has and holds for their benefit.

Why this emphasis? Why should organized medicine wish to bring each of its members to the highest degree of efficiency in the profession? To enrich the members of the profession? No! Except as education enriches the mind and aids efficiency. The answer is, that the members may be better prepared and better qualified to give the best that medicine has to offer to every patient, rich or poor.

Why should organized medicine enlighten the public? To increase the prosperity of the doctor? No! The answer is, in order that the public may have such knowledge as to enable its members to know where to

seek proper medical advice and to enable them to escape the pitfalls of quackery and charlatanism.

But while organized medicine is thus engaged it must remember that, immersed in their humanitarian interests, employing their time and talents in improving their efficiency, they are apt to forget that they are assailed by forces from without busily engaged in undermining the foundations of their organization. The members of the medical profession must be politically minded if they would not wish to see medicine dominated and regulated by political appointees, and its practitioners relegated to the limbo of forgotten men. Medicine must come out of the cloister, not only every 2 years at the time of elections or during the meetings of the legislature, but must come out and stay out. We must continue, as heretofore, to work for every measure intended to promote and protect public and individual health, to oppose every measure whose enactment would jeopardize that health, and to protect professional standards against the assaults of cultists and other such groups. We must be prepared to offer some constructive measures for the solution of the increased cost of sickness and the uneven distribution of sickness. It is not enough to say that we oppose this or that measure which we know is not to the best interests of the public, no matter how appealing such measures may be made to the untrained or the unthinking mind. The best defense is an offense. Foch, at the first battle of the Marne, with his right in confusion and his left retiring, attacked with his center and changed the course of the Great War. Let us attack with our center, with some constructive measure that will help spread the cost of sickness over a great number, so that the few who must meet with the financial strain of sickness may be protected by a common fund. And let the control of such a fund and the administration of such a system be under the control of medicine, where it belongs, or with the representatives of organized medicine rather than under the domination of a political body.

To do these and the many other things with which medicine, against its wishes and often to its dismay, must cope will require a united profession and a full treasury. We will need the sinews of war. Will organized medicine present that united front and provide that treasury? These are 2 of the important issues organized medicine must face. Upon the answers of organized medicine will largely depend its fate and the fate of the public which it endeavors to protect.

In closing this address 2 comments are added: First, refutation is made to an impression which has been bruited in certain quarters and which has gone abroad in the land that organized medicine in California is on the verge of revolt against its parent body, the American Medical Association. Medical men are trained thinkers and are, more or less, individualists. It is, therefore, not surprising that differences of opinion may arise, and have arisen, regarding the best methods for the solution of medical problems. Organized medicine in California is in close accord with the officers and members of the American Medical Association in their valiant efforts to uphold the standards of medicine and to prevent the exploitation of the profession and of the public. Any differences of opinion, such as have arisen, have been differences as to details and not as to fundamentals. These differences of opinion will be solved in a friendly co-operative spirit through evolution and not by revolution.

Second, read your State Society Journal. It is your medical journal. Acquaint yourself with the problems of organized medicine and of the manner in which

your officers are trying to solve those problems. The time has arrived when, if you are to survive, you must be not only a good doctor, but also an informed and active member of organized medicine.—*California and Western Medicine*, June, 1936.

STATE BOARD EXAMINATION

Medical and Surgical

Physiology, Pathology, Bacteriology, and Physiologic Chemistry

1. In a routine health survey, what laboratory procedures would you consider necessary in order to assure a satisfactory opinion? Why each?
2. Discuss briefly carbohydrate digestion. What is the purpose and the value of a dextrose tolerance determination?
3. How may the laboratory aid in the diagnosis (a) of secondary syphilis? (b) of peptic ulcer?
4. Describe typical pathologic changes (a) in aneurysm; (b) in arteriosclerosis.
5. What pathologic sequences may follow an acute attack (a) of otitis media? (b) of endocarditis?
6. How are the following organisms transmitted to man: Typhoid bacillus? malarial parasite? tetanus bacillus? How may each be identified?
7. Explain (a) the deformity accompanying or following Potts' disease; (b) the "aproxexic look" associated with mouth-breathing.
8. What scientific and what clinical evidence confirms belief in vitamins? Illustrate for each.
9. Give briefly theories of immunity. Against what diseases may artificial immunity be acquired? How in each?
10. Describe the normal fluid exchange in the tissues. Discuss its alterations in edema.

Diagnosis, Symptomatology, Medical Jurisprudence, and Toxicology

1. In the study of a patient, except an emergency case, outline the method you would follow. For your guidance in this matter a full and detailed description of the following is expected:
 - a. History—your method in detail
 - b. Physical examination—your method in detail
 - c. Blood—complete study in detail
 - d. Urine—chemical, microscopic, and cultural methods in detail
2. What is the differential diagnosis between acute appendicitis and perforation of an intestinal ulcer?
3. Describe the symptoms of poisoning (a) by bichloride of mercury; (b) by morphine; (c) by carbolic acid; (d) by alcohol; (e) by barbitol and its derivatives; (f) by carbon monoxide.
4. Describe the symptomatology and diagnosis of disease of the gallbladder.
5. What other pathologic conditions should be considered in making a diagnosis of gallbladder disease?
6. Discuss the symptomatology and diagnosis of the clinical syndrome—angina pectoris. In your answer to this question a résumé of the etiology, pathology, differential diagnosis, and prognosis will receive proper credit.
7. In the case of a patient presenting a venereal sore, describe your method of making a diagnosis. In your answer to this question the following information is desired:

- a. Would you, or would you not, apply treatment to a venereal sore before making diagnosis? Give reasons.
 - b. Discuss the Wassermann test in the diagnosis of venereal sores.
8. Discuss in a general way the medicolegal and the personal responsibility of a physician to his patient.
 9. Describe the symptoms of hypertrophy of the prostate.
 10. Describe the symptomatology and diagnosis of a progressive anemia.

Gynecology and Obstetrics

1. What are the symptoms of fibroid tumors of the uterus? How would you differentiate a small fibroid tumor (a) from chronic metritis? (b) from pregnancy? (c) from ovarian cyst? (d) from ectopic gestation? (e) from pelvic hematocoele? (f) from pelvic inflammatory deposit?
2. Describe the fetal circulation.
3. What are the sources of hemorrhage in the third stage of labor? How would you differentiate them? Outline briefly the treatment in each specific case.
4. What is the etiology of chronic cervicitis? Give the pathology and your treatment for the same.
5. Give differential diagnosis of eclampsia. Outline briefly preventive and curative treatment for eclampsia.
6. Give (a) etiology, (b) symptoms, (c) physical signs, (d) prognosis, and (e) treatment of pelvic peritonitis. From what should you differentiate pelvic peritonitis?
7. How would you diagnose premature separation of a normally situated placenta (a) in pregnancy? (b) during labor? Outline briefly the management of each case.
8. How would you diagnose (a) threatened abortion? (b) inevitable abortion? Give treatment of each.
9. Give the etiology of metrorrhagia at the menopause. Outline treatment.
10. You are called on a confinement case and make a diagnosis of breech presentation with arrest of the breech at the brim, what procedure would you use for the extraction of the fetus?

Anatomy and Surgery

1. Discuss major operative procedures in the aged; state under what conditions such might be justified, and indicate what precautionary measures might lessen the risk of complications.
2. What are the signs and symptoms typical of a dislocation of the semilunar cartilage? What would be your procedure in effecting a cure in this condition?
3. Diagnose and treat a simple fracture of the head of the radius which involves the joint.
4. What are the varieties of malignant tumors? Discuss the relative malignancy of each kind.
5. Describe in detail the surgical management of a transverse laceration of the flexor surface of the wrist which involves the tendons and tendon sheaths.
6. What examination would you make of a patient who is unconscious upon admission to your care and has an extensive abrasion of his head about the right temporal region?

7. Discuss the development of an acute suppurative mastoiditis and outline its surgical management.
8. Discuss the significance and the management of tympanites following a laparotomy.
9. Give causes and symptoms of gangrene of toes or foot. Outline treatment. When, if at all, is surgery indicated? Describe the surgical treatment.
10. Give the diagnosis and treatment of a benign tumor of the breast; of a malignant tumor of the breast.

Practice, Materia Medica, Therapeutics, Hygiene, and Preventive Medicine

1. A male, age 50, is suddenly seized with an attack of so-called "acute indigestion," substernal pain, not relieved by vomiting, shows signs of collapse, and you are called in the emergency. Give treatment: (a) immediate; (b) after-treatment. State your diagnosis, laboratory studies not being available.
2. Give the dietetic and medical treatment which you would outline for an adult who is much underweight when this condition cannot be accounted for by any evidence of organic disease.
3. Discuss cinchona, its official preparations, with the dosage of each. Give the therapeutic indications for 3 preparations.
4. Enumerate the therapeutic indications for the use of ipecacuanhae, with the official preparations and dosage of each.
5. Indicate conditions where the use of the following forms of therapy are useful: (a) Hydrotherapy; (b) narcotic; (c) clyster; (d) sedative; (e) pyrotherapy.
6. Enumerate 4 different methods that may be employed in the disinfection of a house wherein a family of moderate means is living and wherein a child has developed a contagious disease.
7. Describe the accepted methods whereby patients with pulmonary tuberculosis may be cared for so as to aid in the ultimate eradication of this disease.
8. Outline the treatment indicated in a case of multiple neuritis, the etiology of which may be cited by you in support of your thesis.
9. Give the treatment in detail for a sudden diarrhea that has developed in a child, age 2.
10. Wherein should (a) local, (b) municipal, and (c) federal quarantine be employed? Illustrate each case.

NOTE: In questions involving materia medica and therapeutics, answer in accordance with the school of medicine in which you have been taught. A member of the Board, representing your school, will grade your paper.

ALLERGY

Perhaps nothing has given rise to more confusion than the word allergy. No 2 men seem to use it in quite the same way. To one man it seems to mean a sensitivity to some certain substance. To another it seems to mean every disturbance in sensitivity of any sort whatever. To many others it seems to mean nothing definite but only that if they use the word, even without sense, they are keeping up with the times.

Sulzberger and Goodman think that the confusion which naturally has arisen from such loose use would be eliminated if writers would adhere strictly to the

definition of allergy made by von Pirquet and Schick in 1906 to the effect that it denotes "an altered state of reactivity in an individual (human or animal)." A little farther on in the same paper they give the application wide scope saying that "all the allergic reactions mentioned above can occur in all organs, in any organ, in any part of an organ, and in any system," which means that allergy includes about everything, if not indeed everything, which only a few years ago was explained on the ground of intoxication, auto-intoxication, sensitivity, hypersensitivity, and susceptibility. Such cases would now, in modern terminology, be called allergic or allergy.

This point of view could be understood better by reading an earlier article by Sulzberger, Wise, and Wolf.

Unfortunately, the position taken by Sulzberger and his collaborators does not clear up everything as Grow and Herman's paper shows.

Grow and Herman report that out of 150 so-called normal individuals 55.5 per cent reacted positively to 1 or more of 13 test extracts used, 4 reacted to all the extracts, and 1 control was positive.

These figures suggest that Sulzberger and Goodman's criteria of allergy are far more accurate. According to Grow and Herman, family history, personal history, and intracutaneous tests are as common in normal individuals as in "allergic." Indeed, the latter conclude, without confirmation by the history and the clinical manifestations, that they are but aids to diagnosis and even positive tests are not necessarily proof of allergic disease.—Editorial, *New England J. of M.*, May 21, 1936.

COMMENTS AND EXCERPTS

Medical Curricula Are Scored.—The development of the use of ether and chloroform in obstetrics was traced by Dr. Benjamin P. Watson, retiring president of the American Gynecological Society, at the sixty-first annual meeting of the society at the Seaview Golf Club, Absecon, May 26.

Dr. Watson, who is professor of obstetrics and gynecology at Columbia University and director of the Sloane Hospital for Women in New York, delivered his presidential address before 71 members of the society.

He took as his theme "The influence of the medical school of the University of Edinburgh on the early development of the practice and teaching of medicine in the United States" and showed how the founders of the first American medical school in 1763 at the University of Pennsylvania were all graduates of the Edinburgh school.

In closing, Dr. Watson said:

"I confess that I am sentimental enough to be a hero-worshiper and to feel that we can derive inspiration and courage from a reperusal of the lives of great men. Such study teaches us that dry-as-dust knowledge is not everything. The great physician, the great surgeon must of necessity be more than a scientist or a technician. He must have that something which we call personality and he must have interests outside those of his calling. So it behooves us to take care that our present hidebound regulations for admission to the study of medicine, and our rigid scientific curricula do not exclude and do not dampen the enthusiasm of some who, if given opportunity, might develop into great clinicians."—*N. Y. Times*, May 26, 1936.

Radio Set Perfected to Page Physician as He Drives in His Auto.—A system for paging physicians by radio signal as they move about in their automobiles was described June 18 before the Federal Communications Commission's radio and television hearing, at Washington, D. C.

Experts from the American Telephone and Telegraph Company and affiliated laboratories said that is only one of many practical and worth-while uses for high frequency transmission, when permits are extended beyond the present limited low frequency channels.

Lloyd Espenschied testified the signal system for doctors probably could be operated on a one-way code circuit. When the code sounded the doctor would be expected to use available telephone or telegraph communications.—*Associated Press*.

Social Clinic to End Guesswork in Courts.—According to the *United Press*, a "Social Clinic" to eliminate guesswork by the sentencing jurist is the vision of Judge Ralph H. Smith, of Pittsburgh, youngest man ever to preside in Allegheny County Criminal Court.

Before Judge Smith completes his 6-month assignment on the criminal bench in August and returns to the common pleas division, he hopes to see punishment tailored to the individual instead of the crime.

Psychiatric and physical examination of every defendant are the main instruments with which he hopes to institute the most far-reaching reforms the local court has known.

Judge Smith's plan parallels to some degree that in use in federal courts and embodies desirable features of systems used in Chicago, Detroit, New York, and Baltimore.

In all humility he considers it a matter of grave importance to reach into a man's life and take out a year, 2 years, 4 years, from the only life that he has.

When he is belting a racketeer for a lengthy stretch, often he thinks of the changes which have come about in his own life in that same period of time.

Why, then, should he sentence him without knowing that his crime, perhaps, was the result of a mental wrinkle which could be ironed out with proper treatment?

But with the social clinic, the Judge's function will cease to be a guessing game.

To Study Causes of Hay Fever and Other Allergic Diseases.—A chemical study of substances in agricultural products and by-products that contribute to allergic disturbances (hay fever, asthma, hives, and related afflictions) is being established in the Bureau of Chemistry and Soils of the U. S. Department of Agriculture, Dr. W. W. Skinner, assistant chief of the bureau, announced July 1.

One-tenth of the population of the country suffer seasonal distress or continual discomfort and restricted activity as the result of allergic diseases, and these afflictions affect people of all ages. Some individuals suffer from abnormal sensitiveness to certain normal constituents of the pollens produced by many varieties of trees, grasses, and weeds. Similar substances present in common foods, textile fibers, furs, and other farm products are also capable of causing distressing disturbances when absorbed through the skin or the membranes of the respiratory or digestive systems of supersensitive persons. Chemists and specialists in other lines of scientific investigation will attempt to isolate these offending components and to determine their composition.

Persistent Hoarseness Is Early Sign of Cancer.—Persistent hoarseness calls for careful examination by a trained throat specialist, warns Dr. Leo Schwartz (*Preventive Medicine*, June). He calls hoarseness the "herald symptom" of cancer of the larynx and points out that it is also the symptom of 49 other conditions, none of them trivial. Cancer of the larynx gives its warning sign earlier and remains localized longer than cancer anywhere else in the body, and early diagnosis and treatment offer a better chance for recovery than in other cancers. In the early stage this condition can be relieved by an operation which does not deprive the patient of his voice or necessitate the use of an artificial voice box.—*Science News Letter*, July 4, 1936.

Inventor Patents Way to Make Quinine Tasteless.—That bitter, shudder-creating taste of quinine is claimed not to be present in a new quinine compound for which a U. S. patent (No. 2,039,414) has just been granted to Max Hoffer, of Basel, Switzerland.

The inventor not only says that it is tasteless but also claims that it has no aftertaste.

The man-made quinine substitute is an entirely new chemical, made by combining quinine with a naphthalene compound. Naphthalene itself is familiar as the common moth ball or moth flakes. In the naphthalene compound there is present a chemical radical related to acetic acid, a substitute present in vinegar. The chemical union between the quinine and the naphthalene compound takes away quinine's bitter taste, states the patent.—*Science News Letter*, July 4, 1936.

One Out of 5 Will Die of Some Heart Disease.—One out of every 5 white persons born will eventually die of heart disease, under present conditions of mortality, a survey of deaths during a 20-year period just completed by the Metropolitan Life Insurance Company shows.

Heart disease is the chief cause of death at every age period after 45. During the period surveyed, 1911-1930, diseases of the heart, blood vessels, and kidneys were responsible for more than one-fourth of the deaths from all causes.

A great many premature deaths from chronic diseases of heart, arteries, and kidneys could be prevented by preventing childhood infections, syphilis, rheumatic fever, and other infections of early life since these infections are often the initial cause of the chronic diseases that develop later and go on to a fatal end.—*Science News Letter*, June 20, 1936.

MEDICAL ECONOMICS

Governmental Aims for 1937.—The following remarks, suggesting somewhat cryptically what seems to be in the minds of the powers that be at Washington with respect to medicine, appeared editorially in *The New York Times* of Mar. 25, 1936:

"The populated areas that now lie under water will make immediate demands on the new Surgeon General's resourcefulness, knowledge, tact, and authority. Later will come the problem of what is called socialized medicine. The President's social ideas being what they are, there is every reason to suppose that the selection of Dr. Parran was dictated by something more than considerations of administrative efficiency and professional competence. A social point of view in harmony with the Administration's was probably a requisite.

"Physicians as a class set their faces against socialized medicine. If we may judge from his past utter-

ances they will have nothing to fear from Dr. Parran. 'I am convinced that an integrated plan of public health, public medical service, and private practice is preferable to health insurance,' he said recently. By this he meant that the poor should receive all the official aid that can be rendered so far as diagnosis, medicaments, and nursing service are concerned, but that the traditional relation of private physician and patient should not be disrupted. Here we have a constructive plan which, if carried out, should remove the major economic hazards of illness below the job insurance level. The man who can thus make it possible for the physician to give his impoverished patients the individual attention that means so much in sickness and at the same time assure them state assistance in lightening their heaviest financial cares displays a kind of social imagination which eminently qualifies him to meet the exigencies of the important office of Surgeon General."

We are not quite sure what these glittering generalities imply. We hope that no one is going to tell us later on that American panel physicians (!) are going to be free to carry on private practice, "as in England," for we know what a farce that set-up is in that country; there a panel physician is *practically* just that—a panel physician.

Taffy, or what? we ask with as much deference as we can command.—Editorial, *Medical Times*, May, 1936.

Don't Answer Threatening Letters.—One of the most important matters brought out in the report of the Committee on Medical Defense at the Savannah meeting, in April, was the advice given by the attorneys of the Medical Association of Georgia, urging the members not to attempt to answer letters containing threats to sue for alleged malpractice. Our attorneys have had a large amount of experience in handling these suits and threats to sue, and have achieved marked success in the work. They are much better qualified to reply to these letters than almost any member of our Association. In replying to such a letter most of our members will give a long detailed account of the case and are liable to make statements which may cause trouble if the case comes to trial. Our lawyers know best how to answer these letters so as to leave no loopholes for future trouble. No matter how innocent of neglect a doctor may be he may so word a letter as to give an opposing lawyer good material for damaging the doctor's case. Our members are advised to turn threatening letters over to our attorneys or to the Committee on Medical Defense.

Another significant thing which appears every year in the report of the Committee on Medical Defense is that about 75 per cent of damage suits are based on some alleged neglect in the treatment of fractures. Although many of our predecessors obtained excellent results in the treatment of fractures without the use of the roentgen ray, it now becomes absolutely necessary to use the roentgen ray if for no other purpose than to combat damage suits. No doubt many fractures could be handled satisfactorily without resorting to the roentgen ray, but if no roentgen ray is used and there is the slightest trouble about the case, failure to employ roentgen-ray examination before and after treatment often is given as the cause of a suit for damages. Therefore, our members are urged to treat every fracture as a potential case for a damage suit and be sure to utilize the roentgen ray whether it is considered to be necessary or not.

Through its Fracture Committee the American College of Surgeons is now putting on a campaign in Georgia to secure better diagnosis and treatment of

fractures. This applies not only to more careful and improved methods of handling by doctors, but also the more efficient first-aid management of fractures by laymen. The latter applies especially to the treatment of fractures of the long bones where early traction is so important. Attempts are now being made to have Thomas splints and other apparatus placed in ambulances and at convenient points throughout the state, where they will be readily available to laymen who will be taught to put them on until the patient can reach a doctor or a hospital. The earlier traction is applied in the fracture of extremities the better the end results will be and the less suffering the patient will have to undergo.

The Georgia Fracture Committee intends to urge the officers of various medical organizations of the state to include fracture demonstrations, papers, and clinics on their programs to a greater extent than has been done in the past. A fracture is one of the most serious and urgent surgical emergencies that comes under the care of the average member of the medical profession.—Editorial, *The Journal of the Medical Association of Georgia*, May, 1936.

Dental Care in the United States.—Declaring that only 25 per cent of the population is now getting regular dental care, Dr. Harlan H. Horner, Assistant Commissioner for Higher Education, told 1500 dentists, May 12, that the extension of dental care to all persons in need of it represents the "most important and far-reaching challenge" to dentistry. Dr. Horner spoke at the sixty-eighth annual convention of the Dental Society of the State of New York, which was meeting at the Hotel Waldorf-Astoria.

It requires a pretty high order of statesmanship as well as genuine professional zeal in these times for dentists to be leading popular thought upon a broad program of health dentistry for the community. The greatest problem before the dental profession is to find a way to make their scientific knowledge and skill available. Society, too, must share in the responsibility.

Dr. Weston A. Price, in reporting on a 3-month survey of teeth among aborigines in Africa last summer, said that while the incidence of dental decay is as high as 98 per cent here, it is virtually nonexistent among primitive tribes who eat their traditional, natural, vitamin-rich foods. Among 5 of the tribes studied, it was found that only one tooth out of every thousand showed any trace of dental caries, he reported.

The primitive tribes which mingle with civilization and have learned to use some of the foods of white men show a much higher percentage of dental ills, the ratio of decayed teeth being 120 out of every 1000 teeth examined. Dr. Price said that white peoples place too great an emphasis on energy foods, with the result that dental decay and other degenerative diseases are more prevalent among them.

Dr. Charles M. McNeely, president of the society, recommended that the organization "interest itself" through the Department of Education in a program of promoting dental health education among all school children.—*N. Y. Times*, May 13, 1936.

Unfavorable Signs.—Even friends of the federal social security program are beginning to question the wisdom of the national old age and unemployment insurance act in its present form. Administrative details are still in an embryonic stage but it is already apparent that the execution of this law will be surrounded with voluminous red tape requiring the creation of an extensive bureaucracy. The cost of this will necessarily come

out of the pockets of industry, labor, and the consuming public; and every one must pay, whether he stands to benefit by the measure or not.

Besides endangering the standards of medical care, the adoption of compulsory health insurance would intensify the objections raised against the old age and unemployment laws. It would mean still higher taxes and living costs, the extension of bureaucratic control over American life and, to an even greater degree than current social security legislation, taxation of the entire nation for the benefit of a small percentage of the people.

While it is too early to pass judgment on the old age and unemployment insurance act—before even it is in operation—there are many indications that it will fall short of the hopes held out for it. Experienced actuaries say that the funds obtainable at present rates will be insufficient to provide the promised benefits under adverse conditions. There are more serious signs that the law may defeat its own purpose in the avowed intention of several large employers of labor to increase mechanization of their plants in order to diminish pay-roll taxes. Additional levies for compulsory health insurance would spur the replacement of men by machines.

It will take a number of years for the economic organization of our society to adapt itself to the new conditions imposed by obligatory old age and unemployment insurance. At this time it is not possible to predict when the adjustment will be completed or whether the benefits will be commensurate with the costs. Until the nation has had an opportunity to evaluate the social security measures already in force, it would be high folly to add compulsory health insurance to its burdens and destroy the system of private medical practice which has functioned successfully in good times and bad because of its freedom from political and industrial control.—Editorial, *N. Y. State J. M.*, Feb. 15, 1936.

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MEDICOLEGAL NOTES

Patient's Statements to Physician as Evidence.

—The Tennessee Court of Appeals, *Bell vs. Travelers' Ins. Co.*, 79 S. W. (2d) 824, holds that, while there is much latitude allowed a physician in testifying to the statements of his patient and he may testify to those relating to the patient's condition at the time he is under treatment, statements of the patient relating to the manner in which an injury was received are not admissible. A statement by an insured to his physician to the effect that he had suffered an injury to his arms at a specified time and place and in a described manner were held inadmissible.—*Medical Record*, Feb. 5, 1936.

Contagious Disease Contracted from Fellow Hospital Employee.

—The Michigan Supreme Court holds, *Basil vs. Butterworth Hospital*, 262 N. W. 281, that an employee in the cafeteria of a hospital who contracted scarlet fever from a nurse with whom she came in contact in the course of her employment did not contract an occupational disease within the Michigan Compensation Act, since the hospital did not receive patients suffering from contagious diseases and any such cases occurring there were immediately removed

to a contagious hospital, with the greatest precautions taken to prevent a recurrence of the disease in the Butterworth Hospital. And it is also held that the contracting of a contagious disease in this manner was not a "personal injury arising out of and in the course of the employment" within the Michigan statute. It protects employees against all accidental injuries arising out of and in the course of employment, whether caused by the negligence of employer or not, but not against a contagious disease contracted from a fellow employee.—*Medical Record*, Jan. 15, 1936.

Survivorship in Common Disaster.—The question of which victim of a common disaster lived the longest is one of fact for the jury. The bodies of a husband and wife were found in bed in their home. Each had been shot in the head from the same gun, which was found on the bed where it might have fallen from the hand of either. Blood, froth, and bubbles around the wife's mouth showed that she had lived probably 3 or 4 minutes after being shot. In a controversy between the administrators of the estates of husband and wife as to the proceeds of a life policy, the Kansas Supreme Court held, *Noller vs. Aetna Life Ins. Co.*, 46 P. (2d) 22, that whether the wife survived the husband, and whether she killed her husband, which would have precluded her estate from recovering the proceeds of a policy on her husband's life in which she was named beneficiary, were questions for the jury.—*Medical Record*, Mar. 18, 1936.

Cause of Blindness After Cataract Treatment.

—In an action for alleged negligent and unskillful treatment of cataracts there was evidence that before operation plaintiff had a substantial amount of vision but at the trial he was nearly blind. The trial judge instructed the jury that the doctor's negligence must be the sole cause of the injury. The Massachusetts Supreme Judicial Court held, *Dellapenna vs. Irwin*, 196 N. E. 839, that although ordinarily in an action based on negligence such an instruction would be both inadequate and incorrect the jury could not have understood the judge to mean that there could be no recovery if the plaintiff's original disease still contributed to his present condition. They must have understood that in using this language the judge had in mind the only remaining possible cause other than negligence of the defendant, i. e., contributory negligence of the plaintiff. Plaintiff's exceptions to the instruction were overruled.—*Medical Record*, Mar. 18, 1936.

Photographs of Victim of Homicide on Spot Where Body Found Admissible in Evidence.

—On appeal from a conviction for murder the Missouri Supreme Court, in *State vs. McDaniel*, 80 S. W. (2d.) 185, held admissible in evidence photographs of the body of the deceased, taken about 9 hours after the homicide, as the corpse lay in the road. The body had remained undisturbed since its discovery until the pictures were taken. The doctor's testimony was that the position of the corpse, the fact that the clothing was not disarranged, the location of the bullet wounds, the great quantity of blood on the ground under the woman's head, and the widely scattered spots of blood and brain substance, indicated that she had received the fatal wounds in the head by shooting after she fell to the ground and lay as the remains were found. This, the court held, was sufficient to sustain an inference that the corpse was in the same position when the pictures were taken as when the homicide was committed. The photographs established the identity of the victim

of the homicide and also had some tendency to show that she had been murdered on the spot where she was found, and that the body had not been brought there from somewhere else.—*Medical Record*, Jan. 15, 1936.

Opinion as to Acceleration of Death by Injury.

—The Iowa Supreme Court, *Shepard vs. Carnation Milk Co.*, 262 N. W. 110, held that where 2 physicians testified in compensation proceedings that a blow on the employee's side aggravated an existing cancer of the colon, giving the opinion that the blow probably caused the man's death sooner than if he had not received the blow, it was immaterial that they could not tell the exact number of days he would have lived had he not received the blow, or that they admitted it to be possible that he would have died the day he did if he had not received the blow.

When an expert expresses his opinion as to the probabilities, especially when he supports such opinion by the reasons for his conclusion, his testimony is held to be entitled to consideration and such weight as the trier of fact thinks it deserves, even though such expert admits the possibility of his being in error.—*Medical Record*, Jan. 15, 1936.

Professional Inference Based on Inference Inadmissible.—The Kentucky Court of Appeals, *Prudential Ins. Co. vs. Howard's Assignee*, 258 Ky. 366, held that the opinions of physicians that a patient's present condition was the result of an injury received 24 years ago and that the same resulting condition extended back and existed 5 years ago was but a professional inference upon an inference and as such of little or no value as proof.—*Medical Record*, Feb. 5, 1936.

Expert Opinion.—In a personal injury action the Maryland Court of Appeals held, *Mt. Royal Cab Co., Inc. vs. Dolan*, 179 Atl. 54, that it was an error to incorporate in a hypothetical question to a medical expert the conclusions and opinions of expert and lay witnesses in relation to the alleged injuries, and the results thereof, which were assumed to be true and to be so considered by him in answering.

An expert witness who has heard all the evidence in the case may be asked his opinion, based upon the assumption that all such evidence is true. But his opinions and conclusions may not be predicated upon the conclusions and opinions of other witnesses, or upon conflicting testimony material to the issue.—*Medical Record*, Mar. 4, 1936.

Negligence in Administering Anesthetics.—In an action for death while under the influence of nitrous oxide gas administered in the extraction of a tooth the Delaware Superior Court, *Mitchell vs. Atkins*, 178 Atl. 593, holds that the mere fact that a patient dies under the influence of an anesthetic does not show negligence of a physician, surgeon, or dentist. The ordinary rules governing the duties and liabilities of physicians and surgeons are equally applicable to other and kindred branches of the healing profession, such as dentists.—*Medical Record*, Mar. 4, 1936.

Acceleration of Death by Blow.—The fact that an expert was unable to state the exact amount by which an employee's death from cancer was hastened by a blow on the abdomen did not, the Pennsylvania Superior Court held, *Lucas vs. Haas Coal Co.*, 179 Atl. 876, render his testimony incompetent, the widow and children being entitled to compensation if the date of death was hastened.—*Medical Record*, Mar. 4, 1936.

Scope of Answers to Hypothetical Questions.

The ultimate question in a malpractice action is whether the treatment administered or the method used, whether a common method of treatment or not, was such, or was given in such a manner as indicated, suggested, or demonstrated a lack of that care, training, and skill which is ordinarily possessed by physicians and surgeons practicing in the same or similar communities. *Thomason vs. Hethcock* (Cal. App.) 46 P. (2d.) 832. The ultimate question which the jury must answer and the question or questions which a doctor testifying as an expert may answer for the purpose of furnishing to the jury evidence upon which a jury is to make up its mind, are not identical. Witnesses from a profession may be called to testify concerning the teachings of their science, and the customs of their craft, but whether these things amount to due care is for the court or jury to say in a controverted case. While it may be true that an expert may give reasons for his opinion on direct as well as on cross-examination, the court knew of no case, and was cited to none, which requires him to do so. The facts in the hypothetical question put are in themselves reasons for an answer. The adversary has the right to probe for additional reasons on cross-examination if such are desired.—*Medical Record*, Mar. 4, 1936.

HOSPITAL ACTIVITIES

Hospital Forced to Curtail Service.—The Board of Trustees of the Easton (Pa.) Hospital has withdrawn 47 beds from the charity service with the explanation that it was forced by a \$40,000 cut in the county appropriation. The trustees formally stated that the occasion was the first backward step since the hospital was founded in 1890.

Group Hospital Plans Spreading.—Group hospital plans are increasing so rapidly that they are now at work in more than 50 towns and cities in the United States and 25 in Canada. From September, 1934, to October, 1935, the number of subscribers in the United States grew from 100,000 to 250,000, and are presumably many more now. Payments range from 30 cents to \$1 a month, depending on the scope of the benefits and the class of subscribers, according to an article in the *Bulletin of the American College of Surgeons* by C. Rufus Rorem, Ph.D., C.P.A., Consultant on Group Hospitalization of the American Hospital Association. He states that the following communities or hospitals have enrolled more than 10,000 subscribers:

Sacramento, California	10,000
Washington, D. C.	18,000
New Orleans, Louisiana	11,000
Minneapolis and St. Paul, Minnesota	14,000
New York City	72,000
Rochester, New York	24,000
Durham, North Carolina	10,500
Cleveland, Ohio	18,000
Baylor Hospital, Dallas, Texas	21,920

He notes as a good feature of group hospitalization that the physicians have been more successful in collecting fees from patients, since the hospital bills are paid from the central fund; the plans have not interfered with the freedom of physicians or patients in their selection of hospitals; some patients have in this way been able to receive hospital service which they could not otherwise afford.

There has been an insistent demand from employed subscribers for the privilege of enrolling their dependents for hospital service. This has been met in several ways. One method entitles the subscriber automatically and without extra payment to discounts on hospital bills of all dependents. This is the case in New Orleans. Another method is the payment of a small additional sum which entitles the subscriber to a small discount on hospital bills of dependents. The Minnesota Hospital Service Association charges the subscriber one dollar per year and grants a 25 per cent discount to his dependents. The Baylor University Hospital charges an additional dollar per month, in exchange for which the subscribers' dependents receive benefits which are equal to approximately 75 per cent discount on hospital bills. In Rochester, New York, subscribers may enroll one or more dependents for 50 per cent discount on hospital bills. One dependent is enrolled at half the cost of a subscriber, and 2 or more dependents may be enrolled at a rate equal to the charge of the employed person. New York City dependents may be enrolled for the same privileges and at the same rates as employed persons.

Experience based on something more than 10,000 admissions and 100,000 patient days of care shows that hospital service subscribers use the hospital more freely than the general community; from 10 to 12 per cent of subscribers are hospitalized in a year as compared to 7 to 8 per cent in a general community.—*N. Y. State J. M.*, July 1, 1936.

About Hospital Insurance.—By request of the Society, Dr. William Rowland Davies, chairman of the Committee on Medical Economics of the Lackawanna County Medical Society, has reported upon the feasibility of hospital service insurance.

The inquiry was for the purpose of hearing both sides of the proposition that people could be provided with a measure of such service at 3 cents per day or 10 dollars per year, the maximum of the measure to be no more than 3 weeks of bed care in a year, which would include all necessary technical processes but not the services of physicians.

The possibilities of such service were applied to the experiences studied and found in Lackawanna County hospitals. It should be remembered that the approximate population of Lackawanna County is 310,000 people and the restricted area of Scranton and Dunmore is 165,000.

The actuarial factor, by which it is determined that people can be insured to cover their normal needs at the rate of 3 cents per day, is based upon the average experience of hospitals in the length of stay of patients and the annual proportion of the people who suffer morbidity of a type best handled in a hospital.

The local average experience of the length of stay of patients in the hospitals is that those who pay as individuals stay an average of 11 and a fraction days, while those whose keep is paid from state or charity funds remain an average of 14 days. This is the general hospital average in other localities.

The insane and chronics or incurables remain 365 days in a year. The tuberculous or sanatoria patients stay about 5 months.

The matter of hospitalization for the chronics and incurables does not enter the present proposition but it should be remembered that the number of beds to be provided for the insane, the chronically ill, and the incurables is roughly 25 per cent more than those required for acute illness and injuries. Figures for

Scranton and Dunmore read 262,934 bed days furnished for acute general hospital cases, while the insane, tuberculous, incurables, and chronics occupied 322,794 bed days in one year.

The incidence of major illness or injury of a magnitude great enough to need hospital care is said to be covered by this actuarial finding: "The population suffers major illness or injury to the extent of 10 per cent of the total annually, and for an average period of 14 days of disability in each case per year."

Breaking this down to the individual, it will be seen that, by average, he suffers 14 days of disability in every 10 years of his life. Saying it another way, the individual must cover the cost of one and four-tenths days of major illness for every year of his life.

When insurance companies can insure groups of 50,000 people who live under similar circumstances they can arrive at averages and remain at almost constant figures. Nothing short of a national calamity can affect their expectancies. This group would return premiums to the extent of \$500,000 on the annual charge of \$10 to each person. The annual expectancy of 10 per cent of morbidity would bring 5000 cases to be sold to the hospitals as hoped for at \$210,000 or at a maximum of \$315,000.

A limit of 3 weeks of hospital care is placed in these contracts. If the group insured is large enough to produce actuarial averages, the sum charged would be enough to supply hospital care with no limit to the period except for a change in the moral attitude of the people toward such service. In Germany, under socialized medicine, the national disability period rose from 14 days to 40 days, approximately. As the scheme is set now, the insurers have assured themselves a minimum of 37 per cent of the gross income, which under careful management could be raised to 58 per cent as their part of the business venture from which they will pay their expense and set up such reserves as the insurance laws call for, after which the "split" will occur.

Just how hospitals can lend themselves to this process will depend upon the various viewpoints of each controlling directorate.

The proposed fee of 3 dollars is an averaged expression of the cost per day per patient, as he passes through the cheapest type of hospital bed, but a sum equaling the total annual bed day usage at 3 dollars per day for each bed day would make most hospitals quite affluent. It is expected that many of the insured would take the more luxurious accommodation and pay the difference, adding to the hospital income.

The proposed sum, however, does not include anything from the profits of the insurers for the use of the existing hospital plants. Three dollars per patient day does not provide sinking funds, capital development, large renewals, increase of capacity, or general amortization ordinarily.

The fact is now easily understood that the hospitals themselves could develop a surplus if they were financed at the daily rate of \$3 per bed in their institutions, if the population were subjected to a per capita tax of \$5 per year, and not the \$10 suggested by the insurance concerns.

The entire population can be hospitalized by the convenient placement of 4 beds per thousand of population in appropriate institutions. This is based upon present practices and will not account for abnormal convalescence or annual vacations in bed by collusion. This is socializing all hospital practice.

Locally, this proposition goes behind socialization and

approaches the communization of the hospitals, meeting a new factor to be dealt with. Here, the people have been so overwhelmed with generosity by the hospitals, that 60 per cent of the total expected annual morbidity of the population has been hospitalized at no cost to the ailing individual. Of the remaining number 20 per cent pay their way in the hospitals and the other 20 per cent stay at home.

The added attraction to those who are given free beds in the hospitals is that they are provided with all of the refinements of hospital technic and the free use of as many doctors as their case may demand. Who of this large proportion of the sick and injured would be so foolish as to buy hospital insurance and then have to pay for his physicians in addition?

A few of the paying 20 per cent of the population might buy such insurance, but that item has never been of pressing necessity to them.

Operating under the present methods of charity relief with the level at its present height, this proposition is hardly necessary except for a very small percentage of the people.

For the hospitals it can be easily seen that those who are operating at capacity and are financed by the state and the Community Chest, in addition to their own earning capacity, would only change the source of a portion of their income and nothing else. This might slightly increase the total by having no losses from that percentage of their whole traffic.

The hospitals that do not fill their capacity and who do not have state aid could be benefited most if they could get enough of it to fill their beds regularly. Their clientele, however, is already made up of the type of people who might be expected to buy such protection. Their annual percentage of usage would probably be very little increased.

The medical profession at large and particularly those not having hospital appointments or connections should hail this as a move for their benefit. Every case moved out of the charity listing into the paying section becomes a paying case to the doctor whom the patient chooses to treat him. Thus the staff doctor also may have a personal interest in having this come to pass.

If the matter does finally come to be accepted and customary in its present set-up, physicians in general bid fair to profit the most, with the exception of the insurance companies who are set to do very well by themselves.—*The Medical Society Reporter*, June, 1936.

INDUSTRIAL MEDICINE

A Notable Decision.—Organized medicine has won a notable victory in Justice Shientag's decision in the test case of *Szold vs. Outlet Embroidery Supply Co., Inc.* The latter firm, in its capacity as employer, had authorized the plaintiff to treat an injured worker but subsequently refused to pay his bill on the grounds that he was not a member of the approved medical panel set up under the amended compensation law. The complaining physician based his case on his license to practice medicine and the employer's specific authorization.

If the plaintiff had been upheld in his contention, some of the most important features of the 1935 compensation reforms would have been nullified. Free choice of physician would again be nonexistent—in fact if not in theory—and professional responsibility for the medical aspects of the law would be reduced to a negligible rôle.

In view of the importance of this case to organized

medicine, the Medical Society of the State of New York obtained permission from the court to file a brief as *amicus curiae*. This was given due consideration in the liberal and scholarly decision handed down by Justice Shientag.

In his ruling Judge Shientag takes cognizance of the grave abuses which sprang from the failure of the old law to recognize the employer's right to choose his own physician. Abolition of this right would open the door "to a revival of the very abuses which the amended law was intended to cure, the cut-throat competition and commercialization of compensation medical practice, the improper 'lifting' of cases and the inadequate and inefficient treatment of injured workers."

Inasmuch as every licensed practitioner is eligible to qualify for the approved panel, "the requirement for authorization of physicians to treat compensation cases bears a reasonable relationship to the orderly and efficient administration of the remedial statute of which it is a part. It is in the interests of the physicians of the state as well."

The outcome of this important test case fortifies organized medicine in its efforts to raise the standards of compensation practice and keep this field open to all qualified practitioners. Only in this way can "employers and the community . . . receive the full benefits of the humanitarian law the costs of administering which they bear."—*N. Y. State J. M.*, July 1, 1936.

A Note On the Treatment of Plumbism.—Dr. F. F. Pincus, member of the Medical Board for Lead Poisoning, Queensland, contributes this article on the treatment of plumbism.

The last 6 years have brought the writer into contact with a large number of cases of plumbism requiring treatment. These have been mainly, but not wholly, in adults, and of industrial origin; symptoms have ranged in severity from acute colic, paresis, *etc.*, to mild indefinite malaise. The milder cases have largely predominated.

The writer's difficulty in finding in literature available to him any very full or authoritative discussion on treatment has prompted him to give this brief account of his experience, with the idea of assisting general practitioners who, like himself, become confronted with a condition fairly unusual in ordinary medical practice, the treatment of which is dealt with inadequately by general medical textbooks.

Gradually the superiority of sodium thiosulphate treatment (the main theme of this communication) was realized, and as confidence in its effective use was gained, distinction between acute and chronic plumbism was disregarded. The present opinion was formed that in all forms of lead poisoning, as distinct from sequelae of lead poisoning, adequate thiosulphate medication gave results uniformly more satisfactory than those obtained with any other drugs or lines of treatment tried.

Thiosulphate is now regarded as a specific by the writer and is the only treatment used, together with general hygiene and symptomatic treatment.

The standard technic employed is the intravenous injection of from 0.6 to 2.4 grams (10 to 40 grains) of a solution of sodium thiosulphate in distilled water every second day until all symptoms of active poisoning have disappeared. The dose for the average adult is 2.0 grams (30 grains). The commercial salt is dissolved in distilled water, 0.6 gram (10 grains) to each 4.0 cubic centimeters (one drachm) of water, filtered, boiled momentarily twice at an interval of 6 hours, and injected on cooling immediately after the second boiling.

No toxic symptoms have been observed after many hundreds of injections of the above doses, although some attempts to increase doses and frequency have led to alarming results.

Improvement has appeared to be invariable in the case of undoubted plumbism, so invariable that the writer places much reliance on the treatment as confirmatory (at least in a negative sense) of the diagnosis. Patients whose condition fails to improve are probably not suffering from plumbism; this is of course not to be taken to apply to sequelae.

In gauging the effectiveness of treatment, or indeed the severity of the condition, symptoms rather than laboratory tests appear much the more reliable criteria; counts of stippled cells, the discovery of lead in urine examinations, *etc.*, appear at present rather as aids in diagnosis than as means of measuring the degree of intoxication.

Symptomatic treatment has followed established lines. Atropine in heroic doses effectively relieves colic. The very stubborn constipation so common in plumbism is overcome by thiosulphate given orally in a mixture, up to 2.0 grams (30 grains) 3 times a day. The oral use of the salt does not appear to necessitate reduction of the intravenous dosage or to increase the effectiveness of the latter. Chloral with bromide is used for insomnia, syrup duplex for anorexia and debility. Variations in diet, except in the direction of completeness, have not appeared to be useful.

It is recognized that when silver salts in solution are acted upon by an excess of sodium thiosulphate, complex salts are formed in which the silver is in a negative ion and does not give the standard reactions for its salts. There is reason to suppose that a similar process is the basis of the thiosulphate treatment of mercurial, bismuth, and arsenical poisoning. In vitro a rather cursory experiment demonstrates that a similar inactivation takes place with lead salts.

If the suggested reaction takes place with lead circulating in the blood, it is obviously preferable to inactivate this in situ than either to store it to cause possible future trouble or to eliminate it rapidly with inevitable exacerbation of symptoms. The writer does not know at present whether the rate of elimination of lead is either increased or decreased by the use of thiosulphate; but it appears clinically that while improvement under calcium therapy tends to be temporary, thiosulphate gives steady permanent improvement, pointing to a probability that elimination, if not increased, is not greatly retarded. There is no obvious reason why potassium iodide and other eliminative treatment should not be combined with the protective thiosulphate therapy; this has been tried in a few cases with apparent success.

Two opposing systems of drug prophylaxis have been recommended in the past for those exposed to plumbism hazard: One is the use of organic acids and other substances to convert ingested lead into easily soluble and easily eliminated salts; the other is the use of calcium, *etc.*, with the idea of "fixing" circulating lead. Both appear to the writer to be dangerous, the latter particularly so in its liability to the masking of warning acute symptoms and the unhindered development of tragic and incurable sequelae. With the modern widespread dexterity in intravenous methods, and the public's diminishing prejudice against "having needles," it appears possible that a system of prophylaxis involving the regular administration of this cheap and easily prepared

medicament might be usefully tried where the hazard is unavoidably large.—*The Medical Journal of Australia*, Apr. 4, 1936.

PHYSICAL THERAPY

American Congress of Physical Therapy Meeting.—A very interesting meeting of the Eastern Section of the American Congress of Physical Therapy was held in Philadelphia, May 27 and 28. There was an attendance of about 200. A day was devoted to a series of papers on the subject of "Physical Therapy in Arthritis and Orthopedic Conditions" and some of the newer phases of physical therapy, such as "Artificial Fever," and "The Treatment of Erysipelas with Ultraviolet." That evening a combined meeting was held with the Philadelphia County Medical Society, in which a paper was read on "The Treatment of Peripheral Vascular Disease by Suction Pressure," and an address on "Influence of Short-Wave Radiation on Constituents of the Blood" was delivered by Dr. Disraeli Kobak, of Chicago.

The second day, beginning at 9 a. m., and continuing throughout the day, a series of clinics on "The Practical Application of Physical Therapy" was given in the Physical Therapy Department of Jefferson Hospital. A capacity audience was present, and a valuable opportunity was given to learn the practical applications of physical therapy.

Meeting of the Pennsylvania Physical Therapy Association.—The June meeting of the Pennsylvania Physical Therapy Association was held at the Episcopal Hospital in Philadelphia, and talks by the staff on "The Practical Application of Physical Therapy in the Various Specialties" were given.

Dr. Albert A. Martucci, of Philadelphia, was elected president. This meeting was in the nature of a reorganization meeting, and new plans have been developed for the future activity of this society.

It is believed that there are many who are anxious to learn more about the use of physical therapy, and it was decided that the society should hold regular monthly meetings during the winter in Philadelphia, and 1 or 2 meetings during the year in some of the surrounding counties.

The society voted to become the Pennsylvania State branch of the American Congress of Physical Therapy, and all members of the Congress in the State of Pennsylvania must join through this society. Members will then receive the official journal of the Congress, the *Archives of Physical Therapy, X-ray, and Radium*. Those who wish to join the local society without becoming affiliated with the national society may do so by paying dues of \$3 per year.

It is hoped that the society may be able to extend its usefulness throughout the entire state, and be the means of supplying the demand for information on the value and use of physical therapy.

The Annual Meeting of the American Congress of Physical Therapy will be held at the Waldorf-Astoria Hotel, in New York City, Sept. 7-11. This is the outstanding meeting on physical therapy in the country, and the attendance is usually very large. Anyone interested in physical therapy should not miss the opportunity of attending this session, as the papers are of unusually high quality. In addition there will be a commercial exhibit, where may be seen all the modern physical therapy apparatus, and which will afford an

opportunity to make a careful comparison of the various pieces of apparatus on the market.

This meeting promises to be one of the outstanding medical gatherings of the year. Programs may be obtained by writing to the American Congress of Physical Therapy, 30 N. Michigan Ave., Chicago, Ill.

Registry of Physical Therapy Technicians Established.—The American Congress of Physical Therapy has established a Registry of Physical Therapy Technicians, which will fill a long-felt want.

With the increasing importance of physical therapy, physicians in the various states are seeking competent help. Requirements in individual states vary very much, and it is to form a national standard for applicants that this registry has been formed. It will thus enable physicians in any state in the Union to secure technical assistants that can be depended upon as being duly qualified as far as preliminary education and special training is concerned.

The next examination will be held in the Waldorf-Astoria Hotel, New York City, on Sept. 7, 1936. Applicants should apply to Miss Marion G. Smith, Registrar, 30 N. Michigan Ave., Chicago, Ill.

PUBLIC HEALTH

Campaign Against Diphtheria.—The Department of Public Health, Philadelphia, through its Division of Child Hygiene, conducted its ninth annual campaign against diphtheria during the month of June.

During the past 8 years more than two-thirds of the school population of Philadelphia, aggregating one-quarter of a million, have been immunized against diphtheria. Approximately one-half of the 240,000 babies born in this city during the past 8 years have also been immunized.

Most infants do not need protection for diphtheria until they reach the age of 9 months, when it is recommended that immunization treatments be made available. Inasmuch as diphtheria is particularly fatal in preschool children, it is advisable that all infants over the age of 9 months be immunized.

In the 4 years previous to the establishment of these campaigns against diphtheria, there were reported to the Bureau of Health 13,118 cases and 1082 deaths. In the past 4 years this morbidity and mortality have been reduced to 702 cases and 72 deaths.

The efficacy of diphtheria immunization has been proved beyond all doubt. It is expected within the next few years to make diphtheria just as rare as smallpox.

In the June campaign this year the department immunized children with one injection of diphtheria toxoid. It is believed that this method is equally as advantageous as that of the older method of toxin antitoxin, giving 3 injections, one week apart.

It should be understood that the Health Department prefers to have the family physician immunize the children in the families under their care. It is a well-known fact that there is a large number of families too poor to pay for medical services. It is, therefore, important that the Health Department offer the opportunity to them.

For the benefit of those physicians who prefer to refer their patients to the centers for immunization during the campaign, a list of schools and health centers is published for their information.—*Quarterly Bulletin*, Philadelphia Department of Public Health.

A Five-Year Survey of Acute Appendicitis.—Michael Burghardt, M.D., Brooklyn, N. Y., made a

survey of 892 cases of acute appendicitis which were operated upon at the Norwegian Hospital from Jan. 1, 1930, up to and including Dec. 31, 1934. An attempt has also been made to divide this group of cases into 2 classes, namely, those with a white blood cell count up to 10,000 and those above 10,000. The following are the conclusions:

1. A survey of 892 operative cases of acute appendicitis is given.
2. Male sex slightly preponderated.
3. Nationality did not seem to play any rôle.
4. Age was negative.
5. Symptoms were those of onset of a steady, increasing pain in the lower right quadrant or a generalized ache, later localizing in the lower right quadrant, followed by nausea and vomiting. Many of these cases gave a history of constipation and other gastro-enterologic symptoms.
6. Examinations showed in most instances definite tenderness over the McBurney point and some rigidity. Rebound tenderness was not always elicited.
7. Temperature was generally not elevated at the onset but the pulse rate often showed an early rise.
8. The blood counts often showed a relative and an absolute increase in the polymorphonuclear count, but sometimes there was a reverse picture.
9. The McBurney incision was not used as much as the right rectus incision. When it was used it required less hospitalization and showed a lower mortality rate.
10. The mortality rate was only 3.9 per cent, and the cause of death in most instances was either generalized peritonitis or paralytic ileus.
11. Spinal anesthesia was the preferable anesthetic when conditions allowed its use.—*Medical Times*, June, 1936.

The Philadelphia Measles Epidemic.—Measles has reached epidemic proportions during the first 5 months of this year and will most likely continue until the closing of public and private schools in June.

During the summer it is believed that measles will continue at a lower ebb, reaching a secondary peak with the opening of the schools in the fall.

From Jan. 1 to May 15, 1936, 8213 cases of measles and 12 deaths have been reported in this city.

The question is usually asked, "Why be concerned about measles when practically every child contracts the disease?" Not only is this query asked by laymen but also by practicing physicians, believing that the disease is inescapable and that it is a matter of economies for all the children in the same household to contract the disease at one time.

Under ordinary circumstances measles is a mild disease, usually not fatal, but during epidemic years the mortality reaches a high peak. The greatest mortality is among children under school age. It would, therefore, appear plausible to prevent the spread of measles in households where there is more than one child, particularly among children under age 5. It is advisable to observe the quarantine and isolation of the infected member of the family so that the younger children may be spared the infection until they reach the age when the mortality is very low.

This opinion is based upon the fact that 91 children died from measles in 1934, 33 in 1933, 109 in 1931, 150 in 1928, and 160 in 1926. Ninety per cent of these fatalities are in children under the school age.

The next question that arises in the minds of the family is how the disease may be prevented or deferred. After a number of years of experience at the Philadelphia Hospital for Contagious Diseases, it has been definitely proven that the use of adult whole blood from one or both parents will either give the child temporary immunity or will reduce the severity of the disease if it develops. One of the most important problems in the management of the Hospital for Contagious Diseases in years gone by was cross-infection by measles. Since the introduction of the use of adult whole blood outbreaks of measles in the institution have been unknown.—*Quarterly Bulletin*, Philadelphia Department of Public Health.

Subsidized Health Service.—The *Philadelphia Evening Bulletin*, July 13, under the title of "Subsidized Health Service" has the following editorial:

"Pennsylvania, which has received the first instalment of \$700,000 to be given to it from the Federal Treasury for public health uses, can accept this money with good conscience because it is part of what has been extracted from the pockets of Pennsylvanians through federal taxation. Furthermore, it is not a bribe to induce this state to take any qualifying legislative action, but a direct donation to several branches of good health work already being carried on.

"Of the sum allocated the greater part will be used for general health activities, but \$153,000 will go toward maternal and child health service and \$133,000 for aid to crippled children. The money will finance 2 roentgen-ray laboratories on wheels, with the help of which tuberculosis tests may be applied to children in rural districts to the end that early detection of the disease may promote cure.

"This state is morally and legally responsible for care of the health of its child and adult residents. It cannot pretend to have adequate resources of its own for the purpose, though it might have if its people were not so heavily taxed for the benefit of the national exchequer."

(This informative reference will be appreciated by our readers.—EDITOR.)

Plans Drive on Accidents.—Dr. Edward S. Godfrey, Jr., Health Commissioner of New York State, said at Albany, N. Y., May 21, that the Health Department will enter the field of accident prevention because increasing automobile mishaps are nullifying gains in the reduction of deaths from disease.

Accidents now rank fifth among the causes of death in New York State. Home accidents cause nearly as many deaths as automobiles, so his department will tell householders of the dangers lurking in their own homes.

Whereas 1 in 19 died from an accident in 1907, 1 in 15 died from it last year.

Causes as well as results of accidents need to be made public and perhaps dramatized, the commissioner said.

His department can help by "providing more facts concerning the causes of accidents through the state division of vital statistics" and through closer collaboration with the agencies charged with the prevention of certain types of accidents.—*The Associated Press*, May 21, 1936.

Urge New Specialty In Medicine of Future.—Need for evolution of a new specialty, that of medical sociology, was pointed out by Dr. R. R. Spencer, U. S. Public Health Service, at the meeting of the National Conference of Social Work at Atlantic City.

Physicians, social workers, and public health nurses would meet in this field which Dr. Spencer termed a "borderland science." They would study the relation

of social conditions to health and disease, and work out measures, both medical and social, for improving health. Dr. Spencer compared this new specialty with such established ones as radiation-genetics and economic entomology.

Dr. Spencer heads the newly organized office of public health education in the scientific research division of the U. S. Public Health Service.—*Science News Letter*, June 6, 1936.

Employment Accidents Not Increased by Recovery.—Contrary to all expectation, increased employment during 1935 did not increase the death rate from occupational accidents, statisticians of the Metropolitan Life Insurance Company report. Figures for 1935, just now available, show a lower occupational death-rate in 1935 than in 1934.

Particularly encouraging is the decline in mortality from transportation accidents of all kinds. A decline of over 11 per cent in occupational automobile accidents, exclusive of collisions between automobiles and railroad trains or engines and collisions between street cars and automobiles, is reported.

Fatality rates for falls, burns, injuries by machines, drownings, and mine and quarry accidents increased.—*Science News Letter*, June 10, 1936.

Qualifications of Health Officers.—Speaking before the New York State Conference of Mayors, and other city and village officials, at Kingston on June 5, Dr. Edward S. Godfrey, Jr., State Commissioner of Health, said that he foresaw difficulty unless city health departments begin shortly to develop understudies or unless public opinion for qualified health officers grows strong enough to permit appointment of nonresidents. The alternative to the appointment of nonresidents, in his opinion, is to provide in each city of 50,000 population or more a full-time deputy who actually functions as a deputy and who has taken a postgraduate course in one of the schools of public health. He said:

"I believe there can be found in every city of 50,000 a physician, not too long out of medical school, with a good background, intelligence, personality, force, and a genuine aptitude for public health and an ineptitude for politics, who would be willing to accept a fellowship at a public health school and serve on full time at a salary compatible with municipal finances.

"I believe that with the moneys available under the federal social security appropriations the state can make a material contribution toward financing such positions. I believe, furthermore, that in doing so the state would be doing more for the advancement of public health work as a whole than through aid for specified purposes such as we are proposing for the control of syphilis.

"Such a deputy could, I think, make possible the bringing together in the health department of the services that belong there, now rendered by a variety of official and nonofficial organizations, and of so knitting the services the health department has to offer with the border-line services of these other agencies that an enormous increase in efficiency would inevitably result. This sort of work takes time which the health officer, working alone and practically unaided except as to specialized services, is not able to give. It will aid, at least, in making a tuberculosis service out of a tuberculosis clinic, a venereal disease service out of a venereal disease clinic, a maternity and infancy service out of the prenatal and well-baby clinics and, above all, it will provide a qualified resident successor to the health officer when he passes out of the picture."—*Health News*, June 22, 1936.

"The health of the future will not be a health officer's product, a negative achievement of reduced death rates, but the accomplishment of individuals who choose their ways of life with understanding, according to their inheritance, their ambition to survive and be superior, and consistent with the immutable laws of human biology. . . . Our society and the nations that are everywhere our neighbors will owe an increasing debt to those who can make the science and art of curative medicine less and less necessary, by reason of the understanding in childhood and youth of the good way of life." —Dr. Haven Emerson, quoted in part from a talk presented before the Sixteenth Annual Meeting of the American Student Health Association held in New York City.—*N. Y. State J. M.*, June, 1936.

Provisional Morbidity in Pennsylvania in May, 1936

Locality	Disease				
	Diphtheria	Measles	Scarlet Fever	Typhoid Fever	Whooping Cough
Aliquippa	0	1	2	0	3
Allentown	4	5	1	12	13
Altoona	1	0	9	0	11
Ambridge	0	3	1	0	2
Arnold	0	1	1	0	12
Beaver Falls	1	0	4	0	0
Bellevue	0	0	12	0	0
Berwick	1	0	0	0	0
Bethlehem	0	0	1	0	3
Braddock	0	0	11	0	0
Bradford	0	0	2	0	3
Bristol	0	1	0	0	5
Butler	0	53	2	0	0
Canonsburg	0	0	9	0	0
Carbondale	0	0	0	0	0
Carlisle	0	1	5	0	0
Carnegie	0	11	2	0	0
Chambersburg	0	1	18	0	0
Charlertoi	0	0	1	0	0
Chester	3	40	2	0	1
Clairton	0	3	0	0	0
Coatesville	0	0	0	0	0
Columbia	0	0	0	0	0
Connellsville	0	0	0	0	0
Conshohocken	0	22	0	1	0
Coraopolis	0	20	1	0	1
Dickson City	0	0	3	0	0
Donora	1	3	0	0	2
Dormont	0	0	3	0	1
Du Bois	0	17	1	0	0
Dunmore	0	1	2	0	0
Duquesne	0	0	1	0	0
Easton	2	3	3	1	3
Ellwood City	0	0	5	0	0
Erie	3	3	10	1	30
Farrell	0	2	0	0	0
Franklin	0	0	0	0	2
Greensburg	0	0	0	0	0
Hanover	0	3	1	0	0
Harrisburg	4	0	4	0	2
Hazleton	1	5	1	0	0
Homestead	0	0	0	0	0
Jeannette	2	3	3	0	0
Johnstown	0	6	9	0	0
Kingston	0	1	1	1	2
Lancaster	0	37	1	0	4
Latrobe	0	0	1	0	0
Lebanon	0	0	4	0	2
Lewistown	0	0	0	0	0
McKees Rocks	0	12	1	0	0
McKeesport	4	13	5	0	1
Mahanoy City	1	0	0	0	0
Meadville	0	0	0	0	0
Monessen	0	21	0	0	0
Mount Carmel	0	0	0	0	0
Munhall	0	0	0	0	0
Nanticoke	1	0	5	0	0
New Castle	1	0	5	0	0
New Kensington	1	0	24	0	1
Norristown	0	1	2	0	0
North Braddock	0	1	6	0	4
Oil City	0	0	0	0	6
Old Forge	0	0	0	0	0
Olyphant	0	0	3	0	0
Philadelphia	12	1912	240	0	185
Phoenixville	1	14	10	0	1
Pittsburgh	20	49	414	0	117
Pittston	3	0	2	0	1
Plymouth	0	0	0	0	0
Pottstown	0	1	1	0	0
Pottsville	0	0	0	0	5
Reading	12	24	6	0	10
Seranton	2	3	11	0	2
Shamokin	3	17	1	0	0
Sharon	0	6	0	0	6
Shenandoah	0	0	0	0	0
Steelton	0	1	0	0	0
Sunbury	0	4	14	0	0
Swissvale	0	0	7	0	3
Tamaqua	1	0	11	0	0
Taylor	0	0	4	0	0
Turtle Creek	0	23	12	0	1
Uniontown	0	9	4	0	0
Vandergrift	0	5	1	0	10
Warren	0	0	4	0	8
Washington	1	151	2	0	0
Waynesboro	0	1	1	0	0
West Chester	0	76	0	0	10
Wilkes-Barre	3	1	18	0	16
Wilkinsburg	0	41	6	0	2
Williamsport	0	1	4	1	0
York	0	2	5	1	1
Townships					
Allegheny County:					
Harrison	0	1	1	0	0
Mt. Lebanon	0	0	4	0	2
Stowe	0	56	0	0	6
Delaware County:					
Haverford	0	5	1	0	0
Upper Darby	0	34	5	0	13
Luzerne County:					
Hanover	1	0	2	0	0
Plains	0	0	1	0	1
Montgomery County:					
Abington	0	69	4	0	1
Cheltenham	0	38	0	0	1
Lower Merion	0	16	5	0	15
Total Urban ..	80	2854	989	8	521
Total Rural ..	71	1142	622	14	175
Total State ..	151	3996	1611	22	696

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the co-operation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

THE year Koch announced the discovery of the tubercle bacillus, 1882, Forlanini published his first paper on pneumothorax. Yet only during the last decade has collapse therapy become accepted practice in this country. What are the more important considerations that have contributed to this change in the treatment and management of pulmonary tuberculosis? J. W. Cutler, physician-in-charge of the pneumothorax clinic, Henry Phipps Institute, discusses this subject in a recent article in the *Journal of the American Medical Association*. Abstracts follow.

IMPORTANCE OF PNEUMOTHORAX THERAPY

Fever, night sweats, loss of appetite, malaise, and rapid pulse are manifestations of toxemia. Toxemia may be of low grade, allowing the patient to enjoy relatively good health, or it may be acute and apparently out of all proportion to the extent of the disease. Toxemia makes the patient feel ill and favors the spread of the tuberculosis in the lungs. This spread results in more toxemia. To effect a cure one must first of all break through the vicious cycle and reverse the trend. Check and eliminate the toxemia and the appetite improves, the fever disappears, and there is gain in weight and strength. This gives an opportunity for the natural healing forces to come into play, and resolution and scar of the pulmonary lesion usually follow.

There is no drug to control the toxemia; bed rest is not sufficient, in many cases at least, to rest a tuberculous lung. Pneumothorax collapses the diseased area of the lung and shuts off the source of the toxemia. For this reason the immediate results of pneumothorax are often dramatic. But the lung itself is still diseased. If re-expansion is permitted before healing has taken place all clinical symptoms of active tuberculosis return.

The Time Factor

The second consideration in the treatment of tuberculosis is the factor of time. Clinical well-being is not synonymous with cure; anatomic improvement often lags far behind clinical improvement and many patients will not remain in the sanatorium or stay in bed for the time required to obtain a lasting cure, particularly if they begin to feel well. Collapse therapy attacks this evil at its source.

When therapeutic pneumothorax is instituted the lung is splinted and kept at rest for as long a period as the physician may desire—2 years, 5 years, or for the rest of the patient's life if need be. With the toxemia controlled and the patient feeling well and able to work, all that is needed to keep him in good health is to maintain the pneumothorax sufficiently long to permit complete healing of the tuberculous lung. Serial roentgen-ray studies are evidence of the remarkable healing power of nature; large cavities and massive infiltrations may in time disappear and leave little trace.

From 3 to 5 years or more is necessary to bring about a lasting cure. The length of time pneumothorax should be maintained depends

upon the extent and severity of the disease at the time treatment was instituted. There is no fixed rule; if a general rule may be ventured it would be to continue pneumothorax for at least a year after roentgen-ray evidence indicates complete healing.

Social and Economic Considerations

The third important consideration in the treatment of tuberculosis is the proper management of the underlying social and economic problems. The tuberculous person who must depend upon his daily earnings or who carries a heavy financial burden finds it difficult to solve his economic problems. Long sanatorium care is a luxury many cannot afford. Pneumothorax therapy in many instances eliminates the necessity for long-continued sanatorium care for it can be safely instituted at home or in a local hospital. More and more specialists, particularly in the larger cities, treat their patients at home with collapse therapy instead of sending them away. In favorable cases (which constitute about 50 per cent) the patient may return to work in from 1 to 3 months after pneumothorax has been instituted. The ambulatory pneumothorax clinic at the Henry Phipps Institute, organized in 1931 in the heart of the slum district of Philadelphia, where poverty and bad hygienic conditions are common, treats about 50 patients a morning with results that compare favorably with similar groups of patients treated in well-regulated sanatoriums. The field pneumothorax clinic of the Chicago Municipal Tuberculosis Sanitarium and similar clinics in other metropolitan centers report similar results. The economic and health value of such a plan to the community is obvious.

Pneumothorax Prevents Spread

The public health aspects of tuberculosis, another consideration, must never be overlooked. In a sense the physician who undertakes the treatment of the tuberculosis patient becomes the public health officer responsible

for the welfare of the entire family and indirectly of the community. He must be on the lookout for sputum containing tubercle bacilli. Education of the patient and his family is a help in preventing the transmission of tubercle bacilli, but more effective is it to render positive sputum negative. When the diseased lung is satisfactorily collapsed tubercle bacilli almost invariably disappear from the sputum. A relatively simple procedure, pneumothorax, is therefore one of the most powerful weapons in the control of tuberculosis.

Improved Technic

Better understanding of pneumothorax and improvement in technic have contributed to the popularity of pneumothorax. Complete collapse of the lung such as Forlanini envisioned is not necessary. All that is necessary is collapse of the diseased part which places little or no strain on the contralateral lung. Selective collapse also makes possible bilateral collapse, which widens the indications for pneumothorax. There are many institutions today in which pneumothorax is applied to 75 per cent or more of the tuberculous patients in marked contrast to the usual 5 to 10 per cent of a decade ago.

Contraindications

The author then discusses indications and contraindications for pneumothorax treatment followed by brief descriptions of complications, the disadvantages of which are balanced against complications of passive treatment, leading to the conclusion that

"Pneumothorax therapy has its dangers and complications, but they can be overemphasized. By and large they are not more serious than the complications of passive treatment, and their frequency and severity can be materially reduced by proper technic and management."

The Increasing Importance of Pneumothorax Therapy in Pulmonary Tuberculosis, J. W. Cutler, M.D., *Jour. of Am. Med. Assn.*, April 18, 1936.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

SCIENTIFIC PROGRAM EIGHTY-SIXTH ANNUAL SESSION *Pittsburgh, October 5 to 8, 1936*

GENERAL MEETINGS

URBAN ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

Reporter—MISS F. E. DILLAN, 3340 N. Meridian St., Indianapolis, Ind.

Tuesday, October 6, 10 a. m.

Call to Order by the President.

ALEXANDER H. COLWELL, Pittsburgh.

Invocation.

REVEREND H. BOYD EDWARDS, *Rector*, Church of the Ascension, Pittsburgh.

Report of Committee on Necrology.

ROBERT G. BARCKLEY, Milford, *Chairman*.

Address of welcome.

HON. WILLIAM N. MCNAIR, *Mayor*, City of Pittsburgh.

Address of welcome.

SIDNEY A. CHALFANT, *President*, Allegheny County Medical Society.

Presentation of Scientific Program.

FREDERICK B. UTLEY, Pittsburgh, *Chairman*, Committee on Scientific Work.

Announcement of Scientific Exhibit.

LESTER HOLLANDER, Pittsburgh, *Chairman*, Committee on Scientific Exhibit.

Announcement of Entertainments.

CLEMENT R. JONES, Pittsburgh, *Chairman*, Local Committee on Arrangements.

Installation of President Maxwell Lick.

President's Address.

MAXWELL LICK, Erie.

Wednesday, October 7, 9 a. m.

(Note—Essayists will please deposit original copies of their papers with the secretary when they have finished reading them. The JOURNAL will not accept carbon copies.)

(Note—The ringing of the bell announcing the beginning and the conclusion of the time allotted to essayists and discussors is beyond the control of the presiding officers. Ample warning of this fact, with frequent reference to time allotted, has been given all who appear on the program.)

The Clinical Aspects of Lead Poisoning (Lantern Demonstration) (20 minutes).

THOMAS A. JOHNSON, Drexel Hill.

OUTLINE. A study of approximately 500 men exposed to a hazard of lead poisoning on whom about 6000 reticulocyte and stippled cell determinations have been made. A fairly definite relationship exists between exposure to lead and height of reticulocyte and stippled cell counts. An attempt has been made to correlate the clinical aspects of lead poisoning with the above determinations. In view of the occupational hazards associated with the industrial use of lead and the apparent inability of industry to provide adequate protection against lead poisoning, it becomes necessary to evaluate the vague symptomatology of early lead poisoning in order to protect the workers from the serious consequences of severe lead poisoning. Most of the early cases of lead poisoning are seen first by the family physician who frequently overlooks the lead factor.

The Control of the Mentally Unfit (15 minutes).

CHARLES H. HENNINGER, Pittsburgh.

OUTLINE. A review of conditions that now exist in Pennsylvania; health requirements for marriage and the issuance of marriage certificates; identification and registration; segregation; community supervision and sterilization. The personal, medical, and legal problems involved will be briefly discussed.

Discussion opened by JAMES W. MCCONNELL, Philadelphia (5 minutes).

Measures for the Control of Syphilis (10 minutes).

EDGAR S. EVERHART, Harrisburg.

OUTLINE. Except in Pennsylvania, syphilis has been reportable in all states in this country since 1918. The dependability of such reports is questionable. Health authorities are interested in infectious syphilis. Infections, the duration of which has been beyond the state of contagion, are of little practical value to sanitarians. Public clinics should follow infections through to a successful finish; the private physician cannot. Some physicians are careless; most of them are conscientious but helpless. It is proposed: (1) To place fresh syphilitic infections in the morbidity reporting tables but without exposing the identity of the patient; (2) to name the patient in the event of negligence on his part. With facilities that will come from the Social Security Act it is proposed to offer to private practitioners a service in the interest of their neglectful patients. The State Department of Health takes the unqualified stand that a service of this character must originate with the physician.

The Toxemias of Pregnancy (15 minutes).

BOYD HARDEN, Pittsburgh (by invitation).

OUTLINE. A study in late gestational toxemias presenting a hospital experience of 30,352 deliveries and a time interval of 13 years. A comparison of previous experience with a 3-year period of control of foci of infection, anemia, and protein deficits in pre-eclampsia. The clinical management of the pre-eclamptic woman.

The Clinical Features of the Macrocytic Anemias (Lantern Demonstration) (20 minutes).

CHARLES L. BROWN, Philadelphia.

OUTLINE. The practical application of the classification of the anemias on the basis of red blood cell size and hemoglobin content will be evaluated. The possible relationship of the macrocytic anemias to the gastro-intestinal tract, and the absorption and storage of the antianemic principle will be considered in the light of present knowledge. Discussion will emphasize those clinical features somewhat common to pernicious anemia, certain occasional cases of carcinoma of the stomach, certain cases of cirrhosis of the liver or other hepatic disorders, sprue, and pernicious anemia of pregnancy. Appraisal will be made of the efficacy of antianemic therapy in these conditions accompanied by macrocytic anemia.

Recess

10:30 - 11:00 a. m.

(Recess to visit scientific exhibit. Use express elevators near entrance to Cardinal Room. Members are earnestly requested to return promptly to the Urban Room for the remainder of the morning program.)

11:15 a. m.

Silicosis—Determination of Disability with Reference to Workmen's Compensation (Lantern Demonstration) (50 minutes).

WILLIAM S. McCANN, Rochester, N. Y. (Guest).

OUTLINE. The various measurements of pulmonary capacity found to be useful in estimating disability will be discussed. Most notable of these is the ratio of residual air to total capacity. Exercise tests consist of performing measured quantities of work for 5 minutes with observations during 3 minutes thereafter. It has been found that the total ventilation (for 8 minutes) divided by the vital capacity is significant. Dyspnea begins when this index reaches 55-60. Measurements of the pulmonary reserve are also of great significance. This is the difference between minute volume of breathing at rest and the maximum minute volume attainable. At any level of work the ratio of the minute volume to maximum minute volume gives an index of dyspnea. The threshold of dyspnea is reached when the ratio passes 55. By plotting the curve of these indices at moderate rates of work, the ventilatory response of patients with silicosis can be compared with normals at the same rates without demanding the subjects to exert to the maximum limit. These observations will be correlated with the roentgen-ray studies of the subjects.

Discussion opened by PAUL G. BOVARD, Tarentum (10 minutes).

Thursday, October 8, 9:15 a. m.

The Psychology of Deafness (15 minutes).

KENNETH M. DAY, Pittsburgh.

OUTLINE. The adjustment problems of the hard-of-hearing patient are rarely understood by physicians. A clear insight into these problems will enable physicians to assist these people to make necessary readjustments and also to relieve them of despondency, depression, and accompanying ills and ailments.

Discussion opened by DOUGLAS MACFARLAN, Philadelphia (5 minutes).

Bromide Delirium (15 minutes).

MAX LEVIN, Harrisburg.

OUTLINE. Bromide delirium is a common and sometimes fatal disease. It may occur in any patient receiving bromides, especially if the chloride intake is low and the resistance of the brain decreased by some pre-existing disease, such as cerebral arteriosclerosis or syphilis. Diagnosis, treatment, and prevention are discussed.

Cancer of the Breast (Lantern Demonstration) (20 minutes).

DONALD GUTHRIE, Sayre.

OUTLINE. The paper reviews the present status of the subject of breast cancer, quoting statistics from various clinics of cured patients 5 or more years after operation and stressing particularly the difference in life expectancy between those who

have axillary metastasis at the time of operation and those who have no such metastasis. The results of a follow-up of cases operated upon by the author and his associates are given in detail. Certain important points of the Meyer-Rodnan operation are emphasized.

Discussion opened by ALBERT F. HARDT, Williamsport (5 minutes).

Comparison of Agglutination Tests in Individuals Treated with Typhoid Vaccines by Subcutaneous and Oral Methods (Lantern Demonstration) (10 minutes).

GEORGE R. LACY, Pittsburgh.

OUTLINE. This study is based on a large series of individuals treated by the 2 methods following the St. Patrick's Day, 1936, flood in the Pittsburgh district.

Discussion opened by MORTIMER COHEN, Pittsburgh (5 minutes).

A Clinical and Pathologic Study of Acute Pulmonary Embolism and Thrombosis (Lantern Demonstration) (15 minutes).

HENRY K. MOHLER, Philadelphia.

OUTLINE. A discussion of the clinical manifestations of pulmonary thrombosis and pulmonary embolism separately is not practical as they are often quite similar. A differentiation between the 2 lesions may be made from the history, the course of the disease, and careful examination at necropsy. It is important to recognize the pathologic lesions which may result in or predispose to pulmonary thrombosis or embolism in order to prevent this serious and often fatal lesion.

Pulmonary embolism or thrombosis frequently affects the right heart, and its symptoms and etiology may be confused with those of acute coronary occlusion, from which it must be differentiated because of the difference in treatment and prognosis.

Massive embolism with sudden death and also emboli and thrombosis of the small vessels, which may or may not be associated with such dramatic symptoms, will be discussed. The recent literature is reviewed with regard to the apparent increased incidence and to the etiology.

Discussion opened by BAXTER L. CRAWFORD, Philadelphia (5 minutes).

The Invasion of Physiology into Clinical Medicine (Lantern Demonstration) (25 minutes).

EDWARD LODHOLZ, Philadelphia.

OUTLINE. The topographic physiologist studies cells taken from various parts of the body, tissues, or organs. He subjects these structures to controlled conditions and variants both normal and abnormal. His results are of great importance in establishing fundamental principles and laws of biologic behavior and some of them have also reached clinical importance in cell physiology, tissue physiology, transfusion, and transplantation. A critical attitude is also taken in connection with these discoveries in regard to their application to clinical medicine on account of the basic difference of conditions in the laboratory and clinical world. Special attention is directed to the variants in the latter not found in the former, which may mitigate, mask, neutralize, or antagonize physiologic behavior as observed in the laboratory. The medical physiologist has recently given more attention to the dynamic nature, sequence, and interaction of physiologic happenings, which include such phenomena as physiologic "delirium," terminal depressions, sectional death, preterminal physiologic "flare," and terminal degeneration. Such studies have produced significant findings of prognostic value to the clinician as well as important data for differential diagnosis.

Infections of the Hand (Lantern Demonstration) (55 minutes).

SUMNER L. KOCH, Chicago, Ill. (Guest).

OUTLINE. The diagnosis and treatment of the simpler and very common types of infection—paronychia, subcuticular infections, felon, collar button abscess, and superficial infections of palm and dorsum; the more serious and extensive types of infection—acute spreading infections of the lymphatics and cellular tissues, tendon sheath infections, and infections of the deep fascial spaces of the palm.

SECTION ON MEDICINE

URBAN ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

OFFICERS OF SECTION

Chairman—EDWARD W. BIXBY, Wilkes-Barre.*Secretary*—JOSEPH T. BEARDWOOD, JR., Philadelphia.*Executive Committee*—WILLIAM D. STROUD, Philadelphia; CARL E. ERVIN, Danville; CLIFFORD C. HARTMAN, Pittsburgh.*Reporter*—MRS. IRENE HILTON SNYDER, 1641 Marshall Field Annex, 25 East Washington St., Chicago, Ill.*(Note—Essayists will please deposit original copies of their papers with the secretary of the Section when they have finished reading them. The JOURNAL will not accept carbon copies.)**(Note—The ringing of the bell announcing the beginning and the conclusion of the time allotted to essayists and discussors is beyond the control of any officer of the Section. Ample warning of this fact, with frequent reference to time allotted, has been given all who appear on the program.)*

Tuesday, October 6, 1:40 p.m.

Symposium on Diabetes

Fluctuation in Blood Sugar Levels in Diabetics (Lantern Demonstration) (15 minutes).

CORTLANDT W. W. ELKIN, Pittsburgh.

OUTLINE. It is generally recognized that the blood sugar of diabetics varies in its relation to meals, amount and character of the food taken, exercise, etc. The figures are usually highest in the morning hours, depending on whether insulin is or is not used. The decrease in glycemia noted from about noon and through the evening has been attributed to the stimulation of endogenous insulin by the carbohydrate ingested. (Based on this theory, the author has treated refractory cases by giving glucose (20 grams) and insulin (5-10 units) every 2 hours, night and day, until glucose tolerance was very high.) While it is assumed that increased glucose tolerance is due to increase of endogenous insulin or increased sensitivity to the same amount of insulin, there occurs a rhythmic change in the blood sugar, with a general tendency to reach a peak in the early morning hours. Interpretations and theories of this change and possible applications.

Discussion opened by FRANK A. EVANS, Pittsburgh (5 minutes).

Diabetes Mortality Approaches That of Tuberculosis (Lantern Demonstration) (15 minutes).

JOHN DAVIS PAUL, Philadelphia.

OUTLINE. The mortality from diabetes is rapidly approaching that of tuberculosis. Diabetes occurs more commonly in the relatives of diabetics, Hebrews, the obese, and those suffering from gallbladder disease. Exton's one-hour, two-dose sugar tolerance conclusively diagnoses the prediabetic state earlier. High fat diets decrease carbohydrate tolerance.

Discussion opened by HERBERT T. KELLY, Philadelphia (5 minutes).

Studies of Arterial Changes in Diabetic Legs (Lantern Demonstration) (20 minutes).

THEODORE A. HENDERSON, Abington (by invitation).

OUTLINE. With the advent of new methods of treatment and diagnosis in arteriosclerosis, a widespread interest in the subject has been reawakened. This is a particularly timely interest in its relation to diabetes mellitus, since in the past few years deaths due to cardiovascular complications have increased to alarming proportions. With this fact in mind it is profitable to study the gross arterial changes in the lower extremities of diabetic patients after amputation. The method used consists merely of injecting metallic mercury into the femoral artery of an amputated leg, and making a roentgenographic record of the result. A comparison of these roentgenograms with the dissected legs and with the patient's clinical records brings out several points which, though known for some time, have not gained widespread application at the bedside.

Experimental Studies on the Effects of Insulin, Protamine Insulin, and Crystalline Insulin (Lantern Demonstration) (20 minutes).

JOSEPH H. BARACH, Pittsburgh.

OUTLINE. Three insulins are now available for clinical use—regular insulin, protamine insulin, and crystalline insulin. Clinical effects of regular insulin are well known. Protamine insulin is more slowly absorbed, reduces the number of doses required, and is more continuous in its action. Protamine insulin has certain disadvantages. In our experience the new crystalline insulin possesses the advantages of protamine insulin without its disadvantages. The results of clinical studies are illustrated.

Recess

3 - 3:30 p.m.

(Recess to visit Scientific Exhibit. Use express elevators near entrance to Cardinal Room. Members are earnestly requested to return promptly to Urban Room for remainder of afternoon program.)

Diabetes.

ELLIOTT P. JOSLIN, Boston, Mass. (Guest) (55 minutes).

OUTLINE. The paper will be based upon the author's experience with the use of protamine insulin during the preceding 12 months with 300 cases. An endeavor will be made to give precise rules for the use of protamine insulin with new diabetic cases, and the method of transfer of patients under treatment with regular insulin to protamine insulin.

Insulin Atrophy (Lantern Demonstration) (20 minutes).

JAMES A. SHELLY, Ambler.

OUTLINE. A series of cases showing atrophy of the subcutaneous fat and muscle tissue following the use of insulin. These cases are analyzed according to age and technic of insulin administration. The type of insulin used and the incidence of this condition in a large series of diabetics. Suggestions as to preventive measures and therapeutic procedure.

Diabetes and Tuberculosis (Lantern Demonstration) (20 minutes).

RUTH WILSON, Beaver.

OUTLINE. Discussion of the course of 9 cases of combined tuberculosis and diabetes, classified as to severity of the tuberculosis and of the diabetes. These cases were analyzed according to admission, blood sugar, previous treatment, insulin requirements, and complications. The differences in insulin requirements with pneumothorax are discussed, as well as the result from such a procedure. Diabetes is not a contraindication to any form of lung surgery if treated by one who understands both diabetic and tuberculosis therapy, with one exception, namely, the acute ulcerative tuberculosis in which surgery is impossible.

Wednesday, October 7, 1:45 p.m.

REPORT OF EXECUTIVE COMMITTEE—ELECTION OF SECTION OFFICERS

Acute Psychosis Due to Coronary Thrombosis (Lantern Demonstration) (15 minutes).

JOSEPH B. WOLFFE and

ALEXANDER SILVERSTEIN, Philadelphia.

OUTLINE. Acute coronary thrombosis may be associated with or entirely replaced by symptoms indicating a psychotic disturbance. The importance of recognizing this association is stressed, since the prognosis and therapy depend upon the proper diagnosis. Cases are presented to illustrate the typical clinical picture of this syndrome. It is suggested that, in every case of a sudden agitated psychosis coming on past middle life, diagnosis of coronary thrombosis should be considered and various studies, particularly the electrocardiogram, should be made. The prognosis of the psychosis with proper treatment is good. The important point in the therapy is to control the agitation and motor activity in order to protect the cardiac lesion.

Discussion opened by CHARLES L. BROWN, Philadelphia (5 minutes).

Principles Governing the Restriction of Exercise in the Treatment of Heart Disease (15 minutes).

LOUIS B. LA PLACE, Philadelphia.

OUTLINE. The amount of rest and exercise which is advisable in any case of heart disease is based on the following considerations: (1) When the heart is caused to work beyond its functional capacity (as determined by the state of the myocardium or the limitations of the circulation), a deleterious effect is produced both on the heart and on the body. (2) Alternatively, the excessive restriction of exercise may handicap the circulation by impairing the efficiency of the peripheral vascular function. (3) In arteriosclerotic heart disease neither dyspnea, anginal pain, nor any one test is an exact guide to the amount of permissible exercise, for failure often occurs suddenly as the result of the onset of an arrhythmia. Sufficient exercise is advisable, however, to prevent circulatory hypostasis.

Discussion opened by WILLIAM D. STROUD, Philadelphia (5 minutes).

Pituitary Basophilism (Lantern Demonstration) (20 minutes).

CHARLES WILLIAM DUNN, Philadelphia.

OUTLINE. This paper correlates the clinical, the therapeutic, and the pathologic conceptions of the symptom complex originally attributed by Cushing, in 1932, to an adenoma of the basophils of the anterior lobe of the pituitary gland with similar pathology involving the adrenal cortex. The clinical syndrome generally designated as "pituitary basophilism" has now been demonstrated also to be caused by carcinoma of the adrenal or the thymus glands. The common pathologic and histologic changes in the basophils, in both benign and malignant endocrinous forms of the syndrome, suggest therapeutic measures; further, they permit a conception as to what may be termed the "initial symptoms" of the classical, usually preterminal, state of the pituitary basophilism. A report of treated cases and the results obtained are presented.

Classification of the Blood Cell Dyscrasias (Lantern Demonstration) (15 minutes).

GEORGE J. KASTLIN, Pittsburgh.

OUTLINE. According to the newer concept of blood cell development, a disturbance of each cell type results in a particular blood disease. Description of the clinical conditions produced by disturbance of each cell type. Illustration of colored schematic cells and colored photomicrographs of the blood smears in each disease.

Discussion opened by WALTER M. BORTZ, Greensburg (5 minutes).

The Interpretation of Some Hematologic Findings (Lantern Demonstration) (15 minutes).

KENNETH FOWLER, Philadelphia (by invitation).

OUTLINE. An attempt will be made to show, with illustrative cases, that in some of the anemias hematologic findings can accurately indicate rational therapy and in addition predict their efficacy.

Discussion opened by TRUMAN G. SCHNABEL, Philadelphia (5 minutes).

The Significance of the Size and Hemoglobin Saturation of Red Blood Cells in the Clinical Study of Anemia (Lantern Demonstration) (20 minutes).

WILLIAM P. BELK, Ardmore.

OUTLINE. The development of this phase of hematology. A very brief discussion of the technique. More emphasis is given to the experiences and opinions of those hematologists who have developed these methods and who are now applying them practically. A detailed exposition of the several practical applications of this method of study. Each point is illustrated by brief case records from personal experience. The conclusion is drawn that the determination of volume and saturation indexes of red blood cells is of as great practical value in the study of anemia as is the nuclear shift in the study of infection.

Liver Therapy in Hemochromatosis and in Various Types of Anemias (Lantern Demonstration) (15 minutes).

LUTHER I. FISHER and
HENRY A. ROTHROCK, JR., Bethlehem.

OUTLINE. Physiology of the liver in reference to hemopoiesis. Types of anemia as classified by red blood cell volume and hemoglobin content. Types of anemia benefited by liver therapy—macrocytic anemia: (a) Pernicious anemia; (b) anemias present in hepatic disorders. Types of anemia not benefited by liver therapy: (a) Microcytic hypochromic anemia; (b) microcytic anemia. Liver therapy in a case of hemochromatosis—macrocytosis following a hyperchromic microcytosis. Illustrative cases. Summary. Conclusions.

Discussion opened by ELLIOTT B. EDIE, Uniontown (5 minutes).

A Study of Native Agglutinins for Brucella in Human Blood Sera (Lantern Demonstration) (20 minutes).

HENRY F. HUNT, Danville.

OUTLINE. Because of inconsistent symptoms undulant fever is oftentimes mistaken for typhoid fever, malaria, tuberculosis, or rheumatism. To date the best known means of diagnosis is by the laboratory technic known as the agglutination test, which is carried out with the patient's blood serum. Agglutinins of the Brucella organisms are not only found in the serum from undulant fever patients, but exist in the blood sera of apparently normal individuals. It was the purpose of this study to determine the extent and significance of these native agglutinins in blood sera. This investigation was made on 1000 specimens of blood routinely collected from patients or blood donors admitted to the Geisinger Memorial Hospital between Oct. 7, 1934, and Apr. 30, 1935.

A Consideration of the Peptic Ulcer Problem (15 minutes).

RUSSELL S. BOLES, Philadelphia.

OUTLINE. Etiology of the disease. Special attention will be given to the diagnosis, especially its differentiation from functional disorders and cancer. Management of the disease from a practical aspect.

Dysfunctional Uterine Bleeding (Lantern Demonstration) (15 minutes).

CATHARINE MACFARLANE, Philadelphia.

OUTLINE. Distributed fairly evenly from puberty to the menopause with a sharp increase in the fourth decade. Theory of endocrine dysfunction prevails. Ovaries show graafian follicle persistence, absence of ovulation, absence of corpora lutea. Treatment unsatisfactory. In experimental animals ovulation and luteinization can be stimulated by anterior pituitary implantation or administration. Clinically similar methods of treatment frequently fail. Other methods of treatment discussed.

Discussion opened by SIDNEY A. CHALFANT, Pittsburgh (5 minutes).

Thursday, October 8, 1:30 p.m.

Joint Meeting of Section on Pediatrics with Section on Medicine

URBAN ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

Symposium on Allergy

Accurate Diagnosis in Hay Fever (Lantern Demonstration) (15 minutes).

J. ALEXANDER CLARKE, JR. and
ARTHUR L. BOLDEN, Philadelphia.

OUTLINE. The rôle of minor pollens and other substances to which a hay fever patient is sensitive explained and stressed. Differential atmospheric pollen counts for 2 seasons in the Philadelphia district. Modification of treatment to overcome these additional disturbing factors.

Discussion opened by BENJAMIN H. HAMNER, Williamsport (5 minutes).

The Rôle of Allergy in the Practice of Medicine (Lantern Demonstration) (15 minutes).

LEO H. CRIEP, Pittsburgh.

OUTLINE. Conditions considered allergic. What are allergic manifestations? Criteria for allergic diagnosis. Uses and

limitations of sensitization tests. Indications for each. Diagnostic and therapeutic management of the allergic patient.

Discussion opened by LOUIS TUFT, Philadelphia (5 minutes).

Glucose Tolerance and Metabolism in the Allergic Individual with a Report of Glucose Tolerance Observations in 600 patients (20 minutes).

HARRY B. WILMER and
MERLE M. MILLER, Philadelphia.

OUTLINE. Glucose tolerance tests were done on 600 patients at various intervals during remissions and exacerbations of their symptoms. All types of allergic cases were included. Hay fever, urticaria, eczema, asthma, migraine, and other conditions thought to be due to a hypersensitivity were observed from the standpoint of glucose tolerance. In asthmatics a marked difference was noted in the glucose tolerance of the intrinsic and extrinsic types. Preseasonal and coseasonal observations of significance were made in the hay fever patients. The tolerance test was done before, during, and after desensitization. A summation of the diagnostic and therapeutic values of the determination of an allergic individual's ability to metabolize glucose is included in this study.

Treatment of Asthma Based on Etiologic Factors (50 minutes).

LESLIE N. GAY, Baltimore, Maryland (Guest).

OUTLINE. A classification of asthma, based on etiologic factors, covering the subject from childhood to old age. The main subheadings of this classification are: (1) *Children* (not including foreign bodies): (a) Inhalant type, (h) pollens, (c) combination of inhalants and pollens, (d) infection with asthmatic bronchitis, (e) combined infection, the aftermath of inhalant and pollen sensitivity, (f) foods, (g) drugs. (2) *Adults*: (a) pollen asthma uncomplicated, (b) inhalants (animal danders, feathers, orris root), (c) combination of (a) and (b), (d) bacterial infection, (e) chronic bronchitis with cough and myocardial insufficiency, (f) occupational, (g) gas inhalation from hot air furnace, (h) obstruction to breathing—cough with secondary asthmatic breathing, (i) reflexes (psychogenic type). Each type of case discussed and case records presented.

Influenza (50 minutes).

THOMAS FRANCIS, JR., Rockefeller Institute for Medical Research, New York City (Guest).

SECTION ON SURGERY

CARDINAL ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

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Reporter—MISS MARY E. REIK, 48 Sagamore Road, Bronxville, N. Y.

(Note—Essayists will please deposit original copies of their papers with the secretary of the Section when they have finished reading them. The JOURNAL will not accept carbon copies.)

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Tuesday, October 6, 1:45 p. m.

1:45 - 2:30 p. m.

Diagnosis and Treatment of Tumors of Cardiac End of the Stomach (20 minutes).

HAROLD A. KIPP, Pittsburgh.

OUTLINE. Difficulties of early diagnosis in absence of obstructive symptoms. Clinical manifestations. Roentgen-ray methods. Esophagoscopy examination and biopsy as certain methods. Problem considered from surgical standpoint alone, excision, etc. Technical difficulties. Futility of complete local excision. Total gastrectomy. Method of procedure. Use of nasal tube. Gastrostomy tube. Implantation of radon seeds from serosal side of stomach at time of exploration, with or without introduction of tube into stomach. Postoperative deep therapy treatment. Postoperative examinations. Summary of results obtained in 2 cases in which this procedure has been used to date. Conclusions as to selection of cases, analysis of results obtained, and relation of this form of treatment to other surgical treatment of malignancy in the stomach.

Discussion opened by J. MAX LICHTY, Pittsburgh (5 minutes).

Peptic Ulcer—The Principles Underlying Surgical Treatment (20 minutes).

EDWARD J. KLOPP, Philadelphia.

OUTLINE. Selection of cases of peptic ulcer which are definitely surgical and a discussion of those which are to be treated medically. Selection of the type of operation for ulcer in certain individuals. Description of such operations with an outline of the after-treatment.

Recess

2:30 - 3 p. m.

(*Recess to visit Scientific Exhibit. Use express elevators near entrance to Cardinal Room. Members are earnestly requested to return promptly to Cardinal Room for the remainder of the afternoon program.*)

3 - 3:55 p. m.

The Genesis and Surgical Treatment of Essential Hypertension (Lantern Demonstration).

GEORGE CRILE, Cleveland, Ohio (Guest).

OUTLINE. Evidence will be presented tending to show that essential hypertension is a pathologic physiology involving the sympathetic complex, the celiac and semilunary ganglia, and the adrenal glands, causing a pathologic tonus of the entire arterial system analogous to the pathologic tonus of the arteries of the extremities. Mechanical stimulation of the sympathetic complex causes specifically a unique rise in the blood pressure; flooding the complex with novocain causes a fall in blood pressure in hypertension to normal; manipulation of the complex during novocain anesthesia causes no rise in pressure; ganglionectomy and denervation of the abdominal aorta cause the blood pressure in hypertension to return to the normal during the operation; operation is completed at one session; there is no disturbance of any other function of the organism. Summaries of clinical cases will be presented.

4 - 5 p. m.

Pulmonary Suppuration (Lantern Demonstration) (15 minutes).

W. EMORY BURNETT, Philadelphia.

OUTLINE. Lantern slide demonstration of personal experiences with abscess and bronchiectasis, showing modes of onset and types of treatment. Résumé of symptoms, prognosis, and results of the forms of treatment.

Discussion opened by GEORGE WILLAUER, Philadelphia (5 minutes).

Negative Pressure Drainage of Pleural Exudates (20 minutes).

WILLIAM ROWLAND DAVIES, Scranton.

OUTLINE. Etiologic factor leading to decision as to method of surgery. What determines use of drainage? Pathologic changes in the pleura and lung determine the type of treatment which should be instituted. Aspiration as first surgical procedure. Some other types of drainage. Conclusion: Drainage should be ample to prevent blockage and so controlled as to produce a mild and constant degree of vacuum. Ways and means of producing vacuum.

Bronchoscopy as a Treatment of Postoperative Atelectasis (Lantern Demonstration) (15 minutes).

JOSEPH A. PERRONE, Pittsburgh.

OUTLINE. Clinical pictures of postoperative atelectasis. Review of other methods of treatment—preventive; medical; carbon dioxide. Necessity of early diagnosis and treatment. Bronchoscopic treatment. Indications. Technic of procedure. Review of 55 cases.

Discussion opened by WILLIAM W. G. MACLACHLAN, Pittsburgh (5 minutes).

Wednesday, October 7, 2 p. m.

REPORT OF EXECUTIVE COMMITTEE—ELECTION OF SELECTION OFFICERS

2 - 3 p. m.

Spasmodic Torticollis and Its Successful Relief by Prolonged Fixation (Lantern Demonstration) (20 minutes).

J. TORRANCE RUGH, Philadelphia.

OUTLINE. Pathology and etiology unknown. Condition progresses steadily though slowly. Consideration of theories as to cause. Seriousness and failure of operative measures. Outline of treatment by prolonged fixation with complete relief. Cases.

Refinements of Technic in Barbiturate Obstetric Analgesia (15 minutes).

OWEN JONES TOLAND, Philadelphia.

OUTLINE. Mechanism of production of childbirth pains discussed. Review with analysis of trend of modern obstetrics toward early operative delivery. Review of analgesic procedures prior to utilization of barbiturates. Summary of Dr. Frederick Irving's original study of barbiturates and other analgesics. Refinements in original technic as devised by Dr. Irving and others. Analogy between obstetric analgesia and administration of ether for general surgery. Brief summary of experience with method on ward service at the Hospital of the Protestant Episcopal Church of Philadelphia.

Discussion opened by ROY W. MOHLER, Philadelphia (5 minutes).

The Universal Application of Fascia in all Hernias (Lantern Demonstration) (15 minutes).

MOSES BEHREND, Philadelphia.

OUTLINE. Anatomic considerations and classifications of hernias. Primary and recurrent hernias. Use of homologous and heterogeneous fascia to prevent recurrences.

Discussion opened by J. WALTER LEVERING, Philadelphia (5 minutes).

3 - 3:55 p. m.

Inguinal Hernia.

FREDERICK W. BANCROFT, New York, N. Y. (Guest).

OUTLINE. Why should an attempt be made to make a pre-operative diagnosis between indirect and direct inguinal hernia? What are the anatomic differences that will help differentiate the 2 conditions? Why are inguinal hernia wounds more frequently infected than other clean abdominal incisions? How can the percentage of recurrences in direct inguinal hernia be reduced? If a strangulated hernia can be reduced, is it safe always to defer operation? Has the use of fascia lata for repair improved the statistics relative to recurrences? What are some of the causes of incisional hernia? What are the principles involved in their cure? An attempt is made to answer these questions according to the literature and facts from data derived from various hospitals.

4 - 5 p. m.

Unusual Fractures and Their Treatment (Lantern Demonstration) (15 minutes).

DRURY HINTON, Philadelphia.

OUTLINE. A brief presentation of a number of interesting fractures, chiefly of long bones, illustrated by lantern slides. These fractures are unusual either because of the location of the fracture, the position of the fragments, or the means necessary to insure reduction and retention. Some emphasis is laid on the fact that the elementary principles governing the treatment of the usual fracture still apply here, and that these

principles and simple splints remain useful while gadgets come and go. In other words fracture treatment must be individual.

Discussion opened by DUDLEY P. WALKER, Bethlehem (5 minutes).

Surgery of the Ambulatory Patient (15 minutes).

LEWIS KRAEER FERGUSON, Philadelphia.

OUTLINE. Advantages: To patient; to doctor. Requirements: In equipment; in personnel; in experience and technical skill. Anesthesia: Local with epinephrine; gas; vine-thene. Scope: Minor surgical lesions; infections; anal lesions; traumatic lesions. Dressings for use in ambulatory patients.

Discussion opened by J. MONTGOMERY DEEVER, Philadelphia (5 minutes).

Benign Breast Lesions (15 minutes).

EDWIN P. BUCHANAN, Pittsburgh.

OUTLINE. Review of breast operations over a 17-year period. Percentage of benign to malignant cases. Diagnosis and treatment of benign lesions. Relationship between benign and malignant lesions.

Discussion opened by HOLLAND H. DONALDSON, Pittsburgh (5 minutes).

Thursday, October 8, 1:30 p. m.

1:30 - 3:30 p. m.

Carcinoma of the Esophagus (20 minutes).

H. RYERSON DECKER, Pittsburgh.

OUTLINE. Diagnosis and treatment of carcinoma of the esophagus. Brief discussion of etiologic factors and symptomatology. Esophagoscopy and biopsy essential for diagnosis. In treatment radiotherapy is largely palliative. Surgery by radical removal offers hope for recovery in selected cases. Criteria for success are discussed. Reported statistics are recorded.

Discussion opened by GEORGE P. MÜLLER, Philadelphia (5 minutes).

Multiple Carcinoid Tumors of the Stomach (Lantern Demonstration) (15 minutes).

ROBERT M. ENTWISLE, Pittsburgh.

OUTLINE. Brief description of pathology. Usual site of this tumor is in the appendix. Roentgen-ray findings are identical with those of multiple polyps of the stomach. Case report.

Discussion opened by ALBERT J. BRUECKEN, Pittsburgh (5 minutes).

Management of Biliary Diseases and Their Surgical Complications (20 minutes).

W. WAYNE BABCOCK, Philadelphia.

OUTLINE. The diagnosis of various diseases of the biliary tract, with evaluation of clinical, microscopic, and roentgen methods. The usefulness of medical and dietetic management. Preoperative treatment, selection of the anesthetic, and the indications for cholecystectomy, cholecystostomy, and choledochostomy. The value of stage operations in acute infections and in jaundice, with the technic of cholecystectomy in stages, and the use of a special muscle-splitting incision. The removal of stones from the smaller ducts by flexible, hollow, aspirating probes. A simple and safe operation for postoperative biliary fistula. The question of drainage and wound closure and the postoperative treatment.

Discussion opened by HARVEY F. SMITH, Harrisburg (5 minutes).

Damage from Drains (15 minutes).

FORD EASTMAN, Erie.

OUTLINE. Medical men fundamentally conservative. Failure to standardize treatment of appendicitis. Operation in clean cases. The so-called inverting suture. When to operate after perforation. Reaction of the peritoneum to drains. Treatment of perforative peritonitis without drains and without suture of the belly wall. Appendix abscess never an emergency. Appen-

dectomy or simple incision. To drain or not. Indications for peritoneal drainage.

Discussion opened by MAXWELL LICK, Erie (5 minutes).

Considerations in Bowel Surgery (20 minutes).

CALVIN B. RENTSCHLER, Reading.

OUTLINE. Choice of anesthetic. Preoperative preparation. Bowel surgery in the emergency case. Operative management of the chronic case. Suiting operative procedure to the lesion. Factors of safety in bowel surgery. Postoperative management. Immediate and late results.

SECTION ON EYE, EAR, NOSE, AND THROAT DISEASES

SILVER ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

OFFICERS OF SECTION

Chairman—WILLIAM ZENTMAYER, Merion.

Secretary—WARREN S. REESE, Philadelphia.

Executive Committee.—GEORGE W. SCHLINDWEIN, Erie; GEORGE H. CROSS, Chester; MATTHEW S. ERSNER, Philadelphia.

Reporter—MISS F. E. DILLAN, 3340 Meridian St., Indianapolis, Ind.

(Note—Essayists will please deposit original copies of their papers with the secretary of the Section when they have finished reading them. The JOURNAL will not accept carbon copies.)

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Tuesday, October 6, 2 p.m.

Pathogenesis and Diagnosis of Unilateral Exophthalmos (Lantern Demonstration) (15 minutes).

EDMUND B. SPAETH, Philadelphia.

OUTLINE. Etiologic factors. Differential diagnosis and treatment. Summarization of possible causes especially anatomic in nature.

Discussion opened by WILFRED E. FRY, Philadelphia.

The Accurate Localization of Foreign Bodies in the Eyeball (Lantern Demonstration) (15 minutes).

CLARENCE J. MCCULLOUGH, Washington.

OUTLINE. Brief historic notes. Comparison of available methods: Optic; radiologic. Radiographic most accurate method if substance is opaque to roentgen ray. Discussion of localizing devices. Description of simplified technic providing greater accuracy. Illustrative case report.

Discussion opened by GEORGE H. CROSS, Chester, and JOHN B. McMURRAY, Washington.

The Clinical Interpretation of Vascular Lesions in the Retina in Hypertensive Disease (Lantern Demonstration) (45 minutes).

HENRY P. WAGENER, Mayo Clinic, Rochester, Minn. (Guest).

OUTLINE. The ophthalmoscopic features of the lesions seen in the retina in association with hypertensive disease. The general factors in the disease responsible for these lesions. A classification of types of arteriolar lesions and of retinitis will be suggested which is based largely on modern conceptions of the local pathogenesis. The clinical significance of these types.

Emphasis on the importance of a careful classification of the retinal lesions if they are to be used as an aid in estimating the future course of the systemic disease.

Recess

3:30 - 4 p.m.

(Recess to visit Scientific Exhibit. Use express elevators near entrance to Cardinal Room. Members are earnestly requested to return promptly to Silver Room for the remainder of the afternoon program.)

4:15 p.m.

The Distribution of Blindness in Pennsylvania (15 minutes).

ALFRED COWAN, Philadelphia, and MRS. BERNICE ENGLISH, Harrisburg (by invitation).

OUTLINE. This is an analysis made from the study of the ophthalmologic reports submitted to the Department of Welfare, Pensions for the Blind of the State of Pennsylvania. The number of blind persons in this state, distribution of blindness in the various counties, and the blind per capita are discussed from the standpoint of cause and possible contributing factors.

Discussion opened by EDWARD STIEREN, Pittsburgh.

Chemical Conjunctivitis of the Newborn (15 minutes).

LEWIS P. GLOVER, Altoona.

OUTLINE. A discussion of the cause, treatment, and prevention of this disease; also of the action of various silver preparations on the conjunctiva.

Discussion opened by JOHN S. PLUMER, Pittsburgh.

Wednesday, October 7, 2 p.m.

REPORT OF EXECUTIVE COMMITTEE—ELECTION OF SECTION OFFICERS

Carcinoma of the Larynx—The Influence of Early Diagnosis on Treatment and End Results (Lantern Demonstration) (15 minutes).

LOUIS H. CLERF, Philadelphia.

OUTLINE. Compiled data of cases of carcinoma of larynx observed at the Bronchoscopic Clinic over a period of years indicated that a large number were not diagnosed until the disease was advanced, even inoperable. The reasons for failure or delay in diagnosis. The symptoms and diagnostic methods. The question of syphilis and tuberculosis as predisposing factors and their concurrence with cancer. The end results of surgical treatment in cases of early carcinoma are reviewed and compared with the end results secured in the advanced cases.

Discussion opened by J. HOMER MCCREADY, Pittsburgh.

Laryngeal Symptoms in Children (Lantern Demonstration) (15 minutes).

ELLEN J. PATTERSON, Pittsburgh.

OUTLINE. History of importance in making diagnosis in children, especially in foreign body cases. Symptoms of hoarseness, croupy cough, and obstructive dyspnea are frequently present. Intubation or tracheotomy may be indicated for immediate relief.

Discussion opened by CHEVALIER JACKSON, Philadelphia.

Acute Infections of the Mouth, Pharynx, and Cervical Region (Lantern Demonstration) (45 minutes).

ALBERT CARL FURSTENBERG, Ann Arbor, Mich. (Guest).

OUTLINE. Three essential infections and their effect upon remote parts of the cervical region when they break down their barriers and extend along the fascial planes of the neck. Their etiology, symptomatology, diagnosis, and treatment will be discussed, and special attention will be given to anatomic dissections which explain some of the clinical phenomena of the suppurative processes in the cervical region. The essential processes above mentioned are: Peritonsillar abscess (quinsy); retropharyngeal abscess; Ludwig's angina. These conditions are the

result of an infection plus a certain anatomic configuration that favors the development and localization of an acute suppurative disease. Their complications and treatment. A detailed anatomical study of muscles and fascia is presented to show the pathways along which these inflammatory processes may spread. Special reference is made to the various cervical compartments as viewed anatomically and embryologically, and their relation to the mediastinum is described. Acute suppurative mediastinitis resulting from neck infection is discussed from the standpoint of etiology and diagnosis. A surgical technic for the successful drainage of an acute suppurative process of such a character is described in full.

Chronic Sinusitis: Its Relation to Chronic Bronchitis (Lantern Demonstration) (15 minutes).

FRANCIS W. DAVISON, Danville.

OUTLINE. Patients with chronic cough as their chief symptom frequently present diagnostic problems. In this paper an attempt is made to classify the various types of chronic sinusitis and chronic bronchitis, indicating etiologic factors and probably sequence of events. A systematic method of study is outlined. Conclusions are based on findings in 50 cases carefully studied by clinical, roentgen-ray, bronchoscopic, and laboratory examinations.

Discussion opened by CARL E. ERVIN, Danville.

Allergic Rhinitis (Lantern Demonstration) (15 minutes).

JOSEPH C. DONNELLY, Philadelphia.

OUTLINE. The common causes of nasal allergy are given, showing the preponderance of the inhalant factors. An allergic method of approach to the diagnosis is outlined. This entails stress on the value of a detailed personal and family history in order to determine the influence of environmental factors and the part played by inheritance. Skin testing is of help in the diagnosis, but positive and negative findings must be judged in the light of the clinical history. The rhinologic examination is indispensable, and a differential diagnosis is necessary to rule out the common cold and disease of the paranasal sinuses. A cytologic study of the nasal secretions is of importance.

Discussion opened by WESLEY L. ALLISON, Pittsburgh.

Thursday, October 8, 1:30 p.m.

Rhinologic and Otolologic Meningitis (20 minutes).

GEORGE B. JOHNSON, Franklin.

OUTLINE. In 80 per cent of the acute cases with which otologists have to deal the inflammation is confined to the middle fossa of the skull. Meningitis of the posterior fossa is due in 95 per cent to suppuration of the labyrinth. Outstanding symptoms: Constant piercing headache, high temperature, and stiff neck. Lumbar puncture surest diagnostic test. The spinal fluid may be cloudy or purulent; polynuclear and mononuclear cells; and, very important, the presence of organisms. Treatment: Removal of the primary focus of infection; frequent lumbar puncture. Dr. Eric Rutten reports success by injecting a gold preparation in salt solution after removal of spinal fluid.

Discussion opened by GEORGE M. COATES, Philadelphia, and J. HOMER MCCREARY, Pittsburgh.

Brain Abscess with Report of Cases (20 minutes).

JOHN R. SIMPSON, Pittsburgh.

OUTLINE. Handling brain abscess cases is not a common experience of the general practitioner. The aid of the neurologist should be sought early. Some cases can be treated by the otologist; others should be referred to the brain surgeon.

Discussion opened by HAROLD L. MITCHELL, Pittsburgh.

Retropharyngeal Abscess in Children (Motion Pictures) (20 minutes).

HENRY DINTENFASS, Philadelphia.

OUTLINE. The etiology, symptoms, and treatment of retropharyngeal abscess. The frequency of its occurrence in the young. The pathways of an untreated retropharyngeal abscess. Several cases are cited to emphasize the difficulties one may encounter in the diagnosis and treatment of this condition.

Discussion opened by GEORGE L. WHELAN, Philadelphia.

Correction of the Dislocated Quadrangular Cartilage, Especially in Children (Lantern Demonstration) (20 minutes).

SAMUEL COHEN, Philadelphia.

OUTLINE. The importance of the subject. The frequency with which dislocation of the cartilages is met. Anatomy of the nasal tip. Etiology. Symptoms—mainly nasal obstruction and lower nasal deformity. Previous operations performed for this condition, and the technic of this operation.

Discussion opened by OTTO C. HIRST, Philadelphia.

SECTION ON PEDIATRICS

ADONIS ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

OFFICERS OF SECTION

Chairman—JOSEPH STOKES, JR., Philadelphia.

Secretary—THEODORE O. ELTERICH, Pittsburgh.

Executive Committee — FRANCIS T. O'DONNELL, Wilkes-Barre; HERBERT E. HALL, Uniontown; EMILY P. BACON, Philadelphia.

Reporter—MISS HAZEL E. CARBAUGH, 103 Locust St., Harrisburg, Pa.

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Tuesday, October 6, 2 p.m.

Chairman's Address: Medical Education and the Practice of Pediatrics (15 minutes).

JOSEPH STOKES, JR., Philadelphia.

OUTLINE. It is frequently overlooked and sometimes entirely forgotten that pediatrics, like all branches of medicine, when properly practiced is a critical summation of all previous clinical and laboratory investigations. The practice of pediatrics and the rapidly developing fields of medical science should be more closely related.

Primary Carcinoma of the Liver in a Child, Age 3 (10 minutes).

THOMAS W. MCCREARY, Monaca.

OUTLINE. This case was that of a male child, apparently in good health. The night before admission to the hospital he was seized with severe abdominal pain. An exploratory operation was performed. Biopsy showed primary carcinoma of the liver. The child died 6 weeks later. Interesting necropsy findings in this case and the pathology in such tumors will be discussed; also presentation of gross specimen.

Present Status of Endocrinology in Its Relation to the Child (55 minutes).

ROY GRAHAM HOSKINS, Boston, Mass. (Guest).

OUTLINE. The child comes under the influence of endocrine factors at the time of conception, and remains vitally under such influence throughout the period of his prepuberal and puberal life. Indeed, his very generation is dependent upon endocrine factors in that the fertility of both parents is thus conditioned. During the intra-uterine period he is under the influence of the hormones of the mother, but in the latter stages of those of his own glands also. His nourishment during infancy is dependent upon the hormone prolactin, by which the ripened mammary glands of the mother are thrown into activity. Several hormones have important regulatory influences upon his growth, both mental and physical. His maturing at puberty is intimately controlled by his glands. The unfolding of his personality is dependent upon hormones which influence both intellectual development and the instinctive drives and emotions upon which personality chiefly depends. The relationship of various of the glands to these various functions will be discussed in the light of older and newer findings.

Lyophil Serum in the Prevention and Treatment of Scarlet Fever and of Other Infectious Diseases (20 minutes).

AIMS C. MCGUINNESS, Philadelphia.

OUTLINE. The lyophil process for the preservation of sera and other biologicals is briefly described. The advantages offered by this process are that sera thus preserved retain their antibodies over long periods of time, may be collected in large pools, and may be administered in concentrated form. The results obtained with the use of human sera preserved by the lyophil process in the prophylaxis of scarlet fever, measles, mumps, and chickenpox, and in the treatment of scarlet fever and other infections are discussed.

Discussion opened by EDMUND R. MCCLUSKEY, Pittsburgh.

The 3 Major Complications of Acute Hemorrhagic Nephritis in Children; Their Prevention and Treatment (20 minutes).

MITCHELL I. RUBIN, Philadelphia, and
MILTON RAPOPORT, Philadelphia (by invitation).

OUTLINE. A recent trend in the therapeutics of acute nephritis in children during its acute phase has emphasized the administration of fluids in large quantities. Based on these cases and on a consideration of the underlying pathologic and physiologic derangements, the advisability of forcing fluids is questioned. The significance of hypertension in its relation to the cerebral and cardiac manifestations of acute nephritis during its initial phase is considered and its treatment will be discussed, especial emphasis being placed on the mode of action of magnesium.

Discussion opened by NORBERT D. GANNON, Erie.

A Review of Cases of Intestinal Intoxication with Notes on Treatment (20 minutes).

JOHN P. SCOTT, Philadelphia.

OUTLINE. A number of cases of intestinal intoxication were treated following a system suggested by Powers in 1925, consisting of removal of active foci of infection. Restoration of fluid content of the tissues, transfusion, and gradual resumption of food are discussed along with the use of procedures investigated since the writing of said paper, namely, continuous venoclysis and the intravenous sodium lactate solution.

Discussion opened by ROBERT A. KNOX, Washington.

Sudden Death in Infants and Children (25 minutes).

CHARLES R. BARR, Philadelphia.

OUTLINE. The clinicopathologic study of a group of cases based on a survey of cases of sudden and unexpected death occurring on the pediatric service at Temple University Hospital from 1930 to 1936. They describe a rapidly fatal disease encountered in children, characterized by a sudden explosive onset, with convulsions, coma, symptoms referable to the central nervous system, and death within 24 hours. A history of malaise or "cold" without other symptoms requiring medical care is stressed. In a few cases the clinical picture was typical of decerebrate rigidity.

Discussion opened by RALPH M. TYSON, Philadelphia,
JAMES L. FOSTER, Pittsburgh, and ALEXANDER SILVERSTEIN, Philadelphia.

Imperforate Anus and Tracheo-esophageal Fistula (15 minutes).

HUGH A. O'HARE, Corry.

OUTLINE. Case report of infant with tracheo-esophageal fistula and imperforate anus. Necropsy findings. Discussion of the clinical pictures of each condition separately and of the attempted treatment. The embryologic background of the development of these structures and illustrations.

Discussion opened by FRED E. ROSS, Erie.

Wednesday, October 7

Clinic at Children's Hospital of Pittsburgh,
Fifth Avenue at DeSota Street

Luncheon, 12:45 p. m.

Members of the Section are invited to be the guests of the Children's Hospital.

2 p. m.

REPORT OF EXECUTIVE COMMITTEE—ELECTION OF
SECTION OFFICERS

Medical Inspection Versus Medical Examination in the
Public Schools (10 minutes).

WALTER J. LARKIN, Scranton, representing
Pennsylvania School Physicians Association.

OUTLINE. Discussion of the regular routine physical examinations made by school medical inspectors. Reasons for so-called cursory medical inspection. The school physician should be considered a medical inspector rather than a medical examiner. Possibilities of medical inspection.

Roentgenologic Findings in the Bones as Aids in the
Diagnosis of Diseases in Infants and Children (Lantern Demonstration) (25 minutes).

RALPH S. BROMER, Bryn Mawr.

OUTLINE. Roentgen examination of the long bones has become during the last decade a most important aid in the diagnosis of diseases in infants and children. Changes in the long bones are found in congenital erythroblastic anemia, sickle-cell anemia, congenital syphilis, rickets, infantile scurvy, leukemia, xanthomatosis, lead poisoning, and other pathologic conditions. The characteristic lesions of these various processes as shown in the roentgenogram are described and illustrated by lantern slides.

Discussion opened by HENRY C. FLOOD and GEORGE W. GRIER, Pittsburgh.

Problems in Children's Posture (40 minutes).

DAVID SILVER, JENNINGS M. KING, WILLIAM B. McLAUGHLIN, and JESSE WRIGHT, Pittsburgh.

OUTLINE. Etiology and treatment from the standpoint of the pediatrician and general practitioner. (1) The legs and feet: Prenatal factor, factor of the first year, and of early childhood; shoe requirements and corrective alteration. (2) The trunk (round shoulders): Prenatal factor, factor of the first year, and of childhood. (3) Basic physiotherapy.

3:30 - 5 p. m.

Round-Table Discussions and Case Presentations

Members and visitors will be requested to choose the topic in which they are most interested, and will be assigned to the round-table discussion they may request.

There will be the following choice of subjects:

Choice No. 1

Recent Developments in Communicable Disease Control.

HENRY T. PRICE, JOSEPH S. BAIRD, and WILLIAM W. BRIANT, JR.

OUTLINE. A review of methods suggested for the prevention and treatment of diphtheria, scarlet fever, pertussis, measles, infantile paralysis, meningitis, etc.

Choice No. 2

Physical Appraisal of the Preschool and School Child in Office Practice.

JAMES K. EVERHART and WILLIAM O. MARKELL;
C. M. HAGAN, D.D.S., and MISS ELIZABETH PARSONS, B.S., dietitian (by invitation).

OUTLINE. Stressing preventive pediatrics, the detection of minor deviations from the normal, the "high-points" of what to look for in a physical examination. Posture. What dental abnormalities to look for. Co-operation of family physician and dentist. The creation of a diet for an individual child.

Choice No. 3**Chronic Nontuberculous Lung Infections.**

D. HARTIN BOYD, C. HOWARD MARCY, and WILLIAM B. RAY.

OUTLINE. Foreign body in the respiratory tract with its sequelae. A discussion of bronchiectasis, lung abscess, allergic bronchitis, roentgen-ray diagnosis and treatment. Emphasis will be placed on preventive treatment. Active treatment, medical and surgical. The importance of the bronchoscope in diagnosis and treatment.

Choice No. 4**Psychopediatrics and Endocrinology.**

HARRY M. LITTLE, EDWARD E. MAYER, THEODORE O. ELTERICH, and MARION MONROE, PH.D., psychologist (by invitation).

OUTLINE. Presentation of cases illustrating such factors as behavior problems, personality disorders, parent-child relationships, endocrine dysfunction, mental retardation, very superior intelligence and specific learning disabilities, singly and in combination, which are often met with in pediatric practice.

Choice No. 5**Dermatologic Problems in Children.**

STANLEY CRAWFORD, LAWRENCE G. BEINHAEUER, GEORGE J. BUSMAN, BERNHARD A. GOLDMANN, and CHARLES L. SCHMITT.

OUTLINE. The interrelationship of dermatology and pediatrics. Recent trends in the etiology and treatment of eczema and congenital syphilis. Treatment of the commoner skin conditions in children. Presentation of cases.

Choice No. 6**Infant Feeding.**

GEORGE J. FELDSTEIN, SAMUEL I. LEBEAU, and JESSE L. AMSHEL.

OUTLINE. Underfeeding and overfeeding. Improper balance of food elements. Failure to make a complete physical examination for organic conditions. Lack of vitamins. Improper preparation of formula.

Choice No. 7**Heart Disease in Children.**

J. MAX LICHTY AND ALFRED S. McELROY.

OUTLINE. A general discussion of rheumatic, congenital, and hypertensive heart disease in children, particularly from the standpoint of etiology, newer methods of diagnosis and prognosis, and any progress in therapy which may be of value. Presentation of suitable representative cases and full laboratory data as well as necropsy material to illustrate the various lesions.

Choice No. 8**Demonstration of Specialized Pediatric Technic.**

WILSON C. MERRIMAN (by invitation); chief resident and members of resident staff, Children's Hospital.

OUTLINE. A clinic designed primarily for general practitioners who are interested in pediatric procedures. Demonstration of technic for intravenous blood transfusion, continuous intravenous medication, Drinker respirator, cisternal puncture, oxygen administration, gavage and lavage, collection of urine in small babies, etc.

Thursday, October 8, 1:30 p. m.

**Joint Meeting of Section on Pediatrics with
Section on Medicine**

URBAN ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

Symposium on Allergy

Accurate Diagnosis in Hay Fever (Lantern Demonstration) (15 minutes).

J. ALEXANDER CLARKE, JR. and
ARTHUR L. BOLDEN, Philadelphia.

OUTLINE. The rôle of minor pollens and other substances to which a hay fever patient is sensitive explained and stressed.

Differential atmospheric pollen counts for 2 seasons in the Philadelphia district. Modification of treatment to overcome these additional disturbing factors.

Discussion opened by BENJAMIN H. HAMNER, Williamsport (5 minutes).

The Rôle of Allergy in the Practice of Medicine (Lantern Demonstration) (15 minutes).

LEO H. CRIEP, Pittsburgh.

OUTLINE. Conditions considered allergic. What are allergic manifestations? Criteria for allergic diagnosis. Uses and limitations of sensitization tests. Indications for each. Diagnostic and therapeutic management of the allergic patient.

Discussion opened by LOUIS TUFT, Philadelphia (5 minutes).

Glucose Tolerance and Metabolism in the Allergic Individual with a Report of Glucose Tolerance Observations in 600 patients (20 minutes).

HARRY B. WILMER and
MERLE M. MILLER, Philadelphia.

OUTLINE. Glucose tolerance tests were done on 600 patients at various intervals during remissions and exacerbations of their symptoms. All types of allergic cases were included. Hay fever, urticaria, eczema, asthma, migraine, and other conditions thought to be due to a hypersensitivity were observed from the standpoint of glucose tolerance. In asthmatics a marked difference was noted in the glucose tolerance of the intrinsic and extrinsic types. Preseasonal and coseasonal observations of significance were made in the hay fever patients. The tolerance test was done before, during, and after desensitization. A summation of the diagnostic and therapeutic values of the determination of an allergic individual's ability to metabolize glucose is included in this study.

Treatment of Asthma Based on Etiologic Factors (50 minutes).

LESLIE N. GAY, Baltimore, Maryland (Guest).

OUTLINE. A classification of asthma, based on etiologic factors, covering the subject from childhood to old age. The main subheadings of this classification are: (1) *Children* (not including foreign bodies): (a) Inhalant type, (b) pollens, (c) combination of inhalants and pollens, (d) infection with asthmatic bronchitis, (e) combined infection, the aftermath of inhalant and pollen sensitivity, (f) foods, (g) drugs. (2) *Adults*: (a) pollen asthma uncomplicated, (b) inhalants (animal danders, feathers, orris root), (c) combination of (a) and (b), (d) bacterial infection, (e) chronic bronchitis with cough and myocardial insufficiency, (f) occupational, (g) gas inhalation from hot air furnace, (h) obstruction to breathing—cough with secondary asthmatic breathing, (i) reflexes (psychogenic type). Each type of case discussed and case records presented.

Influenza (50 minutes).

THOMAS FRANCIS, JR., Rockefeller Institute for Medical Research, New York City (Guest).

SECTION ON DERMATOLOGY

BLUE ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

OFFICERS OF SECTION

Chairman—ABRAM STRAUSS, Philadelphia.

Secretary—LAWRENCE G. BEINHAEUER, Pittsburgh.

Executive Committee—ROBERT L. GILMAN, Philadelphia; HERBERT J. SMITH, Philadelphia; STANLEY CRAWFORD, Pittsburgh.

Reporter—Miss RUTH FOX, 2125 Locust St., Philadelphia, Pa.

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Tuesday, October 6, 1:30 p.m.

**REPORT OF EXECUTIVE COMMITTEE—ELECTION
OF SECTION OFFICERS**

Anthrax (15 minutes).

HERMAN GOLD, Chester.

OUTLINE. Twelve cases of anthrax of the skin are reported which occurred through contact with infected goat hair imported from the Orient. An analysis of symptoms and location of skin lesions together with results obtained from serum are discussed.

Discussion opened by John Reichel, Chester (by invitation).

Finger and Toenail Changes Associated with the Common Skin Diseases (15 minutes).

WILLIAM D. WHITEHEAD, Scranton.

OUTLINE. Nail changes in common skin diseases classified. Differential diagnosis and treatment stressed. Role of contact and cosmetic factors evaluated.

Discussion opened by STANLEY CRAWFORD, Pittsburgh.

Eczema—Uric Acid and Alkali Reserve (15 minutes).

CARROLL S. WRIGHT; HERMAN BROWN, Philadelphia (by invitation).

OUTLINE. Studies of blood uric acid and alkali reserve in a large series of cases of eczema of undetermined etiology. Review of the literature. Discussion of the significance of high uric acid and reduced alkali reserve in eczema. Therapeutic effects of corrective diet.

Discussion opened by WILLIAM H. GUY, Pittsburgh.

Venereal Diseases — With Particular Reference to Granuloma Inguinale and Lymphogranuloma Inguinale (55 minutes).

HAROLD NEWTON COLE, Cleveland, Ohio (Guest).

OUTLINE. While the subject includes syphilis and chancroidal infections with their various manifestations, yet it is particularly devoted to 2 of the less familiar conditions, granuloma inguinale and lymphogranuloma inguinale. Discussion of the principal points in differential diagnosis of these diseases, including the use of specific intradermal diagnostic tests in chancroids and lymphogranuloma inguinale. Value of these tests. Meaning of the anorectal syndrome and stricture of the rectum. Their relation to esthiomene of older writers. Rarity of true syphilitic stricture of the rectum. Brief mention of treatment of the various diseases discussed.

Cutaneous Manifestations of Leukemia (15 minutes).

MEYER W. RUBENSTEIN, Pittsburgh.

OUTLINE. Cutaneous manifestations of acute and chronic leukemia are classified. The importance of dermatologic manifestations stressed. Report of cases observed will be given with a discussion of the differential diagnostic features.

Discussion opened by ABRAM STRAUSS, Philadelphia.

The Organic Mercurials (15 minutes).

NORMAN R. INGRAHAM, JR., Philadelphia.

OUTLINE. A clinical study of the new preparation called Hydramilon. Brief review of the current concepts of the value of mercury in the treatment of syphilis. Discussion of the organic mercurial preparations, together with the results ob-

tained, in the treatment with Hydramilon of a small series of primary, secondary, and early latent cases.

Discussion opened by CARROLL S. WRIGHT, Philadelphia.

Ultraviolet Therapy in Wassermann-fast Syphilis (15 minutes).

HARRY L. BAER, Pittsburgh.

OUTLINE. It has been the hope since Ehrlich's discovery of the value of the arsphenamines in syphilis that an absolute specific had been found. In spite of the use of the arsphenamines and the heavy metals, there are some cases of syphilis that do not respond serologically. Approximately 30 cases have been studied, and a report of the efficacy of this treatment is given.

Discussion opened by SIGMUND S. GREENBAUM, Philadelphia.

Recess and Adjournment at 4:15 p.m.

Recess to visit Scientific Exhibit. Use express elevators near entrance to Cardinal Room.

SECTION ON UROLOGY

BLUE ROOM, 17TH FLOOR, HOTEL WILLIAM PENN

OFFICERS OF SECTION

Chairman—CARLYLE N. HAINES, Sayre.

Secretary—DAVID P. McCUNE, McKeesport.

Executive Committee—GEORGE A. HOLLIDAY,* Pittsburgh; WILLARD H. KINNEY, Philadelphia; EDGAR S. EVERHART, Harrisburg.

Reporter—Miss RUTH FOX, 2125 Locust St., Philadelphia, Pa.

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Wednesday, October 7, 2 p.m.

Renal Anomalies (Lantern Demonstration) (15 minutes.)

DAVID L. SIMON, Pittsburgh.

OUTLINE. Incidence. Congenital absence. Congenital hypoplasia. Congenital hypertrophy. Congenital ectopia. Median fusion. Reduplication of pelvis. Anomalies of vessels. Congenital polycystics.

Discussion opened by CLIFFORD M. LANE, Pittsburgh.

Prostatic Resection (Lantern Demonstration) (55 minutes).

GERSHOM J. THOMPSON, Rochester, Minn. (Guest).

OUTLINE. Opinion regarding the value of transurethral resection of the prostate gland varies considerably. The author believes that dissatisfaction expressed by some urologists is principally due to results obtained from incomplete operations. Data concerning operative technic and pre- and postoperative management will be presented.

* Deceased.

Postprostatectomy Prospects (Lantern Demonstration) (15 minutes).

WILBUR H. HAINES and SILVIO MICELI, Philadelphia.

OUTLINE. There is an erroneous impression among general practitioners, students, and the laity that after prostatectomy a condition of normalcy is rarely attained. This not only concerns micturition but especially potency and sterility. By an analysis of end results and follow-up records, an effort will be made to show the true condition concerning the 3 functions during the years following prostatectomy.

Discussion opened by WILLIAM CULLEN BRYANT, Pittsburgh.

Recess

3:30 - 4 p. m.

(Recess to visit Scientific Exhibit. Use express elevators near entrance to Cardinal Room. Members are earnestly requested to return promptly to Blue Room for the remainder of the afternoon program.)

4 p. m.

Upper Urinary Tract Diseases as Complications of Prostatic Hypertrophy (15 minutes).

FRANCIS G. HARRISON, Philadelphia.

OUTLINE. When a prostatic patient is admitted to the hospital with acute retention, the main issue is to relieve this and remove the obstruction. Upper urinary tract pathology, such as stone, tumor, cysts, pyonephrosis, or infection, may be present and give no symptoms, and unless a careful and complete routine examination is made these complications may be overlooked or often discovered, to the urologist's chagrin, after the patient has been discharged. At times these complications may be sufficient to swing the balance against a prostatic patient in convalescence from relief of the obstruction.

Discussion opened by WILLARD C. MASONHEIMER, Allentown.

Nephrostomy and Large Renal Calculus (15 minutes).

JOHN B. LOWNES, Philadelphia.

OUTLINE. This paper describes the method employed and discusses the possibility of nephrostomy in cases in which large calculi and infection are present, and as a conservative method in cases in which nephrectomy would ordinarily be considered. An interesting case is also reported with most satisfactory results.

Discussion opened by JAMES C. BURT, Pittsburgh.

Observations on the Female Urethra and Bladder (15 minutes).

THEODORE R. FETTER and CHARLES I. LINTGEN, Philadelphia.

OUTLINE. Joint approach of gynecologist and urologist in diagnosis and treatment of the female bladder brings about vastly improved results. More common lesions of female bladder and urethra. Brief review of anatomy and physiology. Pathology of obstruction and infection. Symptomatology and diagnosis. Relation to pregnancy and parturition. Course of events following pregnancy. Irritable bladder of elderly women, and atonic bladder. Recent improvements in diagnosis of bladder lesions. Recapitulation of standard procedure.

Discussion opened by WILLIAM K. MATHEWSON, Altoona.

Wilms' Tumors (15 minutes).

DANIEL P. RAY, Johnstown.

OUTLINE. Special significance of this type of tumor. Various views of their origin. Congenital features. Gross pathology and histology. Manner of growth. Metastases. Frequency of occurrence. Age and sex. Symptomatology. Diagnosis. Treatment and prognosis.

Discussion opened by FRANCIS T. CARNEY, Johnstown.

Thursday, October 8, 1:30 p.m.

REPORT OF EXECUTIVE COMMITTEE—ELECTION OF SECTION OFFICERS

Carcinoma of the Penis with Report of Case (15 minutes).

HOLLISTER W. LYON, Punxsutawney.

OUTLINE. History. Etiology. Symptoms. Pathology. Treatment—surgery, deep therapy, radium. Report of cases.

Discussion opened by HIRAM D. RITCHIE, Pittsburgh.

Primary Carcinoma of the Ureter with Report of Case (15 minutes).

PETER P. MAYOCK, Wilkes-Barre, and WILLIAM BAURYS, Nanticoke. (From Urologic Service, Nanticoke State Hospital.)

OUTLINE. To date there are about 75 cases of primary carcinoma reported. Modern methods help to make clinical diagnosis much more frequent than formerly. Roentgen ray and cystoscope give most reliable information in making diagnosis. The papillary type of carcinoma occurred in about 40 per cent of cases. Only one 5-year cure reported.

Discussion opened by ISAAC L. OHLMAN, Pittsburgh.

Mild and Obscure Forms of Urinary Obstruction (Lantern Demonstration) (15 minutes).

DAVID M. DAVIS, Philadelphia.

OUTLINE. Recent work showing conclusively the relation of urinary obstruction to infection and stone formation in the urinary tract has necessitated some revision of ideas about obstruction. In the past we have recognized the grosser forms of obstruction leading to severe symptoms and marked anatomic changes in the urinary tract. It is now apparent that milder forms of obstruction are also of great importance. These forms are more difficult to detect. They include particularly obstruction at the ureteral-pelvic junction, along the course of the ureter, at the neck of the bladder, and, particularly in females, in the urethra. This paper concerns itself with the methods of diagnosis and treatment of these obstructions.

Discussion opened by EDWARD J. McCAGUE, Pittsburgh.

Urology in Children (15 minutes).

ROBERT L. ANDERSON, Pittsburgh.

OUTLINE. Until comparatively recently the importance of urologic diagnosis and treatment was not generally recognized. Close co-operation between the general practitioner, pediatrician, and urologist is essential to give proper attention to this phase of urology. Methods of examination and diagnosis. Importance of urinalysis and the significance of pyuria and hematuria. Infections. Anomalies. Calculi. Tumors. Spina bifida occulta. Brief report of cases. Treatment.

Discussion opened by JAMES J. LEE, Pittsburgh.

Gonorrheal Arthritis with Special Reference to Fever Therapy (15 minutes).

W. HERSEY THOMAS, Philadelphia.

OUTLINE. Varying pathology of the condition. Differential diagnosis. Evaluation methods employed to date. The beginning of fever therapy and its rationale. The modern application of the method and the results obtained by its use.

Discussion opened by WILLIAM H. MACKINNEY, Philadelphia.

Gonorrheal Epididymitis: Incidence and Practical Consideration (15 minutes).

FREDERICK S. SCHOFIELD and PAUL R. LEBERMAN, Philadelphia.

OUTLINE. A study based on over 8000 cases of acute gonorrhea treated at the urologic outpatient department of the University of Pennsylvania Hospital. Discussion of factors predisposing to epididymitis and outline of treatment.

Discussion opened by ROBERT C. HIBBS, Pittsburgh.

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., *Secretary*, 8104 Jenkins Arcade, Pittsburgh, Pa.

ANNUAL REPORTS

Forty to 50 pages of State Society official and committee reports for 1935-36 will be published in next month's JOURNAL. They will be addressed to the president of our society and the members of the 1936 House of Delegates. Their actual value, except as sources of reference, will depend on how much they influence the members of the society who read them. Advise the delegates from your county society just what you think of each State Society activity after you have read the September JOURNAL.

THE 1936 ROSTER

The annual list of members of The Medical Society of the State of Pennsylvania, corrected to July first, is just off the press and has been distributed to the officers and various committee chairmen of our state and county medical societies. The Roster contains the names and addresses of the members in good standing of our 60 component societies, listed alphabetically by counties, and the names of their officers and committee personnel. Included also will be found the names of the officers, members of the Board of Trustees, and committee personnel of the State Society, as well as of its past presidents and secretaries; annual meeting places of the State Society since 1848, with registered attendance at each meeting; the names of members who have died since July 1, 1935; *etc., etc.*

The Roster was formerly included as a part of one issue of the JOURNAL each year and sent to every member of the society. In more recent years it has been published annually as a supplement and is bound with the PENNSYLVANIA MEDICAL JOURNAL for each fiscal year and filed in the archives of the society.

Any member desiring a copy of the Roster should direct his request to the office of the Secretary, 8104 Jenkins Arcade, Pittsburgh, or to the office of the JOURNAL, 230 State Street, Harrisburg.

ANOTHER HOME OWNER

A recent addition to the all too small number of Pennsylvania county medical societies owning their own homes is the Montgomery County Society. On July 1, 1936, this 90-year-old society, realizing a dream and a determination of more than 40 years' standing, took possession of an improved property, fronting 220 feet on DeKalb Street, in Norristown, formerly owned by the Ersine Tennis Club.

When the medical society has completed proposed improvements to the clubhouse, it will have invested approximately \$15,000 saved throughout the years for the purpose of establishing a permanent society meeting place, housing a medical library and reading room, and the maintenance of a social center.

We congratulate the membership of this progressive society, and we pay tribute to the foresight and the loyalty of the originators and supporters of the building fund. We predict that with this new and objective evidence of stability there will develop an even greater respect throughout Montgomery County for the highest purposes of its county medical society.

LIGHT ON A MISINTERPRETED CODE

Who among our members has not been awaiting opportunity to read a studious treatise on the subject of "Economics and the Ethics of Medicine?" Such has been prepared and very recently published by Messrs. Leland and Simon of the Bureau of Medical Economics of the American Medical Association.

Its preparation, apparently inspired by the voluminous and widely disseminated writings of sociologists, who consciously or subconsciously attempt to fuse the economics of business with the ethics of the medical profession, provides a most helpful theme to the physician who peruses the 70 pages of the resultant booklet.

To the true physician, subordinating financial gain to his service to humanity, it brings comfort as it contrasts his ethical standard based on social well-being with the ethics of those who deal in commodities.

The booklet throughout emphasizes a guiding principle that should be appropriately applied at the present time by all statesmen, sociologists, and economists; viz., that of the ethical code of

the medical profession, which code primarily designed for the protection of the public, is altered from time to time only to conform to proven progress in medical science and to meet established social needs.

Needless to state, the history of the development of our ethical code from its 2200-year-old nucleus, the Hippocratic Oath, down to the additions regarding contract medical practice adopted by the 1934 House of Delegates of the A. M. A., is instructively set forth.

We urge every member to write promptly to 535 N. Dearborn St., Chicago, enclosing 15 cents in stamps, with a request for a copy of "Economics and the Ethics of Medicine." Having mastered its contents, challenge your fellow citizens to apply an equally high ethical concept to their varied contacts with everyday economics.

THE HEALTH COLUMN CARRIES ON

At a July councilor district meeting a local speaker gave great credit to the endeavors of the Appendicitis Mortality Commission of our State Society. He stated that its now well-known warning label against the use of laxatives in the presence of abdominal pain was responsible not only for appendicitis cases coming early to the only hospital in his county but also for the fact that fewer abdominal cases are being given laxatives prior to admission. He urged a renewal and stimulation of all such preventive activities, not only by our Appendicitis Mortality Commission but also by our State Society's "Your Health" column, which he stated was widely read as published in the single weekly newspaper of the county.

We have called attention elsewhere in this department of the JOURNAL to the activities of our Appendicitis Mortality Commission, which needs no stimulation, and herewith publish the "Your Health" column of July 23, 1936, which appeared in approximately 125 newspapers scattered throughout the state, being credited to the medical society of the county in which published.

"YOUR HEALTH"

The recent death of Rev. Dr. S. Parkes Cadman was a loss to the world.

* * *

It was a costly lesson of the tragedy of delay in the presence of a pain in the abdomen.

* * *

Had Dr. Cadman been less intent on the spiritual well-being of his fellow man and more intent on his own physical well-being, he likely would be living today.

* * *

But he worked on and on—his appendix burst, peritonitis followed, and death resulted.

Pain anywhere in the body is a warning.

* * *

Pain in the abdomen is more than a warning.

* * *

It calls for prompt action.

* * *

Operation on a patient in good physical condition, if performed within 24 hours of the first symptoms of appendicitis, is successful in 98 out of 100 cases.

* * *

However, delay alters the ratio.

* * *

If the patient waits 48 hours to be operated upon, his chances of coming through are lowered to 1 in 17.

* * *

If he waits for 72 hours his chances are further reduced to 1 in 13.

* * *

And if he waits longer than 72 hours he has but 1 chance in 9 of living.

* * *

These figures are based on observations of many thousands of cases of appendicitis.

* * *

During these studies it was also determined that 9 in every 10 appendicitis cases becoming serious or fatal because of peritonitis had been given a laxative before a physician was consulted.

* * *

The Medical Society of the State of Pennsylvania is making a continued and determined effort to reduce greatly the annual loss of more than 1000 lives in this state due to appendicitis.

* * *

Its committees repeatedly stress the follow warning: Abdominal pain, cramps, or soreness which last for 4 hours are usually serious.

In the presence of abdominal pain never give a laxative or physic; give nothing by mouth; call your family doctor.

* * *

DON'T DELAY!

* * * * *

DO YOU KNOW?

The word "asthma" is from the Greek meaning "to pant."

* * *

Medical service in all its branches should be controlled by the organized profession, no other body being legally or educationally equipped to establish and maintain the standards of medical service.

LIBRARY NEWS

Sir William Osler once said to a group of physicians, "Our study is man as the subject of accidents or diseases. Were he always, inside and outside, cast in the same mould, instead of differing from his fellow man as much in constitution and in his reaction to stimulus as in feature, we should ere this have reached some settled principles in our art. And not only are

the reactions themselves variable, but we, the doctors, are so fallible, ever beset with the common and fatal facility of reaching conclusions from superficial observations, and constantly misled by the ease with which our minds fall into the rut of one or two experiences."

Our package library service is paving a high road by means of which some, at least, of those ruts may be avoided. Its growing collection of reprints is composed of the experienced observations of members of the medical profession who have published for the edification of their fellow physicians histories of unusual cases, results obtained from experiments with various methods of therapy, and pitfalls to be avoided. One of the most interesting things about medical literature is the honesty and objectiveness of its authors. Fatalities and their causes are faithfully recorded as well as more optimistic results. Signposts are thus constantly being erected which point out dangers or give notice that the road is good.

Members desiring to borrow reprints from the library should send 25 cents in stamps to cover the postage and part of the expense of collecting the material. Address the Librarian, 230 State Street, Harrisburg, Pa. Only one package may be borrowed at a time and it must be returned within 14 days. LIBRARY COMMITTEE.

PREVENTIVE CAMPAIGN ADVANCES

Members of our State Society who have followed with interest and approval the educational movements for the benefit of the public, as carried on by our commissions on Cancer, Maternal Mortality, and Appendicitis Mortality, will no doubt enjoy reading the appended text of a 4-page folder, 10,000 of which were recently prepared by the latter commission for distribution to nurses in the training schools throughout Pennsylvania.

The activities of the above-named commissions, plus those of the committees on Public Relations and Public Health Legislation, costing the treasury of our State Society more than \$1000 each month, are directed toward methods of sickness prevention and the postponement of death among the people of Pennsylvania.

Our reference to dollars and cents in connection with this constant effort being made to meet one of the highest purposes of our society, namely, to prevent disease and to prolong life, is intended to call attention, in an economic way, to the annual reports of these committees, which, together with many others, will be published in the September number of the JOURNAL.

The text of the folder follows:

Prophylactic Surgery and the Nurse

Appendicitis is a disease of the young, the average age being 25; 40.6 per cent are between ages 10 and 20.

When anyone dies from appendicitis, someone is to blame.

In the first 24 hours the mortality of acute appendicitis is 2 per cent, but it increases 1 per cent every 12 hours thereafter.

Of those who enter our hospitals with a history of not having received a laxative, *1 in 57 dies.*

Of those who receive one laxative, *1 in 18 dies.*

Of those who receive more than one laxative, *1 in 9 dies.*

Of those who enter our hospitals with appendicitis in which the inflammation is limited to the appendix, *1 in 183 dies.*

Of those admitted with appendicitis and local peritonitis, *1 in 44 dies.*

Of those admitted with appendicitis and spreading peritonitis, *1 in 4 dies.*

You have just begun or are in the midst of acquiring knowledge to be used in a life of service. If you are successful in your endeavor, you will be granted the privilege of ministering unto others. Regardless of their educational status or social position, you must always remember that you have something which those to whom you minister do not possess—an unprejudiced perspective of what may happen to them and a knowledge of what to do for them.

Whether or not you are correct in your conception of what the immediate future holds for your patient will depend a great deal on how accurate those with whom you have been associated have been in their deductions—the nearness with which they have approached the truth. You must know that, according to the law of averages, these patients with spreading peritonitis have 1 chance out of 4 of dying and that whether they live or die depends on their ability to combat a toxemia that is affecting their vital centers.

You must know that Providence, in preparing the body for dissolution, works in a mysterious but carefully planned way; absence of mental clearness, then loss of consciousness, usually precede by many hours the actual cessation of life. This is true in the case of many of the acute suppurative processes that involve the peritoneum; perspective is essential to those who manage spreading peritonitis—the result of a perforated appendix.

You must know that this disease which, in the beginning robs your patient of perspective, later befogs his mentality so that he becomes irritable, restless, and delirious. If you can, by giving a tepid bath, by applying cool compresses to a torrid forehead or parched lips, by changing the position of an extremity or by word or action prevent his expenditure of energy, you have helped your patient in this battle against infection. Every surgeon knows his orders will be carried out to the best of your ability as nurses; this qualifies you, but it also warns you of what you must do to enhance that ability—take the best out of your environment, which means from those around you, and make it a part of yourself.

That you may have the privilege of rendering a service to your family, perhaps the first opportunity since you have entered training; *that you may be the means of preventing someone's developing spreading peritonitis*; that you may help institute a campaign of prophylactic surgery, we want you to read this folder again

carefully and then send it with the attached sticker to your home, with the request that the members of your family read it and attach the sticker in a prominent place on the medicine cabinet (probably on the inside of the door) so it will be seen every time the door is opened.

WARNING

In the presence of abdominal pain

Never give a laxative or physic

Give nothing by mouth

Call your family doctor

Abdominal pain, cramps, or soreness
which lasts for 4 hours is
usually serious.

This warning is published by The Medical
Society of the State of Pennsylvania.

Commission on Appendicitis Mortality

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

JOHN O. BOWER, M.D., *Chairman*

THIRD PARTIES STEER CLEAR

Wichita, Kansas, is a city with a population of 112,000. It is the county seat of Sedgwick County. We glean from the July, 1936, issue of the *Medical Bulletin* of the Sedgwick County Medical Society the following gleaming statements and impressive promises regarding the fate of certain luckless promoters of a local plan for insured sickness service or their ambitious successors:

Not so many months ago a group of clever promoters opened in Wichita an ambitious plan for interjecting themselves between the doctor and his patient and taking out a fat profit for themselves. Of course, they announced that they were engaging in the project in an effort to assist the vast number of people who were finding it difficult to secure medical care because they could not pay for it.

Such humanitarianism! Such noble compassion! These men were interested in medical insurance because they saw a chance to filch a fat profit in the transaction. It took the Sedgwick County Medical Society just 10 days literally to run this bunch of parasites out of town.

And that will be the fate of their successors. We will give no quarter, and we will waste no time. There is no place in this town for a medical merchant of Venice.

In the event that interested parties may in the future want to know how the profession of medicine feels about the question of promotional schemes and plans for medical care insurance, the *Medical Bulletin* is pleased to state, as clearly as possible, the exact position of this society.

Any plan whereby a third party enters into the delivery of medical care will be opposed with all the power at the command of this society, of the Kansas State Medical Society, and the American Medical Association. The identity of the persons connected with the project will have no effect upon the action of this organization. The fight of organized medicine against get-rich-quick schemes of those who would step in between a doctor and his patient will continue to be a relentless fight.

When the need for an innovation in medical care becomes apparent, then the medical profession will meet that need without benefit from self-seeking and men-

dacious helpers. Until then we maintain an unwavering ultimatum. Hands off!

Having observed for a number of years the determined policy of the Sedgwick County Medical Society to become the actual leader in all proposed health programs for the people of the county, we are confident that such health interests will become and continue to be progressive in their protective phases.

This comparatively small county medical society (less than 150 members) maintains (1) permanent offices and (2) an executive secretary. We in Pennsylvania have at least 9 county societies in addition to Allegheny and Philadelphia that could, by doubling their current county society dues, adopt locally these 2 business essentials to modern organizational success.

AN IMPORTANT COMMUNICATION FROM PRESIDENT COLWELL

July 14, 1936.

TO PRESIDENT, SECRETARY, AND CHAIRMEN OF PUBLIC
RELATIONS, MEDICAL ADVISORY, EMERGENCY CHILD
HEALTH COMMITTEES OF THE COMPONENT COUNTY
MEDICAL SOCIETIES OF THE MEDICAL SOCIETY OF
THE STATE OF PENNSYLVANIA.

Gentlemen:

The existing legislative confusion at Harrisburg regarding relief, and its possible effect upon the continuity of medical service to the unemployed of our commonwealth, leads me to address this, my first personal communication, through the duly elected or appointed representatives of the 60 component societies as above mentioned, to the membership of The Medical Society of the State of Pennsylvania.

In 1931 the then State Secretary of Health appealed to the officers of your State Medical Society in behalf of medical service for the rapidly increasing numbers of unemployed citizens.

All county medical societies responded promptly to the request that their members affiliate with the "health organization in each county best equipped to extend prompt service in mitigating the sufferings of those unable to meet their economic responsibility for the care of their health."

No later than yesterday—July 13—the present State Secretary of Health appealed to your president for assurance that our membership would continue such services regardless of what may develop during the necessary changes imminent in the administrative forms of sickness service for the unemployed and the unemployables throughout the state.

I have personally assured the Secretary of the Department of Health that the representatives of this state department in the various counties may feel assured that they will receive co-operation from our various county medical societies upon appeal to the officers and the committees to whom this communication is addressed, in the event of any significant or sudden disturbance in the present plan for extending sickness service to our more unfortunate fellow citizens.

You have recently been addressed by our Board of

Trustees relative to a possible process of decentralization from state to county control of existing forms of emergency relief, and the necessity for county medical society leadership in the local sickness service phases to be developed during the process.

In the meantime the people of Pennsylvania must remain confident of the continuation of medical service rendered with that joy of service which has in the past distinguished the practitioners of medicine, on the basis of what they give to society rather than on what they receive in return, but given with the hope that our profession will eventually be freed from all political domination, restrictive social control, and unreasonable economic outlook.

Soliciting your co-operation to this end, I remain

Yours sincerely,

ALEXANDER H. COLWELL, *President*,

The Medical Society of the State of Pennsylvania.

MEDICAL SCHOOLS REPRESENTED IN SCIENTIFIC EXHIBIT

The great medical teaching institutions in the State of Pennsylvania will use our Scientific Exhibit this year to acquaint you with the original and practical research work which is being carried on within their walls. We are proud and happy that this medium, the Scientific Exhibit, is being used for this purpose.

Temple University will occupy 48 front feet in the Exhibition Hall. Work from 6 different departments, under the active leadership of the heads of these departments, will be exhibited. The University of Pittsburgh and the University of Pennsylvania are doing the same thing. Therefore, it is imperative for you to spend as much time as possible in the hall where the exhibits will be shown. In this way your search for knowledge at Pittsburgh may be successful.

A new form of fever therapy; the method, the indications for, and the intelligent application of blood sedimentation will be shown. Vein sclerosing—how, when, and why—will be presented. A new and ingenious type of stereoscope, showing the phantom pelvis on which actual measurement of the diameter of the birth canal can be determined, will be one of the features of this Scientific Exhibit. A simple, ingenious, and practical method for the differential diagnosis of the confusing vascular disturbances of the lower extremities will make it worth your while to spend some time at another exhibit.

We tell you all this so that you may be fully prepared for the great storehouse of information which the Scientific Exhibit will contain. Be sure to spend a good deal of your time there.

LESTER HOLLANDER, M.D., *Chairman*,
Scientific Exhibit Committee,
631 Jenkins Building,
Pittsburgh, Pa.

CONTRIBUTIONS TO THE MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence makes grateful acknowledgment of the following contributions to the fund:

Woman's Auxiliary, Montgomery County Medical Society	\$250.00
Woman's Auxiliary, Centur County Medical Society	50.00
Woman's Auxiliary, Lebanon County Medical Society	50.00
Woman's Auxiliary, Westmorland County Medical Society	50.00
Woman's Auxiliary, Washington County Medical Society	100.00
Woman's Auxiliary, Franklin County Medical Society	25.00
Woman's Auxiliary, Allegheny County Medical Society	1.00
Woman's Auxiliary, Blair County Medical Society	75.00
Woman's Auxiliary, Montour County Medical Society	10.00

Total contributions since 1935 report \$2710.94

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to July 10:

ADAMS: *New Member*—Bancel L. Schiff, Gettysburg. *Death*—Robert B. Elderdice, McKnightstown (Cinn. Coll. Med. & Surg. '68), June 28, aged 90.

ALLEGHENY: *New Members*—William C. Diess, 205 18th St., Sharpsburg; Edmund D. Clements, 631 Broadway, McKees Rocks; Eugene H. Mateer, Municipal Hospital, Pittsburgh. *Death*—Charles A. Orr, Craiton (Jeff. Med. Coll. '01), June 6, aged 65; George A. Holliday, Pittsburgh (Univ. Pgh. '97), July 9, aged 65.

ARMSTRONG: *New Member*—Harold W. Rusbridge, Worthington. *Removal*—Ralph K. Butler, from Rural Valley to Madison, Va. *Death*—Jessie H. King, Worthington (Univ. Pgh. '88), June 26.

BERKS: *Removal*—Richard C. Travis, from Reading to 3107 College Ave., Indianapolis, Indiana.

BRADFORD: *Removal*—John M. Touhey, from Towanda to Endicott, N. Y.

BUCKS: *New Members*—Ethel R. Hanneke, Neshaminy; John N. Rich, Doylestown.

CLEARFIELD: *Death*—Earl E. Houck, Dubois (Balt. Med. Coll. '06), June 27, aged 56.

DELAWARE: *New Members*—Edward L. Axelman, 437 Main St., Darby; Henry S. Bourland, 2219 Garrett Road, Drexel Hill; Albert W. Brown, 51 Penn Blvd., E. Lansdowne; James C. Scott, Jr., 307 Gayley Terracc, Media. *Reinstated Members*—John P. Craig, 427 E. Ninth St., Chester; Isaac I. Parsons, Front and Olive Sts., Media.

ELK: *Removal*—Joseph G. Moore, from St. Marys to 1104 Braddock Ave., Pittsburgh.

FRANKLIN: *New Member*—Harvey H. Olds, South Mountain.

GREENE: *Removal*—Louis E. Wells, Jr., from Renovo to 83 Main St., Knoxville (Tioga Co.).

LACKAWANNA: *New Member*—Hobart N. Owens, Moses Taylor Hospital, Scranton. *Removal*—Jack D. Levy, from Scranton to Plainfield, N. J.; Addison W.

Smith, from Scranton to Port Madison, Iowa. *Death*—John D. Wilson, Scranton (Jeff. Med. Coll. '05), June 20, aged 57.

LANCASTER: *Removal*—John L. Ford, from Lancaster to St. Vincent's Hospital, Green Bay, Wis.

LAWRENCE: *Death*—Charles B. Hunt, New Castle (Balt. Med. Coll. '91), June 15, aged 69.

LUZERNE: *Removal*—Malcolm J. Borthwick, from Luzerne to Shavertown.

LYCOMING: *Deaths*—Edward Everett, Dushore (Jeff. Med. Coll. '68), June 30, aged 89; Thomas W. Raper, Williamsport (Jeff. Med. Coll. '97), June 29, aged 79.

MERCER: *New Member*—John A. McKay, Mercer Sanitarium, Mercer.

MONTGOMERY: *New Members*—Walter Hughson, Abington; Mary K. Bazemore, Merion; Hubert A. Royster, Jr., Bryn Mawr; Edward E. Sprenkel, Jenkintown; H. Forsythe Stapp, Pottstown; Max M. Strumia, Narberth.

NORTHAMPTON: *New Member*—Michael S. Dudich, E. Bangor. *Transfer*—John L. Ingham, First National Bank Bldg., Easton, from Philadelphia County Society.

PHILADELPHIA: *New Members*—Grant O. Favorite, Hahnemann Hospital; Joseph O. Keezel, 2069 N. 63d St.; Israel Kessler, 5361 Montgomery Ave.; James R. Kitchell, 3833 Walnut St.; Kenneth Fowler, Presbyterian Hospital, Philadelphia. *Reinstated Members*—Harry H. Greenberg, 535 N. 11th St.; Peter C. F. Castellani, 6500 Lansdowne Ave., Maurice B. Cohen, 2037 E. Allegheny Ave., Philadelphia. *Transfer*—William Osler Abbott, Philadelphia, from Montgomery County Society. *Removal*—Nicholas Gotten, from Philadelphia to Memphis, Tenn.; Sylvester Charniak, from CCC Camp, Solon, Va., to Washington, D. C. *Deaths*—Henry L. Bernhardt, Philadelphia (Univ. Pa. '00), June 30, aged 60; Andrew D. Carter, Philadelphia (Univ. Pa. '95), June 21, aged 65; Joseph G.

Moore, Philadelphia (Temple Univ. '18), June 6, aged 57; Herbert L. Northrup, Philadelphia (Hahn. Med. Coll. '89), May 3, aged 70.

POTTER: *Removal*—Carroll W. Kjelgaard, from Endicott, N. Y., to Athens, Pa.

WASHINGTON: *New Members*—Maurice H. Bowers, Langeloth; Dewees E. Brown, Donora; Arthur E. Morgan, Washington. *Reinstated Member*—William L. Botkin, Charleroi.

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since June 11. Figures in first column indicate county society numbers; second column, State Society numbers:

June 11	Washington	136-139	8000-8003	\$30.00
	Philadelphia	2052-2053	8004-8005	15.00
	Montgomery	196-200	8006-8010	37.50
15	Allegheny	1295-1300	8011-8016	45.00
17	Lackawanna	264	8017	7.50
	Westmoreland	167	8018	7.50
	Delaware	176-183	8019-8026	60.00
18	Franklin	65	8027	7.50
	Luzerne	322-323	8028-8029	15.00
	Luzerne	324	8030	7.50
	Mercer	78	8031	7.50
25	Venango	48	8032	7.50
30	Cambria	158-175	8033-8050	135.00
	Armstrong	45	8051	3.75
	Northampton	128-133	8052-8057	45.00
	Montgomery	201-202	8058-8059	15.00
	York	144	8060	7.50
July 3	Warren	45	8061	7.50
	Dauphin	215	8062	7.50
6	Philadelphia	2054-2070	8063-8079	127.50
	Adams	26	8080	7.50
	Northampton	134-136	8081-8083	22.50
	Allegheny	1301-1305	8084-8088	26.25
8	Bucks	78-79	8089-8090	7.50

PITTSBURGH HOTELS

For the convenience of those anticipating attendance at the Eighty-sixth Annual Session of The Medical Society of the State of Pennsylvania, Oct. 5 to 8, the following information about Pittsburgh hotels is listed.

Early reservations for accommodations should be made directly with the management of the hotel preferred.

Besides the accommodations listed below, the Fort Pitt Hotel will accommodate 3 or 4 persons to a room (single beds) at \$1.25 per person. Suites at Webster Hall Hotel accommodating from 4 to 6 persons may be secured at a cost of \$2 per person.

Official headquarters will be in the Hotel William Penn (down town).

Name and address	Single rooms	Double rooms	Parking (including pick-up and delivery)		Distance from headquarters
			12 hours	24 hours	
Fort Pitt, Penn Ave. and Tenth St.	\$1.50-2	\$3-4		\$1.25	4 blocks
Henry, 417 Fifth Ave.	1.50-3	3-5		.75	1 block
Keystone, Third Ave. and Wood St.	2.50-4	3.50-6		.50	6 blocks
Pittsburgher, 428 Diamond St.	2.50	4-4.50		.75	2 blocks
Roosevelt, 607 Penn Ave.	2.50-4	5-6	\$.50	.75	6 blocks
Schenley, Bigelow Blvd. and Fifth Ave.	3.50-5	5-10		1.00	3 miles
Webster Hall, 4415 Fifth Ave. ...	2-2.50	3-3.50	.50		3½ miles
William Penn, William Penn Way	3-7	5-10		.75	Headquarters

County Society Reports

BEAVER

May 14, 1936

The meeting was held at the Beaver Valley Country Club, Beaver Falls, with Thomas W. McCreary presiding. Members of the Butler County Medical Society were guests as were also members of the Lawrence, Allegheny, Westmoreland, and Washington county societies.

Roy W. Scott, professor of medicine at Western Reserve University, Cleveland, O., spoke on "Ravages of Aging Processes with Regard to the Cardiovascular System."

Dr. Scott brought forth the physiologic relationships between the blood pressure and the circulatory system, emphasizing the importance of the arteriolar bed of vessels throughout the body. It is in this system that there are found definite pathologic changes which are almost always found in essential hypertension and not in the larger arteries and aorta. This can be readily seen in microscopic sections of most organs, especially the kidneys and brain and also in skeletal muscle. Sections of skeletal muscle taken during life from individuals suffering from essential hypertension showed an arteriolosclerosis which was corroborated by post-mortem examinations of the various organs.

A difference was made between "systolic hypertension" which consisted of an elevated systolic pressure and a normal or only slightly elevated diastolic pressure and "essential hypertension" which consists of an elevation of the systolic pressure with a corresponding increase in the diastolic pressure.

Essential hypertension is most common in the fourth and fifth decades of life, seemingly in the descending phase of the human cycle. However, it does occur in younger individuals and a case of essential hypertension in a boy, age 12, was discussed.

In this condition, one of 3 organs finally fails; in 60 to 65 per cent it is the heart, in 20 to 25 per cent the brain, and in about 10 per cent the kidneys. The heart may give out because of congestive failure or coronary thrombosis. The heart of essential hypertension is characterized by an hypertrophied left ventricle, coronary artery sclerosis, or both. The cerebral ending is usually by thrombosis of one of the cerebral vessels. The renal termination is uremia due to occlusion of the renal arterioles within and without the glomerular tufts causing degeneration of the glomeruli.

The use of the ophthalmoscope in the recognition of diseases of the cardiovascular system was stressed, for by determining the condition of the retinal vessels much useful information is obtained. The "step test" in determining the capacity of the heart to exercise was also advised as an aid to the physician. These examinations along with a thorough history and physical examination often enable the physician to determine cardiovascular disease before it has made itself known to the patient. It is by these means that the mortality rate of cardiovascular diseases will be lowered by the medical profession, namely, instituting corrective and remedial measures before the process has so far advanced that little can be done.

As to treatment of these conditions, the patient must always be taken into consideration. Much harm has been done by dissociating the disease and the patient, the physician keeping in mind only the elevated blood pressure. In these cases of hypertension the patient should not be led to think of his condition in terms of

millimeters of mercury as determined by the sphygmomanometer but rather it should be explained to him that his increased peripheral resistance demands a certain pressure, which if lowered too much is not sufficient to meet the demands. The patient should be educated chiefly to live within his cardiac reserve in those cases in which the heart is primarily affected. Drastic dietary measures, such as abstention from alcohol in those accustomed to drinking in moderation and abstaining from red meat, are usually more harmful than beneficial. In fact, those cases of angina pectoris not responding to nitroglycerin or in whom the cerebral effects of the drug are too pronounced are often aided by small amounts of good whisky a few times daily.

A number of lantern slides were shown, illustrating numerous specimens of hearts with various pathologic conditions, many of which had been realistically colored by the speaker. In closing, Dr. Scott mentioned the case of a person over age 70 seen at necropsy in whom the first 2 inches of the aorta were as smooth and free from pathologic processes as that of any normal individual. A question was left in the minds of the audience as to the freedom of this portion of the aorta from disease processes as related to freedom from cardiovascular disease.

Dinner was served for approximately 150 members and guests, and entertainment provided. A short address by Judge Henry H. Wilson, of Beaver, was made during the dinner.

DONALD W. GRESSLEY, *Reporter.*

BERKS

May 14, 1936

The regular monthly meeting was held at 3:15 p. m., at Medical Hall, Reading, President Ralph L. Reber presiding; 45 members and guests were present. Alexander Clark, Jr., director of the Department of Allergy, Jefferson Medical College, Philadelphia, addressed the meeting on "The Present Status of Allergic Diseases." Dr. Clark said in part:

Allergy is not only a new specialty, but a new conception of disease. In prehistoric times, pathology was unknown. Direct injury from a weapon was understood, but all diseases were due to the devil, until the discovery of bacteria. Bacteriology made known the etiology of most of them, but left quite a number for which there was no known cause. To these unknowns was given the name allergens.

Allergens are subdivided into normals and abnormals. The normals are also given the name pathogens. Abnormals include tuberculin reaction, antiphylaxis, atopy, antiserum reaction (occurring only in lower animals), asthma, hay fever, and vasomotor rhinitis. Other forms are urticaria, gastro-intestinal disorders, and eczemas.

Urticaria, gastro-intestinal disorders, and eczema are produced by certain foods and can be cured by avoiding these. The best methods for discovering which foods cause these symptoms are the food diary and the elimination diet. In food idiosyncrasies, positive skin reactions usually follow the ingestion of the offending food. Sometimes the use of simple catarrhal vaccine produces relief from the symptoms.

Hay fever may be seasonal in type—that occurring in spring due to grass pollens (May 10 to July 15); in early summer, usually due to tree pollens (July 15 to August 15); late summer (July 15 to October 18). Early diagnosis of the condition with prompt removal

of all complicating factors is essential. Stop all pollen injections at the beginning of the season. There are 2 forms of treatment—the prophylactic and the phylactic. The latter, the preferred method, calls for smaller doses at more frequent intervals. Perennial treatment has been discarded, since certain numbers of persons, after receiving monthly treatments, have an unexpected relapse with a constitutional reaction. In cases of hereditary hay fever, frequently more than one sufferer is found in a family.

In asthma, hay fever, vasomotor rhinitis, and allergic respiratory diseases, the mucous membranes do not show a definite pathology. These conditions cause intermittent swelling resulting in a certain amount of hypertrophy, with an infiltration of eosinophils. A diagnosis can be based on a cloudiness in the antrum, and roots in the peribronchial structures of the lungs. The mucous membrane of the nose and trachea is usually pale and swollen. In hay fever 95 per cent are sensitive to skin tests, while in asthma and vasomotor rhinitis there is only a mild reaction. For accuracy, intradermal technic should be employed.

There are extrinsic and intrinsic sources which produce asthma. When intrinsic sources are suspected in the nasal sinuses or the teeth, the infection should be dissipated by local treatment. The bronchial types are sometimes cured by a long rest in bed. When there is anthracosis, with the diaphragm deformed and the pleural spaces eliminated, the outlook generally is poor, and best results may be obtained by prolonged rest in bed. Keep the lungs open with frequent injections of adrenalin. Treatment of conditions caused by extrinsic sources consists of elimination, hyposensitization, or both. The patient should be convinced of the importance of the treatment.

June 9, 1936

The regular monthly meeting was held at Medical Hall, Reading; President Ralph L. Reber presided. Forty members and guests were present. William Schmidt, assistant professor of physical therapy, Jefferson Medical College, Philadelphia, gave an address on "General Principles of Physical Therapy." Dr. Schmidt said in part:

Physical therapy is a very important branch of modern therapeutics, and usually will aid in shortening the period of disability, especially in the treatment of fractures. Marked advances have been made in recent years, and many new methods and forms of apparatus have been introduced.

One of the latest forms of physical therapy is short wave diathermy. It is of great value and one of the best procedures used in recent years. The usual length of the wave is 10 meters. The question of the wave length is a mechanical factor and produces a definite effect. The electrodes are not in contact with the tissue. In the condenser field, everything heats up but the air, and all tissues begin to heat evenly. This heat in all the tissues produces beneficial effects more quickly and the period of time of the treatment is much less than with the longer wave diathermy, although the amount of heat is the same. The electrodes should be at an equal distance from the skin.

In the longer wave length, the electrodes are larger, are applied closer to the tissues, and produce a certain amount of heat. Heat is produced by resistance and is concentrated superficially. When the electrodes are unequally distant, the one nearest the skin produces the stronger heat.

Utmost caution is necessary in the use of short wave diathermy, and the heat should be much less than in the long wave, because heat is manifested as pain rather than heat. The greatest advantage is its use in the treatment of infections such as boils and carbuncles in which the relief from pain is almost instant.

In the treatment of paresis, fever therapy, as produced by diathermic apparatus, is under better control than that produced by malaria. Artificial fevers may be produced by the use of cabinets employing either hot air or atomized hot water. The latter is cleaner and more comfortable, as the change is made from hot water into cool by the turn of the wrist. This has a reviving effect, reassures the patient, and alleviates nervousness.

In an almost fatal disease, multiple sclerosis, a number of patients have responded to treatment and shown quite marked improvement, some having a complete remission.

Favorable results have been obtained in the treatment of asthma, multiple arthritis, encephalitis, and Parkinson's syndrome, except the senile type.

In the treatment of tic douloureux and sciatica, a rapid sinusoidal current should be applied on the exit of the nerve, the strength of the current increased sufficiently to produce a spasm of the muscle, and maintained for exactly one minute. Complete relief is usually obtained after 9 treatments.

Another form of physical therapy is zinc ionization of the mucous membranes of the nose for infections of the nose, throat, and middle ear. The galvanic current is used to produce a chemical reaction whereby the zinc is driven into the tissues, even in the crevices, where ordinary antiseptics cannot reach. This therapy is also used in hay fever and allergic conditions of the nose. Still another form of diathermic treatment is the suction apparatus for peripheral vascular disease such as Buerger's disease, Raynaud's disease, and diabetic gangrene.

High frequency current permits production of simple hyperemia, desiccation, or coagulation. By electrodesiccation, many benign or malignant growths of the skin can be removed. In malignancy, the heat penetrates so that the malignant cells are devitalized and there is no recurrence. This should be done under local anesthesia. Where there is ulceration and infiltration with metastasis to the glands, radium and roentgen ray should be employed, in addition to the local treatment.

PEARL E. HACKMAN, *Reporter.*

BLAIR

June 23, 1936

The monthly meeting was held at 8 p.m., at Jaffa Mosque, Altoona, President Harold F. Moffitt presiding. There were 68 members and guests present. The scientific session consisted of a symposium on cancer of the breast by representatives of Blair, Cambria, Huntingdon, and Mifflin county societies.

William H. Howell, Altoona, as a member of the Cancer Commission of the State Society, welcomed the guests, and explained the plan of the commission for creating an increased interest in the diagnosis and treatment of the various forms of cancer. Not only are similar meetings being held in the different counties of the state but public meetings are planned to educate the public on the present status of our knowledge of cancer.

Gerald D. Bliss, Altoona, read a paper on "Irradiation Therapy in the Treatment of Carcinoma of the

Breast." At the present time preoperative irradiation in cases of breast cancer or suspected breast cancer is being advised by many in preference to postoperative treatment. Some cases will require both, and some will be treated by irradiation alone.

Every patient should have roentgenograms taken of the thorax, shoulder girdle, and in some cases the entire spine and pelvis before any form of treatment is employed. More than once patients have been sent for postoperative irradiation within a fortnight of their operation, and when roentgenograms of their chests are taken the lungs are found to be studded with metastatic growths. This type of case would not have been operated upon had the roentgen-ray study of the chest been made preoperatively.

The excuse for operation before irradiation, due to the danger of delay or rapidity of growth, is not sound and will not give the patient the best chance of recovery. Many of the best surgeons in this and other countries who formerly followed this practice are now in favor of thorough preoperative irradiation, and of waiting at least 6 or 8 weeks before considering operation. During this period the patient should have a thorough physical examination, laboratory work, and everything possible done to improve the patient's general condition.

Experiments have shown that cancer cells will not grow as readily or at all in tissues which have been thoroughly irradiated. Transillumination is of some value in diagnosis of malignancy of the breast, provided a high-power, water-cooled light is used such as that of Max Cutler. Roentgen-ray examination of the breasts and axillae gives valuable information and in some cases glands are shown in the axillary region that are not palpable.

In some cases it is necessary to repeat the course of treatment in 2, 3, or 4 months when operation is delayed or not done. Postoperative irradiation is usually not given, unless there is evidence of recurrence.

We have not reached the point in this country where we believe that irradiation alone is the safest procedure; but in England a series of cases is being treated by different methods, and today irradiation alone seems to give as many 4-year cures as surgery alone. The combination of preoperative irradiation and surgery at present seems to be the safest procedure in most cases. But as irradiation technic improves and more cases are treated, we may find that irradiation may prove most effective. Every case must be studied carefully, and the method of treatment determined to suit that particular case. Certainly the conscientious doctor wants his patient to have whatever treatment or treatments seem to be the best and offer the best chance of a cure.

Remember, the painless lump is more liable to be malignant than the painful one, and never say to a patient, "We'll wait and see how you get along." Treatment must be instituted as early as possible. Metastasis takes place very early in some cases. This is why it is of utmost importance to make a thorough preoperative study to determine as nearly as possible that the condition has not spread, for if it has it is of no use to operate.

As a rule, the more malignant the growth and the more rapidly it grows, the more sensitive it is to irradiation, and the more apt it is to metastasize. Therefore, surgery in such cases is not as safe as irradiation. Some of these cases can be operated upon later with greater safety.

There has recently come to his attention an article

in *The Medical Journal of Australia* by A. T. Nisbet, who is thoroughly in accord with preoperative irradiation in the operable cases and irradiation alone in the far-advanced cases with metastasis. This contention is borne out in his experience and proves that when the mammary tumor has reached the stage of enlarged lymph glands the survival rate from surgery alone decreases in a remarkable manner. However, if something can be done to block the spread of the tumor the rate of "apparent cures" will be increased. By building a fibrous wall around the malignant growths something might be achieved in this direction. The dissecting out of the glands in the axilla does not apparently become more difficult after irradiation, although there is usually a little more bleeding than ordinarily.

The essayist believes that where there is a mammary malignant tumor with enlarged axillary and supraclavicular glands surgery is unavailing. Irradiation will help these people for some length of time—it keeps their breast tumor and their metastatic glands in check, and while they live they are without the pain, hospitalization, mutilation, and discomfort which come from massive edema of the arm and from the scarring of tissue around the cervical plexus.

The expectancy of life with surgery and roentgen ray or roentgen ray alone varies with the age of the patient to a great extent. Proper treatment in a patient over age 60 will bring good results and she will likely live for years. Between ages 40 and 50 the outlook is not so hopeful. In a woman under age 40 and particularly about the age of 30 the outlook seems quite hopeless. Some authorities do not like deep therapy because of the possibility of lung fibrosis but if adequate filtration is used this condition will not occur.

In discussion, Oscar M. Weaver, Lewistown, stressed the necessity for preoperative irradiation. He finds it quite difficult in his community to make people realize the value of roentgen ray. Many of them do not like the thought of the additional expense. However, this problem is a matter which will possibly be met by education. Their clinic is rather small and the cases of breast cancer not numerous enough to make any statistics really worth-while. Their cases appear to be best treated if the type of growth is determined by making a biopsy and submitting the tissue to the pathologist. For instance, there is considerable difference in the technic to be used on an adenocarcinoma, grade I, and an adenocarcinoma, grade II. He is heartily in accord with the views of Dr. Bliss on the necessity for preoperative irradiation in the operable cases.

Augustus S. Kech, Altoona, described a cancer of the breast in a woman who had diabetes and hypertension as well and told how the use of roentgen ray alone cured her, to the extent that she is now living and in apparent good health.

Halton C. Cassidy, Lewistown, asked whether there is any difference in the susceptibility of the various types of cancer to roentgen ray.

Dr. Bliss answered the question of Dr. Cassidy by stating that certain growths are radiosensitive and others almost radiofast. He decried the taking of a biopsy and said that it was not necessary for purposes of treatment though it might be of value from the standpoint of science. He uses one-half a millimeter of copper for filtration when the patients are first given roentgen ray and uses up to 2 millimeters for treatment at the later visits.

Fred R. Hutchinson, Huntingdon, presented the subject, "Combined Treatment of Carcinoma of the Breast

by Irradiation and Surgery." There is such a small number of cases, relatively speaking, in Huntingdon County that to make a series of statistics toward drawing any definite conclusions would be practically worthless, but he is of the opinion that breast cancers are best treated by a combination of preoperative and postoperative irradiation along with surgery. When we note that in the last 28 years there has been little change in the number of 5-year cures with whatever modes of treatment are used, then we may still keep an open mind on the problem. There are 35 per cent cured by surgery and a small increase in this percentage has been added by the use of postoperative irradiation. However, no statistics in regard to preoperative irradiation seem to be available, possibly because the roentgen-ray men are continually changing their technic. Lahey is in favor of surgery and then irradiation; White of the Roosevelt Hospital, New York, states that no statistics are available on the newer methods of treatment due to the constant change in procedures. The factors militating against preoperative radiation are the expense and the poor healing of the area treated with roentgen ray. He advises postoperative irradiation, though he thinks that it is far from being in a perfect stage as yet; Adair of New York states that we are not in a position to evaluate the latest modes of therapy and, as did White, points out that though much preoperative irradiation is being done there are few statistics printed. The dosage differs for the various age groups. He suggests a 5-year study with the mutual co-operation of the pathologist, the surgeon, and the radiologist.

John M. Keichline, Huntingdon, as a speaker with Dr. Hutchinson on this topic, stated that postoperative irradiation is not so good due to the scattered and healing tissues. The basis of roentgen-ray therapy lies in a tissue reaction and this reaction does not occur to such an extent in tissues which are already in the process of repair. For this reason he differs with Dr. Hutchinson on the necessity for preoperative irradiation because in the preoperative type of case the tissue reaction is excellent. However, this is merely supposition, as nobody knows the reaction which occurs when cancer is irradiated. But when we observe under the microscope the death of micro-organisms and unicellular animals which have been exposed to roentgen ray, it is only reasonable to assume that a similar situation prevails in the midst of the carcinomatous mass. A biopsy is not good or safe as it does not indicate the type of cancer. Even a great pathologist such as Ewing has been unable to classify the tumors in regard to their radiosensitivity. That question will be settled only by practical experience among those actually doing the roentgen-ray therapy. It is well known that there is a great difference in some people's systemic reaction to deep therapy, usually manifested by malaise and vomiting. The treatment for this is liver extract in some form or other. He urges a more liberal use of consultation between the general practitioner, the roentgen-ray man, and the surgeon. Frequently, the surgeon does not wait long enough after irradiation to do his operation. After all is said and done there is no rush, especially as the deep therapy has blocked the channels by which metastasis may occur. Constant vigilance and striving for a more complete knowledge will eventually solve this problem in our present therapeutic measures.

In discussion, Harry M. Stewart, Johnstown, stated his belief that there are 2 reasons why the percentage of cures is not reduced: First, the public needs to be educated on the need for early visits to a physician

when any mass is felt in the breast; second, the general practitioner must refer the cases sooner. He has studied the results of one clinic and finds that they are practically the same when either surgery or roentgen ray are used alone. The late Jonathan M. Wainwright, in his series of sections of cancer tissues, showed how deeply cancer penetrates and suggested that surgery alone does not cure a patient because often the surgeon may miss a considerable portion of the cancer which to the naked eye looks perfectly normal. This explains recurrences and metastasis. Dr. Stewart wonders whether the late cases or the early cases are most improved by irradiation. Some clinics are not honest in their conclusions because they refer their bad cases elsewhere. This is a bad practice since it leads to biased reports. Since we have better machines there is no doubt but that a better grade of roentgen-ray therapy is being done. Pfahler states that grossly at operation 38 per cent of cases have axillary metastasis and by microscopic study it would be found that at least 51 per cent had axillary metastasis; consequently, he pleads for preoperative irradiation. The late Joseph C. Bloodgood was a surgeon and a student of Halstead (who did so much for surgery of the breast) and he believed in preoperative irradiation. Bloodgood thought that this treatment does not increase the difficulty of surgery as some men state. General practitioners are reminded that ointments must not be applied to portions of the body which have been exposed to roentgen ray as they cause a marked reaction of a kind which does the patient no good. In conclusion, he announced a firm stand for both preoperative and in some cases postoperative irradiation and furthermore stated that there is a great deal of roentgen-ray work being done by ill-experienced men who do not treat the cancers properly. When this last is taken into consideration it is understood why sometimes at least there is such a great variance in the actual good accomplished by the use of roentgen-ray therapy.

George E. Alleman, Altoona, remarked that at Samuel J. Waterworth's clinic several years ago it was shown how the use of roentgen ray made cancer cells "sick." When that occurs there is a situation which makes for clean surgery and for the prospect of a clinical cure. A perusal of most of the recent literature will show a tendency to regard preoperative irradiation as the latest and most approved measure.

Gerald D. Bliss, Altoona, defended his position by stating that the statistics quoted from the Memorial Hospital, New York, were not all that had been given from that institution. Instead he believes that that clinic had published a series of cases both for and against roentgen-ray therapy in breast cancer. He endorsed Dr. Keichline's note on the importance of waiting until the result produced by roentgen ray is healed and quieted down.

Claude E. Snyder, Altoona, is looking forward to the time when roentgen ray will displace surgery entirely in the treatment of breast carcinoma. The results from roentgen ray are just as good if not better than those of surgery.

Halton C. Cassidy, Lewistown, prefaced his remarks on the subject of "The Surgical Treatment of Carcinoma of the Breast" by stating that although roentgen ray in cancer of the breast is a good thing, yet no definite agreement on the point had yet been reached. He noted that Paul White, a cardiologist of Boston, had found that roentgen ray in large doses in left-sided cancer of the breast had caused changes in the heart mechanism which eventually led to death from that cause alone. When Dr. Cassidy sees a suspicious

tumor of the breast he is confronted with 3 problems: (1) Whether or not to take a biopsy; (2) whether or not the tumor is malignant; and (3) whether or not to treat the condition, if malignant, by palliative or radical measures. In regard to biopsy, he wished they were so happily situated at Lewistown that they could take a biopsy and then by means of frozen sections determine at once whether the tumor is malignant. If it is, a radical operation should be done at once. However, they take a biopsy by means of the electrosurgical knife and then within 24 hours get a report from the laboratory.

The following conditions are contraindications to surgery: Pregnancy; adhesions to the chest; metastasis anywhere; debility and low state of health. Axillary metastasis may not be a definite contraindication if roentgen ray is used preoperatively. He prefers the transverse incision when doing a simple amputation and then extends this incision as needed for a radical amputation. He uses the electrosurgical unit and finds that it speeds up the operation, which is a factor to be considered in such a shock-producing operation as this one. With this help he needs to use only about 20 ligatures to the smaller vessels, which also is a help, as the promiscuous use of catgut causes a collection of serum and a lengthening of the recovery period. The possibility of recurrence depends on the original type of tumor and its extent of growth before treatment. He tries in every way possible to protect the normal tissue by using warm towels over the exposed areas and pouring about a liter of normal saline over the tissue and chest wall so as to help maintain normal tissue heat. Some patients otherwise are returned to bed with the chest wall as cold as ice.

In discussion, Joseph D. Findley, Altoona, mentioned the fact that no one had spoken about the prophylaxis of breast cancer. He believes that 2 conditions play an important part in the causation of breast cancer: Improper handling of the breast after childbirth, and disturbances in the endocrine system such as the pituitary gland. The radical operation causes considerable mortality from the shock alone and if instead roentgen ray were used it is possible that the total mortality would be considerably reduced. It has been their practice at the Altoona Hospital to have a consultation between the radiologist and the surgeon in every case of suspected breast cancer. The gross physical findings are first taken into consideration and then the patient is examined with a transillumination lamp (such as that of Max Cutler). After that lateral roentgenograms are taken of the breasts. Then a roentgenogram of the chest is taken and in certain cases other views of the rest of the body. If malignancy is determined the patient is given deep roentgen-ray therapy first, and after that if no metastases, *etc.*, have been found a simple amputation is done. In some instances postoperative irradiation is given also. The reason there has not been a more general acceptance of roentgen ray as the therapeutic measure preoperatively is because roentgen ray in breast cancer is a relatively new thing. This is the reason there have been no favorable statistics reported. In England at certain clinics they have been giving every other patient roentgen ray alone without surgery and in the other instance surgery with or without roentgen ray. A far greater number have lived after roentgen ray alone than with the other measures. It seems that surgeons will have to face the fact that in time they will see these patients being treated by other specialties. We should always be suspicious of any growth in the breast.

William H. Howell, Altoona, concluded the meeting by summarizing what seemed to be the consensus of opinion during the evening, that preoperative irradiation should always be done even though there are as yet no large numbers of statistics to support the procedure. Furthermore he believed, as did others who spoke at the meeting, that the time will come when every doctor will refer all his patients to the radiologist alone instead of the surgeon. This last view is in accordance with the recently published work of Hutchinson, of Glasgow. Until that time it is to be hoped that the practice of taking a biopsy will be dispensed with as it is not needed, and occasionally one biopsy alone is not sufficient for diagnosis.

MARLYN WALTER MILLER, *Reporter.*

CHESTER

June 16, 1936

A regular meeting was held at the Homeopathic Hospital. President Charles J. Brower presided. Luncheon was served.

The following were elected to represent the society at the next session of the House of Delegates to be held in Pittsburgh: John A. Farrell and Joseph Scattergood, Jr., delegates, and Robert C. Hughes, Henry S. Barker, Irving M. Waggoner, and Horace F. Darlington, alternate delegates.

The report of the Executive Committee referred to several questionnaires received from the State Society and suggested that the secretary and various committee chairmen answer the many questions. In view of the fact that state medical relief may become a county problem, it was recommended that the special committee to interview the County Commissioners relative to reopening the contagious unit of the Chester County Hospital be directed to present a broader program to the County Commissioners calling for medical care under the direction of the Chester County Medical Society for all indigent patients.

Three resolutions were presented and approved by the society which in brief were concerned with (1) the clinic set-up now in force throughout the county, (2) the matter of contract practice presented at the State Convention last year, and (3) the policy concerning student health service (now in operation at the West Chester State Teacher's College) throughout the entire state. The delegates to the next State Convention were instructed to present the resolutions at the session of the House of Delegates.

It was also recommended that a maternal welfare program as well as an appendicitis program be instituted throughout the county this fall.

H. Bailey Chalfant, of Kennett Square, presented a paper on "Eye Problems Confronting the General Practitioner." Dr. Chalfant began with cases of simple blepharitis and described conditions of increasing severity until he concluded his paper with the various kinds of iritis and glaucoma. The speaker considers that this latter condition should be treated by physicians specializing in diseases of the eye.

The second part of the scientific program consisted of a demonstration of a series of roentgen-ray films illustrating diseases of the urinary tract by Edward W. Campbell, of Philadelphia. Dr. Campbell demonstrated simple obstructions of the urinary tract and gradually proceeded to the more serious conditions including tuberculosis, malignancy, *etc.*, of the kidneys. The speaker outlined the indications for cystoscopy, urography, and retrograde pyelography. He stressed the

high degree of accuracy in diagnostic urology and urged that all physicians having patients with urinary symptoms refer them at the earliest possible moment for clinical and laboratory studies.

JOSEPH SCATTERGOOD, JR., *Reporter.*

DAUPHIN

June 2, 1936

The regular meeting was held in the Academy of Medicine building, with Park A. Deckard in the chair. The scientific portion of the meeting was composed of reports on appendicitis for 1935 in the Polyclinic and the Harrisburg Hospitals.

Earl R. Whipple gave the report for the Harrisburg Hospital, and the following is an abstract of this report:

Number operated upon for appendicitis, 306; number of cases actually pathologically determined as appendicitis, 234; number of patients who died, 10.

The following is the record of the 234 patients as to decades: Less than age 10, 17 cases, 2 deaths; 10 to 20, 85 cases, 1 death; 20 to 30, 68 cases, no deaths; 30 to 40, 20 cases, no deaths; 40 to 70, 44 cases, 7 deaths.

Laxatives—number of patients taking laxatives before admission, 70; without laxatives, 151; no record of laxatives, 7; laxatives ordered by referring physician, 6.

Time of onset to operation—first 24 hours, 63 patients, 2 deaths; second 24 hours, 70 patients, 4 deaths; third 24 hours, 41 patients, 2 deaths; fourth 24 hours, 26 patients, no deaths; fifth 24 hours, 8 patients, no deaths; sixth 24 hours, 9 patients, no deaths; seventh to tenth day, 5 patients, no deaths; 4 weeks, 2 patients, 2 deaths.

Leukocytes—fewer than 7000, 21; 7000 to 11,000, 76; more than 11,000, 97; no record, 30.

Drainage—with drainage, 103; without drainage, 126; no operation, 5.

Types of appendicitis—acute, 123; acute with perforation, 3; acute with peritonitis, 40; acute gangrenous, 13; acute gangrenous with peritonitis, 31; acute with abscess, 24.

The report for the Polyclinic Hospital was given by Thomas E. Bowman. His paper in part follows:

Total number of patients operated upon, 342 (20 different surgeons); 14 deaths.

The following is the record by decades: Less than age 10, 26 cases, 1 death; 10 to 20, 114 cases, 2 deaths; 20 to 30, 102 cases, 3 deaths; 30 to 40, 54 cases, 1 death; 40 to 70, 45 cases, 6 deaths.

Laxatives—number taking laxatives, 62, 2 deaths; number not taking laxatives, 280, 12 deaths.

Time of onset to operation—first 24 hours, 60 patients, 1 death; second 24 hours, 88 patients, 3 deaths; third 24 hours, 57 patients, 4 deaths; fourth 24 hours, 27 patients, 1 death; fifth 24 hours, 12 patients, 1 death; sixth 24 hours, 8 patients, no deaths; seventh 24 hours, 26 patients, 2 deaths; eleventh day, 4 patients, 1 death; twelfth day, 2 patients, no deaths; thirteenth day, 3 patients, no deaths; 2 weeks or more, 27 patients, no deaths.

Leukocytes—less than 7000, 26; 7000 to 11,000, 133; more than 11,000, 176.

Drainage—with drainage, 56; without drainage, 286.

Types of appendicitis—acute, 265; gangrenous, 56; suppurative, 19.

Types of anesthesia—ether, 291, 10 deaths; gas, 17, 1 death; spinal, 26, 3 deaths; spinal with ether, 1 death; spinal with gas, 4 deaths; local, 1 death. (The deaths are not anesthetic deaths but only represent the deaths placed in a different category.)

A. HARVEY SIMMONS, *Reporter.*

DELAWARE

June 11, 1936

The regular monthly meeting was held at the Springhaven Country Club, Swarthmore, at 3:30 p.m.; President John J. Sweeney presided.

Five new members were elected. Two former members were reinstated. The society voted to pay the dues of a member who has been ill for some years.

The Medical Advisory and Public Welfare Committee submitted a report relative to the distribution of toxoid supplied by the State Department of Health in Delaware County.

The motion passed at the May meeting of the society opposing mass immunization, and instructing the Medical Director of Delaware County to limit the distribution of toxoid to private physicians for use in their offices only, has simplified the work of this committee and will control existing abuses in most of the county.

However, in the section of Delaware County adjacent to Montgomery County certain abuses exist relative to the use of toxoid in clinics which may be difficult to control. They refer specifically to the Ardmore Visiting Nurse Society, which conducts clinics in the Manoa Public School and the Oakmont Public School. In both places the toxoid is procured in Montgomery County and brought into Delaware County.

A definite plan of action must be formulated to prevent this nursing group in Ardmore from conducting clinics in another county, and it is suggested that one of the following plans be put into effect—either present the complaint to the Montgomery County Medical Society and request that they pass a resolution similar to the one passed by the Delaware County Society, limiting the distribution of toxoid, or request the State Department of Health to issue orders that no toxoid is to be carried over county lines.

The first suggestion is the most logical one to follow and will accomplish results.

The report was formally approved with a recommendation that a copy be sent to the secretary of the Montgomery County Society pointing out the items which pertain to Montgomery County.

The special committee to confer with the Poor Directors reported meetings at the Court House with the County Commissioners and Poor Directors and a meeting which was held at Lima with the Poor Directors. At the present time the committee has only progress to report and states that no formal agreement has as yet been reached.

Francis V. Bielski reported for the Child Welfare Committee, and tendered his resignation as chairman, which was accepted with regret.

The Committee on Necrology had no formal report to submit but did report the death of Katharine Ulrich. The president requested the Nomination Committee to submit a nomination for the position of censor to fill the vacancy caused by the death of Dr. Ulrich. The Nomination Committee placed in nomination the name of J. Clinton Starbuck, who was duly elected.

C. Irvin Stiteler and Albin R. Rozploch were elected as delegates to the State Society meeting in October.

Mary McD. Shick, Ralph E. Bell, George L. Armitage, Jr., and Herman Gold were elected as alternates.

Mortimer C. Hymas, of New York, was unable to present his paper on "Treatment of Endocervicitis by Conization." It was therefore agreed to discuss the proposed new by-laws, which were based on the model by-laws approved at the State Convention in 1932. Each item was taken up separately and passed. The chief item of discussion occurred in the proposal to have affiliate members. In the proposed new by-laws, affiliate members may be elected when individuals are at least age 65 and have been members in good standing of component county societies for at least 15 years. Such affiliate members would not be eligible to the Medical Defense Fund. It was explained that this provision is in accord with the by-laws of the State Society; hence, could not be altered.

At the end of the discussion of the proposed new by-laws a motion was approved that the delegates of the Delaware County Medical Society be instructed to present a resolution to the State Society changing the by-laws of the State Society to permit affiliate members to participate in the Defense Fund.

It was approved that the delegates also be instructed to present a resolution to the State Society requesting that a paid representative be employed by the State Society in the capacity of a lobbyist at the House of Representatives.

Dinner was served. EZRA A. WHITNEY, *Reporter*.

FAYETTE

May 15, 1936

The regular meeting was held at Medical Hall, Uniontown Hospital. Lewis N. Reichard presided.

Emil Novak, Baltimore, read an address on "Uses and Abuses of Gynecologic Organotherapy." Dr. Novak unraveled the confusion enveloping the field of endocrinology, its basis, scope, and purposes. Beginning with the menstrual cycle, he said in part: The problem is that of the reproduction endocrines. At the end of the menstrual cycle groups of graafian follicles in the ovary begin to grow. One of these follicles dominates the picture, ruptures at the surface of the ovary, extruding the ovum and the fluid enveloping it. This latter fluid contains the female sex hormone or folliculin. This process is known as ovulation and occurs in the human female between the thirteenth and fifteenth day after menstruation.

From the shell of the ruptured follicle is formed the corpus luteum. More folliculin is formed by the corpus luteum, but in addition it forms progesterin, or progesterone. Folliculin not only exists in the follicle but in many other places, such as the placenta, amniotic fluid, the urine of pregnant women, certain grains, and even in minerals.

Folliculin has 2 effects: Increasing growth effect on the uterus and tubes; and proliferation of the mucosa of the uterus, tubes, and vagina.

Progesterin causes a secretory activity in the mucosal glands, and has a nidatory effect in preparing the uterine mucosa for the reception of the ovum. If the ovum is fertilized, the decidua are formed to be used to maintain the egg.

The commercial products of the above hormones are: Folliculin (theelin, anniotin, and progynon B); and progesterin (proluton).

The latter has been difficult to obtain because of the large amount of material needed to form a small por-

tion. Very little of this product is therefore commercially offered. Menstruation not only affects the reproductive organs, but other organs as well. It is in the nature of a constitutional change or reaction.

The pituitary gland is the most important gland of the endocrine system. The anterior lobe is in special relation to the gonads and acts as the motor of these glands. The activity of the pituitary glands sets into motion the cycle of maturation, ovulation, and consequent development of menstruation and reproduction. Two secretions, of the gonadotropic type, are thought to be formed by the anterior pituitary gland—prolan A and prolan B. Prolan A has a follicle-stimulating effect on the ovary, and prolan B has a luteinizing effect. While these secretions have actually been isolated they are not available for commercial use. A substance resembling prolan B has been isolated from the urine of pregnant women. This substance is an anterior pituitary-like substance and was thought to be identical with prolan B, but subsequent studies have shown that the trophoblast of the chorion is probably the actual source of the hormone.

Commercially the gonadotropic hormones are not available because of the difficulty in obtaining a sufficient amount and in purification. The pituitary-like substance extracted from pregnancy urine and resembling the action of prolan B is available as antuitrin S and follutein.

Regarding the problem of fertility and sterility, Dr. Novak said that the ovum definitely has been shown not to live for more than 24 hours. Spermatozoa do not live more than 36 hours at body temperature. Coolness preserves their activity and therefore the position of the testicles in the scrotum tends to keep them below body temperature.

As to the so-called "safe period" in the rhythm of fertility-sterility, much study has brought out the fact that there is a great deal of truth in this. This period is 7 days before and 8 days after menstruation. At this time it is considered that the chances for impregnation are very much reduced. However, this may be said of women who menstruate regularly. In those who menstruate irregularly this is obviously not true. Even in those women who menstruate regularly rhythms change.

In some cases of sterility it should be advised that intercourse be had between the thirteenth and the eighteenth day as that is the period of ovulation and the optimum period of impregnation. Some cases are sterile because the follicle does not rupture and extrude the ovum. In these cases a large amount of prolan is given.

Females at puberty may menstruate, but not ovulate. The appearance of the menses at puberty does not necessarily mean that pregnancy can occur. Women over 40 still menstruate, but may not ovulate.

In the matter of functional uterine bleeding, the cause is overmaturation of the ovum with overproduction of estrin and consequent bleeding. Conception does not occur during functional bleeding. At the menopause, bleeding may be cured by radiotherapy. At puberty it is best to use antuitrin S. Recently progesterin has been used.

LOUIS F. ROGEL, *Reporter*.

LANCASTER

June 3, 1936

The regular meeting was held at the Medical Club rooms. Edward Thorpe, assistant in pediatrics and assistant dean of the Medical School of the University

of Pennsylvania, gave the scientific address of the evening. He said in part:

The interest in scurvy has been revived recently. A memorial volume was dedicated to Sir Thomas Barlow on the occasion of his ninetieth birthday, in which much of the more recent investigation on this disease was incorporated. This disease was formerly known only in adults, and especially in those taking long voyages or going on long military campaigns. It is rare for a breast-fed baby to get scurvy, which probably explains why it was not seen in babies years ago. Babies who did not do well on breast feeding in those days died. Barlow was the first to separate this disease from other bone diseases, and his treatise on the condition still remains a classic. Nothing new was discovered concerning it until the early twentieth century.

The most notable discovery in recent years was the isolation of a pure vitamin C in 1932. It was found to be related to hexuronic acid and was first isolated from the adrenal, which is a most potent source. It is also found in citrus fruits, but is difficult to extract from these because of rapid oxidation in the presence of impurities which act as catalysts.

Some products on the market are synthetic, built up from sorbose, others are from natural products, *viz.*, dahlia, tulip, and iris bulbs, or even horse-radish. Citibone is one of the commercial products.

Artificially colored and ripened oranges are very poor sources of vitamin C. For this reason the artificial product for the summer and fall months is a great necessity.

There are experiments under way at Harvard and Johns Hopkins medical schools to try, if possible, to detect the disease earlier. Formerly the first symptom noted was pain, which is a late manifestation. It is now known that the deficiency has been present for 6 to 7 months prior to this symptom. Roentgen-ray examination will show the disease, and Dr. Parke, of Hopkins, has detected early radiologic signs.

The pathologic changes represent a modification in the normal growth of bone at the growing end. The earliest roentgen-ray sign, *viz.*, a line of increased calcium density, is the result. Connective tissue fills in the gap back of the zone of hypercalcification and thus in the roentgen ray there is seen a line of lessened density or atrophy. Corner atrophy and bagging are also seen where connective tissue overgrowth has resulted in change of contour of bone ends. There are also small fractures in this calcium layer, followed by minute hemorrhages. Due to the presence of the fragile layer at the end of the bone, epiphyseal separation occurs. This is more apt to occur at the lower end of the wrist and ankle. Hemorrhage frequently occurs at these points of epiphyseal separation with infiltration along the periosteum toward the middle of the shaft. This is, of course, a late sign of scurvy.

The natural history of a case is something like this: The child will usually have been breast-fed for 2 to 3 months, following which it will have received artificial food, with no orange juice. It will be more commonly seen in the summer or fall.

The treatment consists in supplying vitamin C. In winter this may be supplied in orange juice; in summer it will be best to use tomato juice. Some cases may need the isolated vitamin C.

Vitamin C balance and level can be determined by study of food and urine. These tests are rather easily made, because the vitamin is a good reducing agent.

The relation of this vitamin to infections has been rather overemphasized. All cases of lowered resistance

cannot be blamed on a deficiency of this substance, although in the case of dental caries, it is undoubtedly a factor. It has been found to have no special relation to rheumatic fever and heart disease, as was first thought by Rinehart of England. The indiscriminate use of vitamin C to prevent hemorrhage (gynecologic, pulmonary, *etc.*) is not warranted in the light of present knowledge, but trial may be worth-while.

In discussion, Jacob E. Hostetter referred to a case that was cured by the use of water used in boiling potatoes. Louise E. Keasby has been interested in the deficiency of vitamin C in adults and asked concerning the relation of this to the cause of hemorrhage. She stated that scurvy does not alter the constituents of the blood; it is more a fragility of the blood capillaries, linked up with the inability to form intracellular substance, that causes the hemorrhage. In scurvy, the platelet count is high and clotting time rapid. Dr. Thorpe mentioned, among other things in closing, the differential diagnosis from lead poisoning, from the roentgen-ray standpoint. This has been seen more often recently and is manifested in the growing end of the bones, in much the same location as scurvy, but presents a less disorganized appearance. Henry B. Davis then presented a case with lantern slides, showing the classic picture of the advanced stage of the disease.

WILHELMINA S. SCOTT, *Reporter.*

LEHIGH

June 9, 1936

The monthly meeting was held at the Allentown Hospital, President Charles Fox presiding. Nathaniel W. Winkelman, professor of neuropathology, Postgraduate School of Medicine, University of Pennsylvania, Philadelphia, was the guest speaker. Dr. Winkelman spoke on "Common Neurologic Conditions Met by the General Practitioner."

Dr. Winkelman discussed briefly many organic problems seen by the general practitioner. He discussed first the conditions of the spinal cord, and took up the diagnostic problems of pernicious anemia, multiple sclerosis, tabes dorsalis, spinal cord tumors, poliomyelitis, and vascular lesions.

In considering the symptomatology of spinal cord manifestations in pernicious anemia, it was stressed that occasionally the neurologist is able to make a diagnosis of pernicious anemia long before the blood picture shows the distinguishing characteristics. The neurologic picture seen in the usual case consists of subjective complaints of numbness and tingling in all 4 extremities with difficulty in co-ordinate movements of lower limbs particularly, but also in the upper limbs. Examination even comparatively early shows involvement of the posterior and lateral columns of the spinal cord with vibration and muscle position disturbances as evidences of the former and a Babinski as evidence of the latter. The reflexes in the lower limbs may be either increased or decreased, depending on the relative involvements of the tracts of the spinal cord. The absence of free hydrochloric acid in the gastric contents with the above features is usually to be considered diagnostic, and therapy with liver intramuscularly, hydrochloric acid in large amounts with meals, and iron should be started immediately.

The characteristic features of multiple sclerosis were detailed and it was stressed that the clinical picture "is characterized by the fact that its symptoms never are characteristic." This is the summary of the discussion

on multiple sclerosis by the Association for Research some years ago. A patient was presented who illustrated the typical features of multiple sclerosis. He had nystagmus, speech defects, inco-ordination in the upper limbs, an increase of reflex activity in the lower limbs with clonus and a Babinski, and posterior column disturbances in both lower limbs. The abdominal reflexes were absent. The history showed a long-standing symptom complex of many years' duration. There had been no remission in this patient.

Tabes was briefly discussed and the characteristic symptoms and signs given, with the ataxia of a progressive nature, and with the characteristic eye findings of Argyll Robertson pupil and occasional ocular palsies. The lightning pains, bladder and sex disturbances, and the trophic changes were also briefly referred to. The treatment was briefly discussed, and the difficulties in the control of the crises were outlined.

Spinal cord tumors were briefly commented on with the diagnostic features of slowly progressive pyramidal tract and sensory symptoms below the level of the lesion with sphincter and sex disturbances, and with the characteristic finding of partial or complete block (Queckenstedt) within the spinal canal. The intra- and extramedullary tumors were briefly contrasted as far as symptomatology and prognosis are concerned.

Comment was made on the relative infrequency of vascular lesions of the spinal cord in contrast to vascular lesions of the brain. The peculiarity of the circulation of the spinal cord was given, and it was shown how it accounted for this difference. The characteristic features of vascular lesions of the spinal cord with their sudden onset of partial lesions in different parts were detailed.

Syphilis of the brain and spinal cord was discussed very briefly, and attention was directed to dementia paralytica and its manifestations. The treatment with fever and tryparsamide and the results obtained were enlarged upon.

Migraine and myasthenia gravis were discussed as far as newer methods of therapy are concerned. Treatment of the former with ergotamine tartrate by intravenous injection was discussed, as was the treatment of myasthenia gravis with prostigmin hypodermic and oral administrations.

Only 4 conditions of the brain were discussed. Spontaneous subarachnoid hemorrhage with acute onset resembling that of meningitis and the characteristic diagnostic finding of blood in the spinal fluid was given. The treatment of periodic spinal drainages was also given. The subject of meningitis was discussed only so far as therapy of some of the more common types is concerned. The subject of hydrocephalus was also mentioned with particular reference to the newer methods of coagulation of the choroid plexus to control the production of spinal fluid.

The epilepsies were commented upon at some length. A home-made classification was given of congenital or born epilepsy and the acquired or made epilepsy. The 2 types were contrasted as far as symptomatology, etiology, and prognosis are concerned. The treatment was outlined with the admonition that the first essential in treatment of any convulsive case is the determination of the etiologic factor. Convulsions may be early symptoms of brain tumor, uremia, toxic states, etc. These must be discovered before treatment of any sort can be given.

VAUGHAN SPRENKEL, *Reporter.*

LYCOMING

June 12, 1936

The regular monthly meeting was held in the Medical Hall of the Williamsport Hospital, with Galen D. Castlebury presiding.

Harold L. Tonkin, of Williamsport, presented the film compiled by Lewis N. Hurxthal, of the Lahey Clinic, showing the normal and abnormal mechanisms of the heart, with reference to those lesions which the electrocardiograph is able to diagnose. It is an efficiently made film, and well worth-while, both for its completeness and the manner in which it explains the electrocardiographic tracings. It can be recommended to any other society wishing to add to its program.

Franklin Payne, associate in gynecology and obstetrics at the University of Pennsylvania, gave an address on "The Significance of Abnormal Bleeding in the Premenopausal and the Postmenopausal Periods." Comments were interesting and illuminating, and the talk was illustrated by slides of tabulations which will be reproduced here.

The Keene-Payne study of premenopausal bleeding showed the following results:

	<i>Benign</i>	<i>Malignant</i>
Cervical bleeding ...	5.9%	76.4%
Fundal bleeding	64.8%	15.2%
Tubes and ovaries ..	28.7%	5.8%
Vagina and vulva ..	.3%	2.6%
Systemic diseases ..	.3%	0.0%

The most important single symptom in carcinoma of the cervix is the intermenstrual bleeding and bleeding upon trauma.

Dr. Payne then discussed fully the early diagnosis of benign and malignant lesions of the genitalia, with special emphasis upon the cervical malignancies, and the extreme importance of early biopsy.

In the discussion, John B. Nutt emphasized the importance of treatment of the postnatal cervix, with repair of lacerations and erosions. Albert F. Hardt asked why carcinoma of the cervix in the prolapsed uterus is almost unknown, when we do consider trauma and constant irritation a probable factor in the production of malignant lesions. John P. Harley asked concerning the office cervical biopsy, anesthesia found necessary, and satisfaction obtained.

There was also a discussion of the method and results obtained in the office treatment of cervical lesions by the actual cautery. EDWARD LYON, JR., *Reporter.*

NORTHAMPTON

May 22, 1936

The regular monthly meeting was held at the Hotel Easton, Easton.

Dr. Morris Fishbein was the guest speaker. He described the activities of the American Medical Association. Of 130,000 practicing physicians in the United States 103,000 are members of the A. M. A., which is therefore the largest organization of medical men in the world. The *Journal of the A. M. A.* has a weekly circulation of 95 to 100,000 copies. From advertising fees about \$500,000 is realized yearly. This sum is devoted to the general activities of the A. M. A. The Councils of Pharmacy and Chemistry, Foods, and Physical Therapy do invaluable work in protecting the physicians and the public.

The A. M. A. meetings are the largest medical meetings in the world.

The A. M. A. has made statesmen believe that medical problems have to be decided by the medical profession which is the only organization primarily concerned with the standard of medical practice today.

The hospital has become more and more the center of medical practice. Hospital construction costs per bed are increasing. To meet this increase methods of financing involving the exploitation of the medical profession have been devised.

Hospital insurance schemes have no sound actuarial basis and will remain experimental for about 10 years. About 400,000 people are at present participating in them.

The Bureau of Medical Economics costs about \$60,000 a year.

There are only 3 schemes of payment for medical care: Cash, postpayment, and prepayment. The latter is insurance no matter what else it is called. Whereas in insurance applied to other activities there is always a return, in sickness insurance there can be no return to the participant if he does not become ill.

The A. M. A. at its most recent session has promulgated the rule that the Council will declare unsuitable for intern training and will refuse to register any hospital that has on its staff any physician who indulges in contract practice in which fees are less than those generally agreed upon in the community.

There is an oversupply of physicians in sight, if not here already. Therefore an investigation of medical schools is under way to endeavor to cut down the supply of physicians and to improve the training of those accepted.

There are 3 to 4 million listeners to the A. M. A. radio program. In some parts of the West all the school children are assembled in the school auditorium to listen to these broadcasts.

The A. M. A. owns its own plant. It has 550 employees. Eighteen hundred medical journals are read, indexed, and filed in the library there.

Dr. Fishbein concluded his talk by stating that were it not for the A. M. A. we would at present be experimenting with federal control in some other than the present system of medical practice.

J. K. Williams Wood, of Willow Grove, invited all present to become members of the Lehigh Valley Medical Association; the dues are \$2 for the first year.

June 19, 1936

The regular monthly meeting was held at St. Luke's Hospital, Bethlehem. William J. Happel presided.

Michael Dudich and John L. Ingham were elected to membership.

The president was empowered to appoint a committee to draw up a resolution to change the by-laws of the society to read that the censors be required to interview personally all future applicants for membership and instruct them in the purposes of this society.

The secretary was instructed to write a letter reprimanding a member who asked to present a matter to the Public Relations Committee at a special meeting of this body and then did not appear.

The secretary was instructed to renew the subscriptions to the PENNSYLVANIA MEDICAL JOURNAL for the affiliate members of this society.

A letter describing a recent amendment to the by-laws of the Allegheny County Medical Society was read. This deals with grievances of members and disciplinary action. It was referred to the committee on revision of the by-laws.

Delegates to the House of Delegates were elected as

follows: Delegate, Francis J. Conahan; alternates, Harvey O. Rohrbach and Delbert K. Santee; delegate, Arno R. Zack, alternates, W. Gilbert Tillman and James A. Betts.

W. Gilbert Tillman presented a detailed report on the subject of relations between the Northampton County Medical Society and the County Poor Commissioners.

Data on the money expended before the Medical Society made an agreement with the commissioners and since then was read. Ninety-seven physicians participated in the scheme in 1935. All physicians were earnestly requested to obey the regulations in the matter of making out bills.

Arno R. Zack said that he believed that the county indigent load will increase in the future. He reported several items dealing with the SERB in relation to medical care.

FREDERICK J. PEARSON, *Reporter*.

PHILADELPHIA

May 27, 1936

PHYSICAL THERAPY SYMPOSIUM

"An Evaluation of Suction Pressure in the Treatment of Occlusive Peripheral Vascular Disease" was presented by Louis Hitzrot and Eugene Landis, of the University of Pennsylvania. Alternating negative and positive pressure as a physical measure in the treatment of peripheral vascular disease was developed in Philadelphia during the past 3 years by Dr. Landis and the clinical application carefully studied by Dr. Hitzrot. Symptoms are ameliorated and the process somewhat delayed by this type of therapy but nothing specific is done by it for the group of diseases underlying the condition. Arteriosclerotic gangrene is peripheral primarily because the blood vessels of the extremities are exposed to variations of temperature and to trauma, from which more centrally placed vessels are protected. The local application of physical therapy obviously does not affect the generalized arteriosclerosis. Even thrombo-angiitis obliterans is often far more extensive than is suggested by its classification as a "peripheral vascular disease."

The pronounced local manifestations of such generalized vascular conditions call for local treatment and encouraging results often follow because the recuperative powers of the peripheral vascular system are surprisingly great. The advance of vascular disease, whether continuous or otherwise, is marked frequently by episodes of emergency, produced by embolism, thrombosis, trauma, or infection. If the circulation can be aided temporarily in these periods of what might be termed peripheral vascular decompensation, time may be gained for the development of collateral channels of blood flow upon which lasting recovery of function must finally depend.

The diagnosis, prognosis, and particularly the choice of conservative or radical therapy depend largely upon the degree to which peripheral coldness, cyanosis, pain, or ulceration are secondary to vasospasm alone or secondary to advanced organic occlusion. Reference was made to the tests available for the determination of early organic vascular obstruction in the extremities and the interpretation of the findings by these tests. These depend upon the variation of the skin temperature under fixed conditions. The deleterious effects resulting from vascular obstruction were cited. The need of local assistance under such circumstances was shown. Utilizing Poiseuille's law in physics Drs. Landis and Gibbon were led to devise a means of

temporarily lowering venous pressure. Apparatus was constructed with this objective in mind. This utilized positive and negative pressure at appropriately spaced intervals. Control cases showed that the blood flow was appreciably increased in the treated extremity as compared with the untreated. Subsequently a series of 96 cases of peripheral vascular disease were treated. Slides were shown to illustrate the work in this field. In 26 cases of thrombo-angiitis obliterans, 14 obtained good results, 8 fair. In 24 cases of diabetic arteriosclerosis, 12 obtained good results, and 12 fair. In 46 cases of arteriosclerosis, 26 obtained good results, and 6 fair. In the whole series, only 6 could be said to have been totally unsatisfactory, and 20 showed poor results, that is, the process was unchecked and a lesion occurred.

In discussion of the foregoing paper, David W. Kramer stated that the incidence of the conditions described was increasing. In addition to this the awakened interest in the subject had caused physicians to be more alert in recognizing them. Various measures are now available for their treatment, namely, fever therapy, diathermy, negative and positive pressure, ganglionectomy, *etc.* The underlying cause of these conditions is not understood although infection seems to be the most likely etiologic factor. A local condition, however, is presented to the physician which does appear to offer some possibility of relief from local physical measures. In his experience, the negative-positive pressure treatment has given 74 per cent of good results. He cautioned against its promiscuous use. Meyer Naide urged careful selection of the patients for this form of therapy. He suggested attention to other extremities in these cases, extremities which must of necessity participate in the general arteriosclerosis but to which the patient's interest had not as yet been attracted. His comment on the whole was favorable to the employment of this form of therapy.

"Influence of Short-Wave Radiation on Constituents of the Blood" was read by Disraeli Kobak, of Chicago, Ill. He stated that short electrical oscillations produce dilatation of the capillaries, small arteries, and veins as in other heat stimulation. Intense and prolonged application of short waves results in injury to the circulation. If the capillaries are dilated to an extensive degree, injurious disturbance of the circulation follows, such as permanent dilatation and coagulation of the blood. With proper dosage such conditions may be avoided and beneficial results obtained. The paper was replete with detailed laboratory findings as to the effect on the blood and its constituents.

SAMUEL H. BROWN, *Reporter.*

YORK

June 20, 1936

Harry M. Read, secretary, in the absence of the president and vice-presidents, presided. I. Newton Kugelmass, of New York City, spoke on "Hemorrhagic Problems in Childhood."

He said, in part, that this presentation would concern his personal work during the past 15 years. Dr. Kugelmass showed slides during his entire discourse.

The liver forms prothrombin and fibrinogen and the spleen and blood vessels form antithrombin. There are 3 internal clotting entities—the vascular system clotting function, the blood-clotting function, and the tissue-clotting function (reticulo-endothelial system).

There are 3 or more external clotting entities—the constitution of the child, food, and drugs.

The clotting mechanism takes place through 2 sources—the vessel-clotting function and the blood-clotting function. The vessel-clotting function is carried on by plasma dissociation and blood clotting; the blood-clotting function is carried on by elemental substances and endothelial dissociation. The blood-clotting dysfunction and vascular dysfunction may be acquired and familial.

Dr. Kugelmass analyzed the hemorrhagic symptomatology in 5000 sick children. He stated that vascular dysfunction was $2\frac{1}{2}$ times more common than real hemorrhagic disease; that the more persistent bleeding in hemorrhagic disease is really the only difference in both dysfunctions. The blood-clotting time must be estimated always and blood should be taken from a vein.

The clotting index was described as follows:

Index of blood-clotting functions=

prothrombin x fibrinogen x platelets
antithrombin

The normal index is 0.5; the hemorrhagic index is more than 0.5 and thrombotic less than 0.5.

The clotting time is valuable only at birth and not in adults; diet and nutrition have much to do with the clotting index in children; vegetables and carbohydrates shift the index to bleeding; protein and fats shift the index to clotting; vitamin D causes very little shift; vitamin A plays no rôle; vitamins B and C (water soluble) have no rôle, but insoluble vitamin B plays some rôle in capillary permeability.

Diets can increase and decrease the clotting index. For operative patients, when the clotting index is high, give sodium thiosulphate; when low, give a diet to increase the index.

For prenatal prevention of potential hemorrhagic disease of the newborn, treat the mother by giving higher protein and fat before birth of baby as these elements lessen the prothrombin; a low prothrombin content is the only thing to be considered in low clotting time of child at birth.

In intracranial hemorrhage in the newborn as well as in visceral hemorrhage in the newborn, the infant's blood is normal but some injury to the vessel wall takes place. Potential hemorrhagic disturbances: Higher protein intake to raise the prothrombin; children who bleed easily have symptoms of hypoprothrombinemia. A higher carbohydrate diet deprives the protein intake. Because of secondary anemia many physicians believe the child is bleeding, but bleeding is from a complication of anemia.

Purpura hemorrhagica of the newborn: High bleeding time in the newborn means purpura, yet the clotting time may be normal. Blood platelets can be increased only by giving blood intravenously.

Thrombocytopenic purpura: This is divided into primary and symptomatic. In the primary group 3 types were discussed: Where there is a grave nutritional deficiency; elimination of infectious foci; and regulating ovarian function.

In the grave nutritional type the spleen is not at fault, but in the 2 types of essential purpura the spleen is doing damage and the disease is amenable to splenectomy; in the infectious type the spleen may be normal, but there is failure of the bone marrow to form platelets.

Treatment in thrombocytopenic purpura: Stimulate platelet formation and increase the platelet content.

Vascular diseases in which the tourniquet test and vessel wall are not normal are nutritional, allergic, infectious, and toxic.

Calcium salts are only valuable in vascular diseases to diminish capillary permeability; diminishing calcium does not produce bleeding.

In hemophilia platelets are normal but the clotting index is low; platelets at the end of an hour's count are intact normally; in hemophilia platelets fail to coalesce in capillary pipette.

Treatment of hemophilia: Theelin, 1 c.c. weekly; also mother's blood when menstruating; and, make patient allergic to various sheep and beef sera.

The speaker also mentioned hereditary hemorrhagic disease. He stated finally that the treatment for the arrest of bleeding centered around local, oral, nutritional, intramuscular, and intravenous methods.

In discussion, William C. Langston, York, asked if, in hemorrhagic diseases of the newborn, the physician can correct intracranial hemorrhage by giving the mother a high protein diet.

Dr. Kugelmass replied: In those pregnancies in which there is a hemorrhagic tendency in the offspring, the physician can control this in a second pregnancy by giving a high protein diet in the first few months of pregnancy; after the fifth month no change is noted; this causes the newborn's blood to clot more rapidly; the normal clotting time in the first few days after birth is higher than later on.

Jackson W. Allison, York: Are typhoid hemorrhages vascular hemorrhages as in other infections, and do they respond to calcium, styptase, etc.?

Dr. Kugelmass replied that agents introduced into the circulation to diminish capillary permeability should be given locally—such agents as strychnin intravenously and powdered brain or cephalin locally, or better yet, use globulin extract from the placenta locally but only on mucous membrane. Always attempt to determine the cause of bleeding.

Wallace R. Swartzwelder, York: Is there a routine procedure in the use of maternal whole blood in hemorrhage of the newborn?

Dr. Kugelmass: Many babies do not need routine maternal blood; mothers' blood is not as good as fathers' blood but is used more commonly; one ounce injected routinely will be in order but always take the clotting time.

W. Frank Gemmill, York, asked in what type of splenectomized individuals the blood may be used in the treatment of hemophilia. High protein and low carbohydrate are used in treatment when there is jaundice; does not protein produce gelation of the blood, and is the surgeon on the right track in giving glucose, etc., before operating upon jaundice patients?

Dr. Kugelmass: In hemophilia, the treatment administered to royalty is not necessarily good treatment; the blood of a splenectomized person is more valuable only for its publicity rather than actually; large transfusions periodically every 3 to 4 days are useful before operation.

In arresting local hemorrhage, remove soft clot and debris, apply tightly the local application such as cephalin or raw beef, and administer large transfusions intravenously. In jaundice, when there is bleeding, the index of clotting function should be determined and glucose intravenously may diminish capillary permeability.

Charles RCA, York: Is the sedimentation rate useful in bleeding? Too little protein is used in the diet of those suffering with nephritis and cardiac decompensation.

Dr. Kugelmass: In chronic infections such as rheumatic fever in children, the sedimentation test is used but bears no relation to the bleeding of the child.

PAUL M. REIGART, *Reporter*.

THIRD COUNCILOR DISTRICT

The annual meeting of the Third Councilor District, comprising Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Wayne, and Pike counties was held at Skytop Lodge in the Poconos on May 23; 150 physicians and their wives and guests were in attendance.

The morning was given over to a program of reports and addresses with John J. Brennan, Scranton, trustee and councilor of the Third District, presiding. After 2-minute reports by the censors of the county districts, all of which were represented at the meeting, 5-minute talks were given by Alexander H. Colwell, of Pittsburgh, president of the State Society; Maxwell Lick, of Erie, president-elect of the State Society; William H. Mayer, of Pittsburgh, chairman of the State Society Committee on Public Relations; Chauncey L. Palmer, of Pittsburgh, chairman of the State Society Committee on Public Health Legislation; Thomas R. Gagon, of Pittston, member of the State Society Committee on Public Health Legislation; and Mrs. Harry M. Kraemer, councilor of the Woman's Auxiliary for the Third District.

Morris Fishbein, of Chicago, was the guest of honor of the district meeting. Taking as his topic "Medicine and the Changing World," Dr. Fishbein said in part:

Each year the total American family budget amounts to 120 billion dollars. Of this, the largest portion is expended for automobiles and automotive parts—12 billion dollars. There is an automobile for every 4½ persons in this country—you can find the half person on any highway after the usual week-end accidents. Today there are only 2 classes of people left, "the quick and the dead." In this country 36,000 people are killed annually by motor cars, fourth in the casualty list, and yet if you told a patient that he was liable to be killed by an automobile in the next 24 hours, he would laugh at you. Tell him that he has diabetes or tuberculosis and he begins to write his will.

There has been much talk of the rising costs of medical care, but the actual upkeep on 2 bobbed heads of hair in the average American family with cutting, shampooing, waving, and what not, totals a much higher sum than the average family medical bill. When we compare the American family budget of 1890 with that of today we note that in those days 40 million dollars yearly was spent for cosmetics—mostly for perfumes and toilet water, as baths were none too prevalent—while last year 1½ billion dollars was spent for cosmetics. The cost of advertising cosmetics, alone, was greater than that required to advertise and sell 17½ billions of dollars worth of foodstuffs.

In 1919 there was one pair of silk stockings for every 2000 women in this country. In 1936 cotton stockings are a thing of the past, and silk stockings are so sheer that the average office worker needs 2 pairs daily because of "runs."

The 700 golf clubs in the United States in 1919 have increased to 8000 in 1936. Three billion dollars yearly is spent by the American public for motion pictures. Another 3 billion dollars is spent for radios, musical instruments, and saxophones.

With such increase in spending, there has been a concerted desire on the part of the average patient to have the finest in medical care. Whereas the doctor of the last century had to depend largely on his 5 senses, he now has the advantages of instruments of precision in almost endless profusion and he is expected to use them. Instead of treatment at home, hospital care is

steadily increasing with its consequent drain on the family purse.

We are directly responsible for the lack of interest taken in his personal health by the average person. We have advertised the fact that the medical profession has increased the average life expectancy by scientific methods and that if our children are immunized early in life and the adults submit to a yearly examination, there is nothing to fear. No one need fear death or disease—only automobiles. Because we have so minimized the fear of disease, it is a very rare family, indeed, which saves for illness.

Too few doctors care to inform their patients of new developments in the field of medicine for fear that they may be accused of advertising themselves. It is a known fact that in this country there is a cultural lag of 10 to 15 years before the average physician is willing or able to avail himself of new developments, i. e., 15 years after the discovery of insulin there are large numbers of physicians who use insulin without any definite idea of its action, or the rationale of its employment with a carefully balanced dietary. This same cultural lag applies to all new developments.

Medicine is directly responsible for most of the new social legislation. Prolongation of life from an expectancy of 45 years to one of 60 to 70 years means that provision must be made to take care of this group of the population who in increasing numbers are finding it impossible to care for themselves. Industrial disease legislation is generally far in advance of actual knowledge of the profession as to the actual needs, such as the present silicosis problem.

Is the medical profession to dictate how medical practice is to be adapted to the new economic era? Hugh Cabot says that the practice of medicine is no longer a profession, but must be considered a business. If this is so, and people must pay item for item with actual interest on the investment of the physician, then the annual medical bill of the nation will be tremendously increased. And if the hospitals were operated on a hotel basis, hospital care would in most cases be prohibitively expensive.

The day of the socialization of medicine is not at hand, and despite the highly publicized releases of the foundations the number of actually interested persons is inconsiderable when compared to the great body of the American people who are satisfied with the present standard of medical care, which is the highest of any country in the world.

SEVENTH COUNCILOR DISTRICT

The annual meeting of the Seventh Councilor District of The Medical Society of the State of Pennsylvania was held at the Williamsport Country Club, Williamsport, July 10. Dinner was served at 12:30 p. m. to 66 members and guests; 20 other physicians who were unable to attend the dinner arrived in time for the scientific session, which began at 2:15 p. m.

David W. Thomas, of Lock Haven, trustee and district councilor, presided. The reports of the district censors of the various counties of the Seventh Councilor District were submitted by Saylor J. McGhee, of Lock Haven, for Clinton County; John C. McAllister, of Elk County, who was unable to be present, sent his report, which was read by the chairman; Wesley F. Kunkle, of Williamsport, for Lycoming County; Elwin H. Ashcraft, of Potter County, who was unable to be present, sent his report, which was read by the chairman; Fan-

nie U. Angelicola, of Jackson Summit, gave the report for Tioga County.

The reports from the various counties showed that as a whole the members are taking an active part in the county society affairs.

Walter S. Brenholtz, of Williamsport, Lycoming County, presented the 50-year testimonials to the honored guests: William H. Follmer, Williamsport, who has practiced 54 years, and James W. Ritter, of Jersey Shore, who has practiced 52 years. Dr. Brenholtz, in presenting the certificates, paid great tribute to the recipients for the service they rendered to the public during these years. Francis P. Earley, of Ridgway, who has also practiced 50 years, was not present to receive his certificate and the chairman requested the State Society secretary, Walter F. Donaldson, to send it to the recipient together with a letter recognizing the services he has given during the past 50 years.

The visiting trustees and councilors were introduced: E. Roger Samuels, Mt. Carmel, Fourth Councilor District; Clarence R. Phillips, Harrisburg, Fifth Councilor District; Augustus S. Kech, Altoona, Sixth Councilor District; and Laurie D. Sargent, Washington, Eleventh Councilor District.

Walter F. Donaldson, of Pittsburgh, secretary of the State Medical Society, spoke on "State Medical Society Problems" and outlined the procedures that the officers are taking to meet the problems as they appear from time to time during the interim between the meetings of the House of Delegates.

Alexander H. Colwell, of Pittsburgh, president of the State Medical Society, spoke on "The Diagnosis of Heart Conditions at Two Periods of Life"—the adolescent period and the middle-age period—going into detail as to the history, symptoms, and physical signs, in order to make a diagnosis.

James S. Taylor, of Altoona, chairman of the State Society Commission on Maternal Welfare, read a paper on "Obstetrical Hazards." The paper was based upon the findings of the commission over a period of 2 years. He dealt very little with statistics but discussed the various hazards in detail.

John O. Bower, of Philadelphia, chairman of the State Society Commission on Appendicitis Mortality, was unable to appear on the program owing to the death of his brother. LaRue M. Hoffman, of Williamsport, who is a member of this commission, spoke at some length on the activities of the commission. He again mentioned the fact that the mortality from appendicitis is much higher in the United States than in practically any other country and outlined what the commission deemed was the cause. Dr. Hoffman laid great stress on the educational program which is being sponsored by this commission throughout the State of Pennsylvania during this year and asked for the co-operation of all those present to help in every manner to bring this program of education to every part of Pennsylvania.

It was decided to hold the Seventh Councilor District meeting next year in the month of May instead of July.

EIGHTH COUNCILOR DISTRICT

The annual meeting of the Eighth Councilor District of The Medical Society of the State of Pennsylvania was held June 3, at the Riverside Hotel in Cambridge Springs. George Reed, trustee and councilor, presided. An exceptionally educating and entertaining program was provided. The meeting proved somewhat discouraging to the councilor in that the representation from the 6 counties only totaled 33.

Two-minute reports were submitted by the following district censors: William H. Brennen, Crawford County; Orel N. Chaffee, Erie County; Homer A. Wilson, McKean County; Joseph S. Knapp, Mercer County; and Otis S. Brown, Warren County.

The following program prevailed. "Responsibilities of Membership, 1848 to 1938," Walter F. Donaldson, Pittsburgh, secretary, State Medical Society; "Maternal Mortality in the Eighth Councilor District," Charles G. Strickland, Erie, member of the State Society Commission on Maternal Welfare; "Social Security and Pennsylvania Legislation," Chauncey L. Palmer, Pittsburgh, chairman, State Society Committee on Public Health Legislation; "The Threat of Socialized Medicine," Maxwell Lick, Erie, president-elect, State Medical Society; "Transurethral Prostatic Resection—A Review of 532 Cases," Robert L. Anderson and James J. Lee, Pittsburgh.

Luncheon was served, followed by golf.

The following is an editorial which appeared in *The Stethoscope*, June, 1936, the official bulletin of the Erie County Medical Society.

"In the vernacular, 'where was youse guys' when Councilor Dr. George Reed staged his annual meeting of the Eighth Councilor District in Cambridge Springs

early this month? It is easy to criticize your officers and to plead ignorance of medical economics, but when an opportunity is given to hear what is going on in medical circles from accurate first-hand information by the mouthpieces of your parent organization and you fail to respond, then there is no excuse for criticism or ignorance.

"Eight counties of northwestern Pennsylvania are included in the Eighth Councilor District and only 33 physicians from this section attended the meeting which included talks on membership by the state secretary; maternal mortality by a leading member of that committee; social security in Pennsylvania legislation by an authority on this subject; and lastly the threat of socialization by the president-elect. Yet only 33 attended.

"From this lesson comes a suggestion—that hereafter the district meetings are held for the officers of the various county societies, the committee chairmen and members, and other key men of the county society. Make this a 'must' meeting, just as we have 'must' legislation. It should be almost a compulsory duty for these men to attend this annual meeting. What do you think?"

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

Your president wonders just what the doctor's womenfolk did about councilor district meetings before the auxiliary was organized. Did they take to the mountains with the doctor when he made his pilgrimages, or did they stay at home? It would seem, however, that these meetings now give to auxiliary members an opportunity to enjoy, probably more than ever before, pleasant converse with one another while their menfolk battle with weighty scientific problems, and, mayhap, golf. Be that as it may, it gave us 2 delightful excursions in July—one at Eaglesmere, at the Fourth Councilor District meeting, and one at Williamsport, at the Seventh Councilor District meeting. Another is in prospect, the Eleventh Councilor District meeting at Bedford Springs.

We marveled at the enthusiasm and vigor of these groups, for they prove that there is a vital interest in the work at hand and a fine communion of friendship that comes only to those who labor in a common cause. To one who comes

from a metropolitan area, it evokes unceasing admiration to see these women, who meet each other all too seldom, welded into a harmonious whole.

Now a word about the convention. In this issue is a tentative program; let it be indelibly impressed upon your minds that your president looks forward to greeting you at Pittsburgh, where each of you will have some definite part to play. If present plans are consummated, it should be a profitable session because of the rich program which is in the making. Speakers of note from the national organization, round-table conferences, the welcoming of a new president and her staff, the renewing of old friendships and the making of new ones—all these await you. If you have never attended a convention, make the trip this time and it will not be your last. Mrs. Herbert E. Woelfel, the chairman, has completed her program, which means not only the scheduled functions, but—what is infinitely greater—a program which will express to us all the generous and gracious spirit of hos-

pitality which is so characteristic of the women of Allegheny County. May it be our privilege and our pleasure to make her labors worth-while. Plans are made, but more than plans are needed to make for a successful convention. Attendance is the other factor. May your president greet you in Pittsburgh? That adequate preparations may be made, follow instructions and send your reservation in advance to the named chairman.

MRS. W. BURRILL ODENATT.

GREETINGS FROM THE CONVENTION CHAIRMAN

As president of the Allegheny County Auxiliary, as well as chairman of the convention of the Auxiliary to The Medical Society of the State of Pennsylvania, I extend a most hearty welcome to all members of the various county society auxiliaries throughout the state. Plans are well under way for what will prove worthy of your attendance.

The headquarters will be at the Hotel William Penn, which we all will thoroughly enjoy. All of the various functions, both social and business, will take place in these spacious quarters with the exception of a luncheon at the Shannopin Country Club, Wednesday, Oct. 7. This affair will be supplemented by a very elaborate fashion show to be given by the famous Joseph Horne Company, of Pittsburgh. This may prove to be the inspiration for your fall shopping.

Do plan to attend if it is at all possible. If your doctors are unable to attend, why not fill a car with auxiliary folk and drive to Pittsburgh? Enjoy the gorgeous fall scenery of western Pennsylvania, also the 4 convention days which will be crowded full of pleasure and good fellowship.

MRS. HERBERT E. WOELFEL.

EDITOR'S NOTE

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania is highly honored in that one of the past presidents, and a very active member, Mrs. Augustus S. Kech, of Altoona, has been made president-elect of the Auxiliary to the American Medical Association.

Congratulations and well wishes! We pledge her our support.

(MRS. GEORGE C.) JESSIE W. YEAGER.

TENTATIVE PROGRAM

THE WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Twelfth Annual Session, Pittsburgh

October 5-8, 1936

Headquarters: Hotel William Penn

Monday, October 5

12:00 Noon Reception.

12:30 p. m. Luncheon, Adonis Room, Hotel William Penn.

Presiding, Mrs. John F. McCullough.

Speakers: Mrs. Robert E. Fitzgerald, president, Woman's Auxiliary to the American Medical Association; Mrs. John O. McReynolds, founder of the Woman's Auxiliary; Mrs. W. Wayne Babcock, organizer of Pennsylvania Auxiliary; Mrs. Augustus S. Kech, president-elect, Woman's Auxiliary to the American Medical Association.

Guests of honor: Mrs. David W. Thomas, president-elect, Woman's Auxiliary to The Medical Society of the State of Pennsylvania; Mrs. J. Newton Hunsberger, past president, Woman's Auxiliary to the American Medical Association; Mrs. Virgil E. Holcombe, national chairman of program.

Subscription \$1.10.

Reservations should be sent before Sept. 28, 1936, to Mrs. Howard A. Power, 1204 Denniston Avenue, E. E., Pittsburgh.

1:30 to 2:30 p. m. Conferences. Adonis and Blue Rooms, Hotel William Penn.

Auxiliary presidents and presidents-elect, Mrs. David W. Thomas.

Archives and history, Mrs. David B. Ludwig.

Hygeia, Mrs. Cecil F. Freed.

Program, Mrs. Edward Lyon.

Public Relations, Mrs. Daniel N. Bulford.

Treasurers, Mrs. E. Kirby Lawson.

6:30 p. m. Executive Board dinner, Blue Room, Hotel William Penn.

Board meeting to follow.

Presiding, Mrs. W. Burrill Odenatt.

County presidents and presidents-elect invited to attend board meeting and dinner. Official business.

Speaker, Mrs. Virgil E. Holcombe, chairman of program, Woman's Auxiliary to the American Medical Association.

Subscription \$1.50.

Reservations to be sent before Sept. 28, 1936, to Mrs. Daniel N. Bulford, 100 East North Avenue, N. S., Pittsburgh.

Tuesday, October 6

9:00 a. m. Formal opening of convention. The Chat-terbox, Hotel William Penn.

Presiding, Mrs. W. Burrill Odenatt.

Singing, "America."

Invocation, Rev. Herbert Beecher Hudnut.

Introduction, General chairman, Mrs. Herbert E. Woelfel.

- Address of welcome, Dr. Sidney A. Chalfant, president, Allegheny County Medical Society.
- Response, Mrs. John H. Doane.
- In Memoriam, Mrs. Clarence R. Phillips.
- Minutes, Eleventh Annual Meeting, Mrs. Francis P. Dwyer.
- Report of National Convention, Mrs. Francis F. Borzell.
- Announcement of Nominating Committee, Mrs. Howard C. Frontz, chairman.
- Report of Committee on Credentials and Registration, Mrs. Vernon Thomas, chairman.
- Roll call of counties.
- Reports of officers.
- Corresponding Secretary, Mrs. R. Powers Wilkinson.
- Recording Secretary, Mrs. Francis P. Dwyer.
- Treasurer, Mrs. E. Kirby Lawson.
- Auditor's Report.
- Adjournment to the opening meeting of Medical Society of the State of Pennsylvania.
- 12:15 p. m. Auxiliary Luncheon—The Chatterbox. Hotel William Penn.
- Presiding, Mrs. Wilmer Krusen.
- Speakers: Dr. Maxwell Lick, Dr. Alexander H. Colwell, Dr. Walter S. Brenholtz, Dr. Walter F. Donaldson, Dr. Frank C. Hammond.
- Guests: Dr. W. Wayne Babcock, Dr. Lewis T. Buckman, Dr. Arthur H. Gross, Dr. Sidney A. Chalfant, Dr. David W. Thomas, Dr. W. Burrill Odenatt, Miss Ida L. Little, Mr. Lester H. Perry.
- Subscription \$1.10.
- 2:30 p. m. General Meeting.
- Presiding, Mrs. W. Burrill Odenatt.
- Minutes.
- Unfinished business.
- New business.
- Reports of standing committees (3-minute limit).
- Election of delegates to National Convention, Atlantic City, New Jersey, 1937.
- Adjournment.
- 6:30 p. m. Reception.
- 7:00 p. m. Dinner in honor of past presidents. Urban Room, Hotel William Penn.
- Presiding, Mrs. David W. Thomas.
- Entertainment to follow.
- Subscription \$1.75.

Wednesday, October 7

- 9:00 a. m. General Meeting.
- Presiding, Mrs. W. Burrill Odenatt.
- Minutes.
- Unfinished business.
- New business.
- Reports of counties (3-minute limit).
- Report of Committee on Courtesy Resolutions, Mrs. John A. Farrell, chairman.
- Report of Committee on Credentials and Registration, Mrs. Vernon Thomas, chairman.
- Address of President, Mrs. W. Burrill Odenatt.

- Report of Nominating Committee, Mrs. Howard C. Frontz, chairman.
- Election and installation of officers.
- Adjournment.
- 1:00 p. m. Reception.
- 1:30 p. m. Luncheon and Fashion Show. Shannopin Country Club.
- Subscription (including transportation) \$1.00.
- 8:00 p. m. Public Meeting of the State Society, followed by President's Reception and Ball.

Thursday, October 8

- 10:00 a. m. Post-convention Executive Board Meeting, The Chatterbox, William Penn Hotel.
- Presiding, Mrs. David W. Thomas.
- 11:00 a. m. General Meeting.
- Announcement of committee appointments.
- Presentation of program for 1936-37 by the president and chairmen of committees.
- Final report of Committee on Credentials and Registration.
- Address, Mrs. Augustus S. Kech, president-elect, Woman's Auxiliary to the American Medical Association—"The Doctor's Wife."
- Adjournment.

MINUTES OF THE GENERAL MEETING OF THE WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

The Eleventh Annual Meeting of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania was called to order by the president, Mrs. Laurrie D. Sargent, Washington, in Parlor "A" of the Penn-Harris Hotel, Harrisburg, Pa., Tuesday, Oct. 1, 1935, at 9:00 a. m.

The meeting was opened by the singing of "America," under the direction of Mrs. Helen Hartman, accompanied by Mrs. J. Landis Zimmerman, and the invocation was given by the Rev. Chester S. Simonton, pastor of the Messiah Lutheran Church, of Harrisburg.

The "In Memoriam Service," under the direction of Mrs. Clarence R. Phillips, Harrisburg, past state president, was very impressive. Mrs. Phillips placed white roses in a bowl in memory of each deceased member of the auxiliary within the past year.

Mrs. George H. Seaks gave a cordial greeting of welcome to all the officers and delegates, and Mrs. Charles H. Smith, past state president, made the response to Mrs. Seaks' greeting and accepted her greeting in behalf of the auxiliary.

It was moved by Mrs. David H. Thomas, seconded by Mrs. John F. McCullough, that the reading of the minutes of the previous meeting be dispensed with as they were printed in full in the JOURNAL.

Mrs. James F. Percy, Los Angeles, Calif., national past president, was presented to the delegates by Mrs. Laurrie D. Sargent.

Mrs. J. Newton Hunsberger, national past president, who is from Pennsylvania, was also presented to the delegates.

The Committee on Resolutions was announced by Mrs. Sargent as follows: Mrs. Frederick J. Bishop,

chairman, Mrs. R. Powers Wilkinson, and Mrs. Herbert E. Woelfel.

Mrs. David B. Ludwig asked the president to announce that all the delegates should be sure to see the exhibit of the Archives Committee in the lobby of the Penn-Harris.

Mrs. Cecil F. Freed read the report of the Thirteenth Annual Convention of the Woman's Auxiliary to the American Medical Association at Atlantic City.

A letter from Mrs. Rogers N. Herbert, president of the National Woman's Auxiliary, was read by Mrs. Frank P. Dwyer. Mrs. Herbert thanked the Pennsylvania Auxiliary for the invitation to attend the State Convention and regretted very much that she could not accept at this time.

Mrs. Carson Coover made the following report for the Committee on Credentials and Registrations: Twenty-four board members registered, 50 delegates, 20 alternates, 137 members, and 5 guests, or a total of 236 registrations to date.

Mrs. Edward Lyon reported that a list of the officers nominated for the coming year had been posted in the rear of the room.

Twenty-three county presidents responded to the roll call.

Mrs. James H. Corwin, corresponding secretary, and Mrs. Frank P. Dwyer, recording secretary, gave their reports.

Mrs. E. Kirby Lawson, treasurer, gave her report, and the auditor's report was given by Mrs. Frank P. Dwyer. Mrs. Lawson's accounts were found to be correct and in order. It was moved by Mrs. Bulford, seconded by Mrs. Brallier, that the treasurer's report be accepted. Motion carried.

Due to a tea given in the afternoon by Mrs. George H. Earle, III, wife of the Governor of the State of Pennsylvania, the election of the delegates to the National Convention in Kansas City was postponed to the morning session. The following members were nominated: Mrs. M. Fraser Percival, Philadelphia; Mrs. Wilmer Krusen, Lansdowne; Mrs. S. A. E. Brallier, Conemaugh; Mrs. Walter S. Brenholtz, Williamsport; Mrs. Laurrie D. Sargent, Washington; Mrs. Francis F. Borzell, Philadelphia; Mrs. J. Newton Hunsberger, Norristown; Mrs. David W. Thomas, Lock Haven; Mrs. George C. Yeager, Philadelphia; Mrs. Edward Lyon, Williamsport; Mrs. Harry M. Kramer, Scranton; Mrs. Walter F. Donaldson, Pittsburgh; Mrs. Edgar S. Buyers, Norristown, and Mrs. Daniel N. Bulford, Pittsburgh.

It was moved by Mrs. Bulford, seconded by Mrs. Fosselman, that the nominations be closed. Motion carried.

Mrs. Wilkinson moved that the delegates be elected by acclamation. The motion was seconded by Mrs. Woelfel. Motion carried.

Mrs. Daniel N. Bulford, chairman of the Public Relations Committee, and Mrs. David W. Thomas, chairman of the District Councilors' Committee, gave their reports. Mrs. Frank P. Dwyer read the *Hygeia* report as Mrs. Howell was ill and not able to attend.

It was moved by Mrs. Ludwig, seconded by Mrs. Johnson, that the morning session adjourn. Motion carried.

Meeting adjourned at 11:00 a. m.

Tuesday Afternoon, Oct. 1, 1935

The meeting was called to order by the president, Mrs. Laurrie D. Sargent.

It was moved by Mrs. Ludwig, seconded by Mrs.

Yeager, that the reading of the minutes of the morning session be dispensed with.

Under new business Mrs. Lawson recommended that the county auxiliary fiscal year end with the State Auxiliary fiscal year, which is Aug. 31. After much discussion it was moved by Mrs. Wilkinson that the books close May 31. This motion was seconded by Mrs. Seaks. A vote was taken and it passed by a vote of 25 to 18.

Mrs. David B. Ludwig, chairman of the Archives Committee, gave her report.

Mrs. Wm. A. LaRoss, chairman of the By-Laws Committee, submitted 2 changes which were read by Mrs. Frank P. Dwyer. The changes were recommended by the Executive Board and are as follows: Article 5, Section 2, and Article 11, Section 1, of the Constitution. Mrs. Brenholtz moved that the changes be adopted. This motion was seconded by Mrs. Kech. Motion carried.

Mrs. John R. Davies, chairman of the Public Health Education Committee and Mrs. George C. Yeager, chairman of the Publicity Committee, gave their reports.

Mrs. Clarence R. Phillips, chairman of the Necrology Committee, gave her report and asked that, upon the death of any member of the auxiliary, the county president send her the name, residence, date of death, and if she had ever held an office.

Mrs. Bulford announced that she had outlines with her and any member may secure a copy. She will discuss the outline on Thursday, Oct. 3.

Mrs. Augustus S. Kech, chairman of the Legislative Committee, gave her report.

The meeting adjourned at 3:30 p. m.

Wednesday Morning, Oct. 2, 1935

The Wednesday session of the Eleventh Annual Meeting of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania was called to order by the president, Mrs. Laurrie D. Sargent, Washington, in the Penn-Harris Hotel, Wednesday, Oct. 2, 1935, at 9:05 a. m.

It was moved by Mrs. W. F. Weitzel, seconded by Mrs. Freed, that the minutes of the previous meeting be dispensed with. Motion carried.

The president introduced Dr. Arthur C. Morgan, of Philadelphia, who spoke to the delegates on "Medical Economics."

Under unfinished business Mrs. John F. McCullough, chairman of the Budget Committee, gave her report. The budget was referred to the assembly by the Executive Board for their consideration and approval. After much discussion concerning the allotment for the year book, Mrs. Krusen explained that it would be necessary for the Committee for the Year Book to keep within the \$400 as allotted in the budget. It was moved by Mrs. F. I. Stifort, seconded by Mrs. Lowe, that the budget be accepted. A standing vote was taken and the budget was adopted by a vote of 40 to 29.

Mrs. Craig made the motion, seconded by Mrs. Eisenberg, that a copy of the year book be sent to the Executive Board, county presidents, and officers. The Year Book Committee should use its discretion as to who should receive them. After much discussion Mrs. Craig withdrew her motion.

Thirty-eight reports representing 40 counties were given to the secretary to be filed.

The report of the Resolutions Committee was read by Mrs. Frederick J. Bishop and filed with the secretary.

Mrs. Carson Coover, chairman of the Committee on Credentials and Registrations, made the following report: Twenty-five board members, 85 delegates, 36 alternates, 234 members, and 15 guests, or a total of 395 registrations at this time.

Mrs. Clarence R. Phillips moved that a letter of loving sympathy be sent to Mrs. Maurice I. Stein. This motion was seconded by Mrs. W. Burrill Odenatt. Motion carried.

Mrs. Sargent gave her report for the year 1934-35 and was given a rising vote of appreciation.

A report of the Nominating Committee was given by Mrs. Edward Lyon as follows:

President-elect, Mrs. David W. Thomas, Lock Haven.

First vice-president, Mrs. William H. Treibel, York.

Second vice-president, Mrs. Walter F. Donaldson, Pittsburgh.

Third vice-president, Mrs. Ezra A. Whitney, Elwyn.

Recording Secretary, Mrs. Frank P. Dwyer, Renovo.

Treasurer, Mrs. E. Kirby Lawson, Harrisburg.

Directors (Two years each): Mrs. Laurie D. Sargent, Washington; Mrs. Joseph W. Shaffer, Harrisburg; Mrs. Clarence W. Prevost, Pittston.

It was moved by Mrs. Brallier, and seconded by Mrs. Santee, that the officers be elected by acclamation. Motion carried.

The question was discussed with regard to the legality of voting collectively for the officers. Mrs. Brallier withdrew this motion.

There being no nominations from the floor, it was moved by Mrs. Brallier, seconded by Mrs. Santee and carried, that the election be by acclamation.

The president declared the new officers duly elected. The officers and directors were introduced and installed by Mrs. Laurie D. Sargent.

Mrs. Laurie D. Sargent, retiring state president, presented the gavel to Mrs. W. Burrill Odenatt, the incoming president, and asked that all the members give the new president the same loyal support that was given her throughout the year.

Mrs. Odenatt greeted the delegates and said she would outline her year's work on Thursday, Oct. 3.

There being no further business the meeting adjourned at 11:50 a. m.

MRS. FRANCIS P. DWYER, *Secretary*.

POST-CONVENTION GENERAL MEETING 1935

The general meeting of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania was called to order at 11:15 a. m., Thursday, Oct. 3, 1935, in the Penn-Harris Hotel by the president, Mrs. W. Burrill Odenatt.

The president gave her outline for the coming year.

Mrs. R. Powers Wilkinson, Philadelphia, was appointed corresponding secretary by Mrs. Odenatt.

There were 70 delegates and members at the post-convention meeting.

The committee chairmen appointed by the president and ratified by the board were presented to the delegates and members.

Dr. Ruth Hartley Weaver, Philadelphia, spoke on the work of the Maternal Health Clinic and urged auxiliary members to carry on the work in their communities. Dr. Weaver announced that the county medical societies will provide speakers on this subject.

Mrs. George C. Yeager, Philadelphia, chairman of the Publicity Committee, gave an outline of her report and asked for the name of the publicity chairman of each

county. Mrs. Yeager announced that all reports should be typed, double-spaced, and written on one side of the paper, and the information should be sent to her by the tenth of each month. The chairman expressed a desire to have a report monthly from each county.

Mrs. Daniel N. Bulford, Pittsburgh, chairman of the Committee on Public Relations, gave an outline of her work for the coming year. She suggested that the county committees keep a few of the members on this committee from year to year. Mrs. Bulford also gave a brief outline of the Health Institute, which the president announced is her chief object for the year.

Mrs. David B. Ludwig, Pittsburgh, chairman of the Committee on Archives, gave an illustrated talk and announced that she would appreciate receiving any old instruments used by Pennsylvania doctors and the history of such instruments.

Mrs. Augustus S. Kech, Altoona, chairman of the Legislative Committee, was introduced and announced that she could not give any plan, as her committee was a creature of the future.

Mrs. Cecil F. Freed, Reading, chairman of *Hygeia*, asked that the counties co-operate with her 100 per cent this year.

Mrs. Clarence R. Phillips, Harrisburg, chairman of the Necrology Committee, requested that each county president send to her the names of deceased members.

Mrs. Walter S. Brenholtz, Williamsport, chairman of the Year Book Committee, made a request that each county president send to her a list of the members of her auxiliary for publication in the Year Book.

Mrs. Wilmer Krusen suggested that the county presidents make triplicate copies of the historian's report so that the State Chairman of Archives may have a copy.

Mrs. George H. Seaks, Harrisburg, gave a final report of the Committee on Credentials and Registration as follows: Delegates, 88; alternates, 39; board members, 25; members, 277; guests, 17; total, 446.

Mrs. Howard Mellor, of West Chester, gave a short address on "Health Education." She outlined the work of the Chester County Auxiliary, particularly stressing it in connection with the campaign of the county to reduce the mortality of appendicitis.

The meeting adjourned at 12:25 p. m.

MRS. FRANCIS P. DWYER, *Secretary*.

COUNTY AUXILIARY REPORTS

Berks.—The regular meeting of the auxiliary in April was addressed by Mrs. Charles Creitz, who spoke on "Japanese Women." Mrs. Creitz emphasized the difference in status between American and Japanese women. There was instrumental music. A number of our members attended the Health Institute in Philadelphia.

The May meeting featured the election of officers. Mrs. Cecil F. Freed was elected president. The program consisted of an illustrated talk on art by Italo de Francesco, head of the art department, Senior High School, Reading, and selections by the mixed quartet of the Senior High School. Mrs. Richard C. Travis, past president, has moved from Reading to Indianapolis, Indiana.

The June meeting was a Reciprocity Luncheon at the Reading Country Club. The retiring president, Mrs. Paul C. Craig, gave her annual report. Mrs. W. Burrill Odenatt, State President, spoke on "Echoes of the National Convention in Kansas City." Guests were present from Philadelphia, Norristown, West Chester, Lancaster, and Buffalo, New York.

Blair.—A luncheon business meeting was held by the auxiliary, Apr. 28, at the Penn Alto Hotel, Altoona, with the president, Mrs. David Kauffman, presiding. The speaker was Dr. Harold F. Moffitt, president of the Blair County Medical Society.

On June 22, a meeting was held at the Blairmont Country Club. Following the luncheon, Mrs. Augustus S. Kech, the honor guest, who was recently made president-elect of the National Auxiliary, was presented with a gift from the membership. The presentation was made by Mrs. William R. Brewer. It was voted to send \$75 to the Medical Benevolence Fund for 1936.

Greene.—Mrs. R. E. Brock was hostess to the auxiliary on May 12 at her home. Mrs. James A. Knox, the program leader, read an article on "Control of Cancer." There were guests from Woonsocket, R. I., and Fairmount, W. Va. Refreshments were served.

Lehigh.—The auxiliary was entertained by the president, Mrs. J. Treichler Butz, at a dessert-bridge at the Elks' Club.

Lycoming.—The regular monthly business meeting of the auxiliary was held at the home of Mrs. William Devitt at Devitt's Camp, Allenwood, Pa., on June 12.

The following officers for the ensuing year were elected and installed: President, Mrs. W. Clair Bastian; first vice-president, Mrs. Ross K. Childerhose; second vice-president, Mrs. Frederick E. Sanford; third vice-president, Mrs. Thomas M. West; treasurer, Mrs. Archibald M. Cook; recording secretary, Mrs. Reynold M. Grieco; corresponding secretary, Mrs. Carl H. Senn; directors—Mrs. James H. Burrows, Mrs. Walter S. Brenholtz, and Mrs. John Campbell.

The society has recently paid its annual contribution of \$150 to the Medical Benevolence Fund, also \$5 to the Crippled Children's Fund.

Mrs. Ernest Williams, of Catawissa, a former member of the auxiliary, made and donated a patchwork quilt, the proceeds from the sale of which are to be given to the Williamsport Hospital.

The auxiliary was represented by Mrs. Wm. A. Ford, Mrs. Thomas M. West, and Mrs. James H. Burrows at the luncheon and the business sessions of the one-day Institute on Tuberculosis which was held in May at the Y. W. C. A.

At this meeting arrangements were made for the annual District Councilor luncheon meeting of the Seventh District that was held in Williamsport at the Woman's Club, July 10. Mrs. W. Burrill Odenatt, of Philadelphia, State President, was the guest of honor.

Tea was served.

Montour.—The auxiliary held its annual meeting at the Danville State Hospital on May 29 in connection with the observance of Mental Hygiene Day. Mrs. Charles L. Johnston, president, had charge of the meeting. The auxiliary members were the guests of the hospital at luncheon. Dr. E. Roger Samuel, Mt. Carmel, a trustee and councilor of the Pennsylvania State Medical Society, addressed the members, stressing particularly the work of the auxiliary for the Medical Benevolence Fund.

The following officers were elected: President, Mrs. Leslie R. Chamberlain; vice-president, Mrs. Roy E. Nicodemus; secretary and treasurer, Mrs. Horace V. Pike.

On June 5, the auxiliary gave a luncheon at the Merrill Tea Room, Danville, in honor of Mrs. W. Burrill

Odenatt and Mrs. David W. Thomas, respectively president and president-elect of the State Auxiliary. Mrs. Henry F. Hunt, district councilor of the Fourth District, presided. Addresses were made by Mrs. Odenatt and Mrs. Thomas.

Schuylkill.—The annual benevolence party was held at Shenandoah, May 1. Mrs. Clemens S. Burke presided.

On June 9, the auxiliary held a session with 26 members present at the Locust Mountain Hospital, with Dr. and Mrs. C. J. Ulshafer as hosts.

Officers for the ensuing year were elected: President, Mrs. Newton H. Stein; president-elect, Mrs. Henry A. Dirschedl; first vice-president, Mrs. Ivor D. Fenton; recording secretary, Mrs. Charles V. Hogan; corresponding secretary, Mrs. William J. Cress; treasurer, Bessie Moore; directors, Mrs. Francis M. Quinn, Mrs. Clemens S. Burke, and Mrs. William F. Darkes.

Seventh Councilor District.—The annual meeting of the woman's auxiliaries of the Seventh Councilor District of The Medical Society of the State of Pennsylvania was held on Friday, July 10, at the Woman's Club, Williamsport. There was a combined business meeting and luncheon.

The following program was given: Address, Alexander H. Colwell, president, State Medical Society; Address of Welcome, Mrs. Lloyd E. Wurster, Williamsport; Response, Mrs. Augustine C. Luhr, St. Marys; Address, "The Auxiliary and Its Purpose," Mrs. W. Burrill Odenatt, Philadelphia, president, Woman's Auxiliary to The Medical Society of the State of Pennsylvania; Address, "Legislative Problems," Mrs. Augustus S. Kech, Altoona, president-elect, Woman's Auxiliary to the American Medical Association; "Kansas City Convention," Mrs. David W. Thomas, Lock Haven, president-elect, Woman's auxiliary to The Medical Society of the State of Pennsylvania.

Medical News

Births

TO DR. AND MRS. WILLIAM A. MYERS, of York, a daughter, late in June.

TO DR. AND MRS. BENJAMIN SCHNEIDER, of Danville, a son, Robert Henry, June 23.

TO DR. AND MRS. W. GORDON MCDANIEL, of Philadelphia, a son, W. Gordon McDaniel, Jr., May 22.

Engagements

MISS ANN B. SHINDEL, of Reading, and Dr. Henry C. Schneider, of Philadelphia.

MISS VIRGINIA WELLS, daughter of Dr. and Mrs. G. Harlan Wells, and Mr. Paul Maloney, all of Philadelphia.

MISS EVELYN H. THOMPSON, of Brookline, Mass., and Mr. David Riesman, Jr., son of Dr. and Mrs. David Riesman, of Philadelphia.

MISS ELIZABETH FERGUSON, daughter of Dr. and Mrs. William Norman Ferguson, and Mr. Julian Waldo Story, all of Philadelphia.

MISS CISILY TOWNSEND CHAPIN, daughter of Dr. and Mrs. David Raymond Chapin, of Ardmore, and Mr. Robert Allen Wilson, of Scranton.

Marriages

DR. RUTH FRAZER HARRAL, of Drexel Hill, to Dr. Leo Boyes Freeman, of Philadelphia, June 20.

MISS SARA ANNE SMITH, of Hazleton, to Dr. William H. M. Erb, of Sassamansville, Pa., July 6.

MISS GENEVIEVE D. HEYL, of Elizabeth City, N. C., to Dr. Joseph A. Gilmartin, of Pittsburgh, Apr. 17.

MISS MARY ELIZABETH PARKER, of Bethlehem, to Dr. Donald Keith Coleman, of Rochester, in Philadelphia, May 28.

MISS JULIA SETTLE MAIER, daughter of Dr. F. Hurst Maier, to Mr. Irving Livingstone Gloninger, all of Philadelphia.

MISS MARGARET MILLER LANDES to Dr. Richard Glenn Hahn, son of Dr. and Mrs. Franklin J. Hahn, July 15, all of Bath.

MISS FRANCES GOULD RYMAN, of Summit, N. J., to Dr. Rudolph Beale, of Lemoyne, June 27. Dr. Beale is the son of Mrs. Benjamin F. Beale and the late Dr. Beale, of Duncannon, Pa.

Deaths

JOHN L. AXTELL, Cochranston; Western Reserve University Medical Department, Cleveland, 1882; aged 76; died Apr. 6, of chronic myocarditis.

HORACE PALMER BECK, Newport, R. I.; University of Pennsylvania School of Medicine, 1897; aged 62; died July 5, of heart disease. Dr. Beck was a native of Wilkes-Barre. He rowed on the varsity crew for 4 years and was very active in yachting and naval matters. He is survived by his widow, a son, a brother, and a sister.

JAMES FINLEY BELL, Englewood, N. J.; New York University Medical College, 1883; aged 76; died June 16. He was born in Aaronsburg, Pa., and entered practice in Glen Hope, Pa. Later he was appointed to the staff of the State Hospital on Wards Island, then to Brentwood, on Long Island. Dr. Bell founded the Englewood Baby Dispensary in 1910. He was noted for his studies in bacteriology in relation to milk. On Mar. 13, 1933, the Bergen County (N. J.) Medical Society honored Dr. Bell with a triple celebration; it was his birthday, his fiftieth wedding anniversary, and his fiftieth year of medical practice.

His widow, 3 sons (one of whom is Dr. Alfred L. Bell, Tenafly, N. J.), and 2 daughters survive.

HENRY LEANDER BERNARDY, Philadelphia; University of Pennsylvania Medical School, 1900; aged 60; died from heart disease, June 30. Dr. Bernardy, who was born in Philadelphia, a son of the late Dr. Henry L. Bernardy, was an instructor in applied anatomy at Jefferson Medical College. He was one of the organizers of fencing at the University of Pennsylvania. He was a member of his county and State medical societies and the A. M. A. He is survived by his sister, Eugenia M. Bernardy, D.D.S.

WILLIAM BLAIR, Ann Arbor, Mich.; University of Michigan School of Medicine, 1893; aged 66; died July 11, at his home. Dr. Blair formerly practiced in Harrisburg, Pa., but has practiced for the past 40 years in Ann Arbor. He was a brother of Dr. Thomas S. Blair and Miss Mary S. Blair, formerly of Harrisburg, Pa.

WILLIAM J. BRYSON, Hays; Medico-Chirurgical College of Philadelphia, 1903; aged 75; died Apr. 5, of hypostatic pneumonia.

ANDREW DOUGLAS CARTER, Philadelphia; University of Pennsylvania School of Medicine, 1895; aged 65; died at Ocean City, N. J., June 21. He was a member of his county and State medical societies and a Fellow of the A. M. A. His wife survives.

ALQUIN J. DAVIS, Farmingdale, L. I.; University of Pennsylvania School of Medicine, 1909; aged 50; died June 18, of pneumonia.

Dr. Davis was born in Plymouth, Pa., received his preliminary education in the Plymouth public schools,

and at Pennsylvania State College. He began practice at Scranton, Pa., in 1909, after serving his internship at the Wilkes-Barre City Hospital and the Scranton State Hospital. He remained in Scranton until 1917, leaving for 2 years of hospital work at Ray Brook, Pa., after which he came to Nassau County to assist in the establishment of the Nassau County Sanatorium at Farmingdale, L. I., of which institution he was superintendent for 17 years. He was on the consultation staff of 3 other hospitals.

He was stricken at his summer home in Buck Hill Falls, Pa., and returned to Farmingdale for treatment, where he died.

Dr. Davis is survived by his widow, a daughter, and a son.

JOHN MOORE DELO, Philadelphia; Medico-Chirurgical College of Philadelphia, 1909; aged 61; died July 15. Dr. Delo was born in Altoona. He is survived by his wife, his father, and a brother.

ROBERT BRECKENRIDGE ELDERDICE, McKnightstown (Adams County); Miami Medical College (Cincinnati, O.), 1868; aged 89; died June 28. Dr. Elderdice fought 10 months with the Union forces in the Civil War before age 17. He retired some time ago.

ALEXANDER RAE EVANS, Ardmore; Medico-Chirurgical College of Philadelphia, 1905; aged 69; died Apr. 20, of cerebral thrombosis. Dr. Evans was a member of the Lower Merion Board of Health for many years.

EDWARD EVERETT, Dushore; Jefferson Medical College, 1868; aged 89; died at the Robert Packer Hospital, Sayre, June 30. He was born Feb. 12, 1847. He was made a nestor of the Lycoming County Medical Society, Aug., 1925. At the annual councilor district meeting in July, 1933, he was made an affiliate member of his county society, and at that time had been in active practice 65 years.

CARROLL FOX, Medical Director, U. S. Public Health Service, died at Rosebank, N. Y., on May 24. Dr. Fox was born in Philadelphia, Pa., Sept. 3, 1874, and was graduated in medicine from the University of Pennsylvania Medical School in 1897. His internship was served at the Emergency Hospital, Carbondale, Pa. He entered the Public Health Service in 1899 as assistant surgeon and was promoted through the various grades to medical director in 1930. During the World War Dr. Fox was commissioned in the Medical Corps of the Navy. He had 2 tours of service in the Philippines, first as quarantine officer 1902-3, and assistant director of health of the Philippines 1910-13. Dr. Fox had a most distinguished service in the Public Health Service. He was an authority on fleas as carriers of disease, especially in connection with bubonic plague. Dr. Fox was an enthusiastic member of the Association of Military Surgeons. He was buried in Arlington National Cemetery with full military honors.—*Military Surgeon*, July, 1936.

JOHN BUNTING HAINES, Drexel Hill; Jefferson Medical College, 1916; aged 46; died suddenly of heart disease, June 28. He was a member of the American Urological Association. He is survived by his wife and a son.

PERCIVAL J. HERMAN, Selinsgrove (Snyder County); Cincinnati College of Medicine and Surgery, Ohio, 1876; aged 84; died July 15. He was a member of the Northumberland County Medical Society, the State Medical Society, and the A. M. A. He is survived by his widow.

HARVEY PETER HESS, Pine Grove (Schuylkill Co.); Hahnemann Medical College of Philadelphia, 1896; aged 64; died June 22. Dr. Hess was born near Lickdale, Lebanon Co., Pa., the son of the late George W. and Sarah J. Hess. Shortly after entering practice he was elected a director of the Pine Grove National Bank and Trust Company, and later was elected to the presidency. He also served as a member of the school board. He is survived by his wife and a brother.

GEORGE A. HOLLIDAY, Pittsburgh; University of Pittsburgh School of Medicine, 1897; aged 65; died July 9. Dr. Holliday specialized in urology. He was a member of his county and State medical societies and a Fellow of the A. M. A.

EARL E. HOUCK, DuBois (Clearfield Co.); Baltimore Medical College, Md., 1906; aged 56; died June 27, of an acute cardiac condition. Dr. Houck was the son of George F. and Sarah E. Houck and was born at Purchase Line, Indiana County, July 4, 1880. From 1897 to 1901 he taught school in Greene Township, Indiana County. He had a prominent part in the organization of the Maple Avenue Hospital Association, and upon completion of the hospital was one of the staff surgeons. He did graduate work at the Polyclinic Hospital in New York, the Mayo Clinic, the Crile Clinic, and in Germany and England. He was a member of his county and State medical societies, a Fellow of the A. M. A., and a Fellow of the American College of Surgeons.

CHARLES B. HUNT, New Castle; Baltimore Medical College, Md., 1891; aged 69; died June 15.

JESSE H. KING, Worthington; University of Pittsburgh School of Medicine, 1887; died June 26.

JOHN H. LLOYD, Erie; Jefferson Medical College, 1896; aged 63; died June 2, of tuberculosis. Dr. Lloyd had spent more than 4 years at the Veterans Hospital in Aspinwall, returning to his home last fall.

JAMES A. MILLER, Grampian (Clearfield Co.); University of Pittsburgh School of Medicine, 1897; aged 73; died July 11, of pneumonia. He was examiner for a number of life insurance companies, a Pennsylvania Railroad physician, and a member of the local school board for a number of years. He was made an affiliate member of the Clearfield County Medical Society in 1933. Dr. Miller was married twice. His second wife and 4 children survive him (2 children were by his first wife).

JOSEPH G. MOORE, Philadelphia; Temple University School of Medicine, Philadelphia, 1918; aged 57; died June 6. He was a member of his county and State medical societies and a Fellow of the A. M. A.

THOMAS W. RAPER, Williamsport; Jefferson Medical College, 1897; aged 79; died June 29, following a protracted illness. He was the son of the late Dr. and Mrs. Thomas Raper, and was born in Lairdsville, Pa., Nov. 10, 1857. He practiced at Lairdsville until 1907 when he moved to Williamsport. He was married in 1885 to Miss Mary A. Vroman, who with 2 sons and a daughter survive. He was an affiliate member of his county society and a member of his State Society and the A. M. A.

JOHN M. ST. CLAIR, Indiana; University of Pennsylvania School of Medicine, 1875; aged 88; died Mar. 29, of arteriosclerosis.

HORACE STOFFLET SAYLOR, Altoona; Temple University School of Medicine, Philadelphia, 1915; aged 47; died Apr. 5, of posttraumatic epilepsy. Dr. Saylor was a relief doctor for the Pennsylvania Railroad Company for many years.

JOHN FRANKLIN SNYDER, Pittsburgh; University of Pittsburgh School of Medicine, 1931; aged 29; died Mar. 22, of general peritonitis and cerebral hemorrhage. Dr. Snyder was assistant resident physician to the Municipal Hospital for Contagious Diseases.

WILLARD SPRINGER, Wilmington, Del.; University of Pennsylvania School of Medicine, 1874; aged 84; died June 26. Dr. Springer was graduated from Lafayette College in 1871, taught school for a time in Easton, Pa., and was one of the oldest practicing physicians in Delaware. He was chairman of the board of the Industrial Trust Company, Wilmington, and was the first president of the New Castle County Medical Society,

and a past president of the Medical Society of the State of Delaware. He is survived by a widow, 2 daughters, and 2 sons, one of whom is Dr. Harold L. Springer, of Wilmington.

GEORGE A. STRADER, Philadelphia; Hahnemann Medical College, 1902; aged 62; died June 26 at his summer home, Norway, Me., from heart disease. He is survived by a brother.

EVER WALTER, Williamsport; Jefferson Medical College, 1880; died June 2, following an operation for gallbladder disease. Dr. Walter was born in Union County Nov. 20, 1853. Upon graduating in medicine he located in Kansas and after 5 years removed to Ohio where he remained a few years in general practice. He then came to Pennsylvania and conducted a drug store in 3 different places at different times. He came to Williamsport about 18 years ago but was not engaged in the practice of medicine, having retired several years previously. He became actively engaged in buying real estate which continued until the time of his death.

He is survived by his widow and a daughter by his first wife.

MRS. LOUIS S. WEAVER, wife of Dr. Weaver, of York, died July 11, after a lingering illness.

RUFUS B. WEAVER, Philadelphia; Pennsylvania Medical College, 1862; aged 95; died July 15 from arteriosclerosis. Dr. Weaver was born in Gettysburg and obtained his early education at the local schools and was graduated in 1862 from Pennsylvania College with the degree of A.B., receiving his M.A. degree 3 years later. He was appointed demonstrator in anatomy at the Hahnemann Medical College in 1869; 7 years later he was appointed lecturer in regional anatomy, and from 1896 until his retirement in 1925 he was professor of applied anatomy. His most famous contribution to medical science is the dissection of the complete nervous system of a human being in 1888. This specimen is preserved and on exhibition at the college.

MRS. ALICE EMORY WILMER, Centreville, Md., aged 81, died July 17. Dr. Harry B. Wilmer, of Philadelphia, is a son.

JOHN D. WILSON, Scranton; Jefferson Medical College, 1905; aged 55; died June 20, following a heart attack. Dr. Wilson was born in Indiana, Pa., and was graduated from the Indiana County State Teachers' College. After obtaining his medical degree he studied extensively in Europe. Upon returning to this country he was named assistant to the late Dr. W. M. Coplin, professor of pathology at Jefferson Medical College. In 1909 he was made pathologist and bacteriologist of the Scranton State Hospital. He served in that capacity for 7 years and in 1916 was appointed a chief of the medical staff of the hospital. He was a member of his county and State medical societies, the American College of Physicians, the American Heart Association, and a Fellow of the A. M. A. He was a veteran of the Spanish-American War. In 1910 Dr. Wilson was married to Helen Sherman Mott, who with a son and daughter survives him.

Miscellaneous

DR. J. THEODORE VALONE, of Warren, is in attendance at the summer medical school at Harvard.

DR. HARRY B. THOMAS, of York, has completed a short course in gastro-enterology in Boston, Mass.

DRS. EDWIN R. ANDERSON AND A. FOLLMER YERG, of Warren, have recovered from operations for appendicitis.

THE NEW YORK HOMEOPATHIC MEDICAL COLLEGE announces that the name of the college has been changed to New York Medical College.

DR. CLIFFORD J. LEWIS, of DuBois, has been undergoing treatment at Binghamton, N. Y., for a blood stream infection.

DR. MARTHA TRACY, dean of the Woman's Medical College of Pennsylvania, after a year's leave of absence, resumed her duties July 1.

DR. CHARLES L. FACKLER, of York, is spending 2 weeks doing summer work in the U. S. Navy. Mrs. Fackler and daughter, Jean, are touring Europe.

DR. JAMES E. KAHLER, resident pathologist at the Reading Hospital, was appointed to a fellowship in pathology at the Mayo Clinic and began his duties July 1.

RIGHT TO PROCLAIM MEMBERSHIP.—Active members will be allowed to state upon their prescription blanks that they are members of The Philadelphia County Medical Society.

DR. JOHN A. MCKENNA, Lansdowne, is a patient in the Fitzgerald Mercy Hospital, Darby, due to the amputation of a leg for osteomyelitis following an injury sustained a year ago.

DR. HAROLD HAYS, of New York City, has been appointed director-general of the American Medical Editors' and Authors' Association, to succeed Dr. H. Lyons Hunt, resigned.

DR. HOBERT A. REIMANN, professor of medicine at the University of Minnesota Medical School, has been elected Magee professor of practice of medicine and clinical medicine in the Jefferson Medical College.

THE MEETING OF THE WEST SECTION, Fifth Councilor District, was attended by 50 members and their wives on July 16, at the York Country Club. Dr. Francis C. Grant, of Philadelphia, spoke on "Cranial Injuries."

DR. AND MRS. ELMER E. NEFF, of Altoona, sailed on June 30 for a 6-weeks' trip to Iceland, North Cape, Norway, Sweden, and Russia. During the past 8 years they have crossed the Atlantic Ocean more than a dozen times.

DR. GABRIEL TUCKER, of Philadelphia, sailed on July 11 aboard the *S. S. Champlain*, to be a guest speaker at the meeting of the British Medical Association at Oxford, England, July 21-25. Dr. Tucker's subject was "Tumors of the Larynx."

DR. ESMOND R. LONG, director of the Henry Phipps Institute of the University of Pennsylvania, was elected president of the National Tuberculosis Association at the New Orleans meeting.

PRIZES TO INTERNS.—The Philadelphia County Medical Society will award prizes in the amount of \$25 each for the 3 best papers written by hospital interns in the County of Philadelphia with the understanding that these papers be read before the society on Interns' Night.

AT THE COMMENCEMENT EXERCISES of the University of Pittsburgh held June 10, Dr. Irvin D. Metzger, of Pittsburgh, received the honorary degree of doctor of science. Dr. Metzger has been chairman of the Board of Medical Education and Licensure of Pennsylvania for more than 15 years.

THE WISTAR INSTITUTE OF ANATOMY, Philadelphia, has announced plans for the establishment of a department of nutrition. The new department will devote special study to the food problem not only in animals but also in mankind. One branch will be at the institute and another at the Effingham B. Morris Biological Farm near Bristol.

THE FOLLOWING OFFICERS were elected for one year at the annual meeting of the Eye Section of the Philadelphia County Medical Society, held in May, 1936: Chairman, Dr. Sidney L. Olsho; vice-chairman, Dr. Walter I. Lillie; secretary, Dr. Edmund B. Spaeth; and editor of publications, Dr. Louis Lehrfeld.

DR. JAMES A. GREENWAY, director of the Department of University Health at Yale since its establishment in 1916, retired in June. He will be succeeded by his assistant, Dr. Orville F. Rogers. The department is considered a pioneer in its field. Twenty years ago, when it was established, 497 students applied for advice and assistance. Last year the department recorded 34,100 consultations.

DR. CLAIR G. SPANGLER, former chief resident physician at the Reading Hospital, has been appointed secretary of the Berks County Medical Society to fill the unexpired term of Dr. Richard C. Travis, recently resigned. Dr. Spangler and his bride recently returned from their honeymoon. Dr. John Waring, who has been surgical resident at the Reading Hospital, has been appointed house physician to fill Dr. Spangler's position.

DR. SYDNEY L. WRIGHT, of Glenside, Pa., has been appointed director of membership of the Franklin Institute, Philadelphia. Dr. Wright has resigned as a member of the faculty of the Medical School of the University of Pennsylvania to devote himself entirely to his activities at the Franklin Institute. He has been associate director in charge of the Medical Section for 3 years and will continue in that capacity.

THE PRESIDENT-ELECT OF THE NATIONAL AUXILIARY.—At the annual meeting of the Woman's Auxiliary to the American Medical Association recently held at Kansas City, the National organization again reached out and tapped the shoulder of a member of the Pennsylvania delegation for president-elect, Mrs. Augustus S. Kech, of Altoona. Mrs. Kech is the wife of Dr. Augustus S. Kech, a trustee and councilor of the State Medical Society. Congratulations are extended to the Kechs on this signal honor.

THE FOLLOWING PHYSICIANS have been appointed on the staff of the Philadelphia General Hospital: Drs. Grant O. Favorite, H. Russell Fisher, and Hunter S. Cook, assistant pathologists; Dr. Harvey Bartle, Jr., assistant neurologist; Dr. Gabriel M. Epstein, assistant pediatricist; Dr. DeHaven Hinkson, assistant physician, outpatient clinic; Dr. Rubin M. Lewis, assistant surgeon, division of thoracic surgery; Dr. Thomas Rathmeall, assistant neurologist, and Dr. George A. Richardson, assistant bronchoscopist. Dr. Benjamin P. Weiss is acting neurologist to succeed the late Dr. Clarence A. Patten.

THE FIFTY-NINTH ANNUAL CONVENTION AND EXHIBITION of the Pennsylvania Pharmaceutical Association was held at the Bellevue-Stratford Hotel, Philadelphia, June 15-18. The following officers were elected: President, Henry V. DeHaven, of West Chester; vice-president, George F. Young, McKeesport; second vice-president, Nathan Zonies, Philadelphia; third vice-president, R. S. Raleigh, Kingston; secretary and treasurer, J. B. Pilchard, Philadelphia.

At the annual banquet held June 17, Dr. Wilmer Krusen, president of the Philadelphia College of Pharmacy and Science, was toastmaster.

THE MONTGOMERY COUNTY (PA.) MEDICAL SOCIETY has purchased the Ersine Tennis Club, of Norristown, for \$11,250, possession being taken July 1, 1936.

This brings to fruition the plans of the society, dating from the starting of a building fund in 1905, when the late Dr. Oscar H. Allis, Philadelphia surgeon, who devised the Allis Ether Inhaler, etc., presented a \$10 gold piece to the society as a nucleus for the Permanent Home Building Fund. Dr. Walter J. Stein is president and Dr. Edgar S. Buyers is secretary.

Dr. Buyers is chairman of the Board of Trustees and a councilor of The Medical Society of the State of Pennsylvania.

U. S. DELEGATES TO ATTEND PARLEYS IN GERMANY AND AUSTRIA.—The United States, on June 29, accepted the invitation of the Austrian Government to participate in the Ninth International Dental Congress to be held

in Vienna in August. The State Department appointed Dr. Leroy M. S. Miner, of Boston, president-elect of the American Dental Association, and 17 other dentists to compose the American delegation.

The government also accepted the invitation of the German Government to send delegates to the Third International Congress of Throat, Nose, and Ear Specialists in Berlin in August.

Dr. I. W. Steele, of the United States Public Health Service, and Dr. James Augustin Flynn, of Washington, have been named to represent this country.—*N. Y. Times*, June 30.

THE NATIONAL MEDICAL COUNCIL ON BIRTH CONTROL was organized in June, 1936, for the following purposes: (1) To control and supervise all medical policies of the American Birth Control League; and (2) to initiate, encourage, and execute appropriate scientific research in the medical aspects of birth control.

Dr. Frederick C. Holden, New York, is chairman of the executive committee, and Dr. Eric M. Matsner, 515 Madison Ave., New York, is executive secretary.

The following Pennsylvanians, as of July 10, are members: Drs. Brooke M. Anspach, P. Brooke Bland, Clarence Gamble, Floyd E. Keene, Edward A. Schuman, J. Owen Toland, Norris W. Vaux, and Philip F. Williams.

AMONG THOSE RECEIVING honorary degrees at the commencement exercises of the Hahnemann Medical College held June 11 were Dr. Gustave A. Van Lennep, who was recently elected professor and head of the department of surgery to fill the vacancy caused by the death of the late Dr. Herbert L. Northrop. Dr. Van Lennep received the honorary degree of Master of Arts. The honorary degree of LL.D. was conferred on the following members of the faculty: Dr. Leon A. Ashcraft, head of the department of urology; Dr. Henry M. Eberhard, head of the department of gastroenterology; and Dr. William A. Pearson, dean of Hahnemann.

KING EDWARD OF GREAT BRITAIN celebrated his forty-second birthday on June 23, his first birthday since his accession. On the eve of the King's birthday the first honors list of the new reign was issued. Among those on the list were his mother on whom was conferred the title, Dame Grand Cross of the Royal Victorian Order.

Lord Dawson of Penn is promoted from baron to viscount in recognition of his devoted services as physician to the late King George. Lord Dawson of Penn is well-known to the medical profession of the United States; he has been entertained in Philadelphia.

Among those who will be entitled to use "Sir," before their names is Alfred Edward Webb-Johnson, surgeon of Middlesex Hospital, who attended Rudyard Kipling in his last illness.

PENNSYLVANIA QUALIFIES.—Word has been received from the National Tuberculosis Association that on recommendation of the Committee on Qualifications the directors have approved the Pennsylvania Tuberculosis Society as being in compliance with the qualifications of the National Association. At the New Orleans meeting Dr. Charles J. Hatfield was renamed as the representative director from Pennsylvania on the Board of the National Association.

The National Tuberculosis Association has appointed Dr. Hatfield as its official representative to the tenth conference of the International Union Against Tuberculosis, which is to be held in Lisbon, Sept. 7-10. The National Association also named as its representatives on the Council of the International Union Dr. Hatfield, Dr. Eugene L. Opie, Dr. Esmond R. Long, Dr. Willard B. Soper, and Dr. Kendall Emerson.—*Bulletin*, Pennsylvania Tuberculosis Association.

IN THE PENNSYLVANIA MEDICAL JOURNAL, July number, page 827, column 1, there is an article entitled "Hospital Insurance" which was abstracted from *California and Western Medicine*, April, 1936. In column

2, paragraph 3, of this article, there will be found the following.

"Anesthetic service is the practice of medicine, in the opinion of the committee and of the council, and will continue to be so unless decided otherwise by the Supreme Court of California. Being the practice of medicine, it cannot be furnished in hospital contracts."

Since this publicity was given by the Committee on Public Relations of the California Medical Association, the Supreme Court of the State of California has ruled that a nurse may be permitted to give an anesthetic, as that does not constitute the practice of medicine.

THE FOLLOWING OFFICERS have been elected by the Allegheny County Medical Society: President, Sidney A. Chalfant; president-elect, William H. Guy; first vice-president, Earl V. McCormick; secretary, George R. Harris; treasurer, Ernest W. Willets; board of directors (within Pittsburgh) John P. Griffith, Thomas B. Carroll, Richard J. Behan; (outside Pittsburgh) Herbert S. Arthur, Marlin W. Heilman; judicial board, Thomas G. Simonton, Harry G. Noah; district censor, David P. McCune; delegates: Henry J. Benz, Zoe Allison Johnston, Grover C. Weil, Frank C. Blessing, Richard J. Behan, Gomer S. Llewellyn, Curtis C. Mechling, John W. Frey. Alternates: William Anderson, Frank R. Braden, George S. Bubb, Edwin P. Buchanan, William J. Connelly, Thomas L. Cottom, Kenneth M. Day, Guy D. Engle, James K. Everhart, Ralph D. Goodwin, James C. Hawkins, C. Leonard Hobough, William Hodgson, Clarence Ingram, John M. Johnston, J. Clarence Kelly, Frederick C. Koenig, Joseph A. Lafferty, Herbert M. Long, James A. Martin, Ray P. Moyer, John Priestes, John C. Reed, Charles K. Shanor, James W. Spellman, John W. Stinson, Lloyd L. Thompson, Hunter H. Turner.

The following were elected to membership: Thomas M. McLenahan, Jr., Harold William Jacox, Raymond E. Jordon, Jules C. Landy, Charles N. Gross, and Norman G. Mathieson.

POSTPONEMENT NOTICE.—The First International Conference on Fever Therapy, originally scheduled for the end of September, 1936, has been postponed, because of numerous requests, to permit more time for the preparation of material. The new dates set for this conference are Mar. 30 to Apr. 2, 1937. The sessions will be held at the College of Physicians and Surgeons, Columbia University, New York City.

The advances in the treatment of gonorrhea, syphilis, and other diseases by pyretotherapy are of great social significance. Invitations on behalf of the conference will be issued by the State Department of the United States to Ministries of Public Health of other countries. The medical departments of the Army, the Navy, and the Public Health Service of the U. S. A. will be represented, as will also the New York City Departments of Health and of Hospitals.

A tour has been arranged to take place immediately following the conference to enable physicians to observe the technics employed in fever therapy in some of the hospitals in the eastern section of the United States. Among the institutions to be visited are the Strong Memorial Hospital of the University of Rochester, New York; the Henry Ford Hospital, Detroit; the Mayo Clinic, Rochester, Minn.; the Kettering Institute for Medical Research at the Miami Valley Hospital, Dayton; Northwestern University Medical School, Chicago.

Further information regarding the conference may be obtained from the General Secretary, Dr. William Bierman, 471 Park Avenue, New York City.

RUSSIANS FIND FLAWS IN "BIG FAMILY" ACT.—The law prohibiting abortion in the Union of Soviet Socialist Republics, which was published in Moscow, June 28, is a subject of interested discussion all over Moscow. After having listened to dozens of opinions in different circles of society, an observer must reach

the opinion that the law is not wholly welcome at the present time.

The law forbids abortions save in cases where childbirth threatens the life of the mother or in cases of the danger of transmission of gravest diseases. There is no doubt that many persons here, especially among the poorer sections of the populace, had expected a clause permitting such operations when the great overcrowding characteristic of many sections of Moscow, or the existence of large families, made new births undesirable.

The reply that the law provides an immense extension of maternity hospitals and children's homes and pays premiums for large families—the total allotment for all these purposes for the current year is increased from 600,000,000 rubles to nearly 2,250,000,000 rubles—fails to meet the criticism that present conditions do make for unwanted children in certain cases, especially among couples too poor or too ignorant to understand birth control.

Many serious citizens fear the immediate results will be an increase in "underground" operations for the prevention of childbirth, with worse consequences to health and morality.—*The N. Y. Times*, June 29, 1936.

THE PENNSYLVANIA RADIOLOGICAL SOCIETY held its twenty-first annual meeting at the Lycoming Hotel, Williamsport, June 5-6.

The program for June 5 was as follows: "Program Presentation," Dr. William J. Corcoran; "Problems in Irradiation Therapy," Mr. James L. Weatherwax; "Irradiation Treatment of Uterine Fibroids," Dr. James J. Quiney (discussion by Dr. Harry M. Stewart); "Irradiation Treatment of the Lymphoblastomas," Dr. F. B. Ray (discussion by Dr. B. Swayne Putts); "Irradiation Treatment of Acute Infections," Dr. Gerald Bliss (discussion by Dr. Lloyd E. Wurster); "Clinical Parathyroid Dysfunction," Dr. Edgar C. Baker (discussion by Dr. M. H. Bachman).

On June 6 the following program prevailed: Round-table discussion of interesting roentgenograms (1 hour); "Estra Bones of the Skeleton," Dr. William E. Reilley (discussion by Dr. Allen Z. Ritzman); "Differential Diagnosis of Conditions About the Hip-Joint," Dr. William J. Corcoran (discussion by Dr. Harold S. Callen); "Diseases of Bone in Children," Dr. George H. Hess (discussion by Dr. James R. Gemmill); "Roentgen Study of the Mastoid," Dr. Forrest L. Schumacher (discussion by Dr. Reuben G. Alley); "Artificial Pneumothorax in Pulmonary Tuberculosis," Dr. Ross K. Childerhose (discussion by Dr. Paul G. Bovard); "Roentgen Diagnosis of Gall-bladder Disease," Dr. Eugene P. Pendergrass (by invitation) (discussion by Dr. Sidney J. Hawley); "Contrast Enema," Dr. Charles S. Caldwell (discussion by Dr. H. N. Mawhinney); "Roentgen Study of Genitourinary Conditions," Dr. Peter B. Mulligan (discussion by Dr. Anatole Desjardins).

The annual banquet and dance were held at the Lycoming Hotel on the evening of June 6.

THE FORMAL DEDICATION of the new Allegheny General Hospital, June 22-26, also marks the fiftieth anniversary of the opening of the first hospital to bear the name of Allegheny General. Following a widespread demand by citizens for a hospital in the former City of Allegheny, the first Allegheny General Hospital was incorporated in 1882. Funds were raised and 2 private dwellings were acquired, converted into a single hospital building, and equipped at a total cost of about \$60,000. The hospital was opened in 1886 with a capacity of 50 beds, and during its first year 368 patients were treated.

The present hospital on Stockton Avenue was opened in 1904. Dr. Maitland Alexander, now president of the hospital, was largely responsible for raising the \$880,000 fund to construct the building. The bed capacity is 405, which for a number of years has been inadequate for the large volume of service the hospital is called upon to perform.

Officers and directors started the work of gathering the nucleus of a building fund in 1927, and by the following year had given and secured gifts totaling \$2,500,000 toward the \$6,000,000 which the new plant was then expected to cost.

In 1928 a public campaign was conducted in which more than 4600 friends of the hospital pledged enough to bring the total available for the building fund to \$5,577,000.

Construction work on the new plant was started in 1929, but as plans developed it became apparent that the building, as originally planned, would still be inadequate for the service it would be called upon to render, since Allegheny General would be the only large hospital in the Pittsburgh district remaining on the north side of the Allegheny River. Enlargements were made and the plant as it now exists was planned at a total cost of \$8,000,000.

DOCTORS TO HONOR JACOBI AND SCHURZ.—As a memorial to Carl Schurz and Dr. Abraham Jacobi, leaders among men, an acre of land was turned over to Bolton Landing, N. Y., June 10, 1936. The dedication was the closing feature of the convention of the American Pediatric Society. The donor is Mrs. George A. McAneny of New York, a summer resident, who is a daughter of Dr. Jacobi.

Brought together as youths attending the University of Bonn, Dr. Jacobi and Mr. Schurz suffered similarly in their fatherland for their revolutionary activities. Then their respective ways parted, Mr. Schurz to follow war, diplomacy, statesmanship, and law; Dr. Jacobi to walk through science's corridors to advanced outposts of human knowledge, the paths of peace.

Through the daughter of one of them, aided by other men of science and peace who carried on his work, the lives of both are to be linked for future generations as they were in the middle of the nineteenth century and again as aged men. Dr. Henry L. K. Shaw, of Albany, specialist in pediatry, led the work for the dedication.

Dr. Frederic W. Schultz, of Chicago, presided. He is chairman of the Abraham Jacobi Memorial Committee, section of pediatrics, American Medical Association.

The speakers were Dr. Isaac A. Abt, of Chicago, for the American Pediatric Society; Dr. Frederic Sondern, of New York City, former president of the New York State Medical Society; Dr. Dixon Ryan Fox, president of Union College, Schenectady, and president of the New York State Historical Society, and Mr. McAneny, son-in-law of Dr. Jacobi as well as representative of the Schurz Foundation.

Mrs. McAneny presented the park to Edward N. Vandenburg, president of the Bolton Landing Village Board.—*N. Y. Times*.

MEDICAL SCHOOLS OF PENNSYLVANIA

University of Pennsylvania School of Medicine

The University commencement was held on June 10. The address was delivered by Dr. James Grafton Rogers, professor of law and head of Timothy Dwight House at Yale University. One hundred and forty were graduated from the School of Medicine.

Dr. Joseph McFarland, one of the professors of pathology, has been made emeritus professor of pathology; he will, however, continue to instruct the dental and veterinary students. Dr. Joseph Stokes has been promoted to associate professor of pediatrics. Dr. I. S. Ravdin has resigned as J. William White professor of surgical research and has been appointed "The George L. and Emily McMichael Harrison professor of surgery." He will be the head of the newly created "Harrison Department of Surgical Research," made possible through the bequest of Mr. George L. Harri-

son, which at present amounts to 1¼ million dollars and eventually will be over 2 million dollars.

Dr. Cyril N. H. Long, assistant professor of medicine, has resigned to accept the professorship of physiological chemistry at Yale University School of Medicine.

Jefferson Medical College

The One Hundred and Eleventh Commencement was held on June 5. The valedictory address was delivered by Dr. John H. Finley, associate editor of *The New York Times*.

The graduating class numbered 133, bringing the total number of graduates to 16,175. The graduates originated in 17 different states and insular possessions; 29 were commissioned as first lieutenants in the Medical Officers' Training Corps of the United States Army.

The annual alumni dinner was held on June 4, at the Bellevue-Stratford Hotel, with more than 500 in attendance. Dr. Charles E. G. Shannon, president of the Alumni Association, presided. The speakers were Mr. Van Horn Ely, a member of the Board of Trustees; Dr. David M. Davis, professor of genito-urinary surgery; Dr. James W. Tankersley, Greensboro, N. C., representing the Class of 1906; Dr. Andrew Wallhauser, Pittsburgh, Pa., representing the Class of 1916; Dr. Neil R. Moore, Bay City, Mich., representing the Class of 1926, and Dr. Leonard W. Parkhurst, Wilkes-Barre, Pa., representing the Class of 1936.

Alumni Day and Ex-Interns' Day clinics were held on June 3 and 4, in the clinical amphitheater of the Jefferson Hospital.

During the year the following deaths occurred: Dr. Thomas McCrae, Magee professor of practice of medicine and clinical medicine, and Dr. J. Clarence Keeler, professor of otology.

The graduating class of 1936 presented a portrait of Dr. P. Brooke Bland, professor of obstetrics, to the College on March 26, 1936.

The following promotions and appointments in the teaching corps have been made during the past session: David M. Davis, M.D., professor of genito-urinary surgery; John B. Flick, M.D., associate professor of surgery; Henry K. Mohler, M.D., associate professor of therapeutics; Lewis C. Scheffey, M.D., associate professor of gynecology; Henry K. Seelaus, M.D., assistant professor of surgery; Harold L. Stewart, M.D., assistant professor of pathology; David R. Morgan, M.D., assistant professor of pathology; Adolph A. Walkling, M.D., assistant professor of surgery; William H. Schmidt, M.D., assistant professor of physical therapy in the Department of Neurology; Roy W. Mohler, M.D., John B. Montgomery, M.D., Charles Lintgen, M.D., and William J. Thudium, M.D., all associates in gynecology; Andrew J. Ramsey, Ph.D., associate in histology and embryology.

Dr. Hobart A. Reimann, professor of medicine at the University of Minnesota Medical School, has been elected Magee professor of practice of medicine and clinical medicine, to fill the vacancy caused by the death of Dr. Thomas McCrae. Before his connection with the University of Minnesota Medical School Dr. Reimann held positions with the Rockefeller Institute for Medical Research of New York City and the Peking Union Medical College. Dr. Reimann will assume his duties on Sept. 1, 1936.

Dr. Martin E. Rehfuuss, clinical professor of medicine, has been promoted to professor of clinical medicine.

Dr. Henry K. Mohler, medical director of the Jefferson Medical College Hospital, and associate professor of therapeutics, has been promoted to the position of clinical professor of therapeutics.

Dr. Baldwin L. Keyes has been promoted to the position of clinical professor of psychiatry.

University of Pittsburgh School of Medicine

The graduating exercises of the School of Medicine of the University of Pittsburgh were held June 10. The commencement orator was Douglas Southall Freeman, editor of the *Richmond (Va.) News Leader*. The number in the graduating class was 60. Dr. John P. Griffith was appointed professor of surgery to fill the vacancy caused by the resignation of Dr. John J. Buchanan, who has served as professor of surgery for 36 years. Dr. Buchanan was made emeritus professor of surgery.

Woman's Medical College of Pennsylvania

Exercises marking the closing of the eighty-sixth annual session of the Woman's Medical College of Pennsylvania were held on June 10, at the Westside Presbyterian Church.

The degree of Doctor of Medicine was conferred upon 33 graduates.

The college gold medal was awarded to Dr. Marie K. Formad and Dr. Elizabeth Kendig, members of the Class of 1886, who have practiced medicine for 50 years.

Mrs. Roberta Campbell Lawson, president of the General Federation of Women's Clubs, made the principal address.

Dr. Martha Tracy will resume her duties as Dean on July 1, 1936, after a year's leave of absence.

The following new appointments to the faculty for the session of 1936-37 have been made: Dr. Rose Hirschler, professor of dermatology; Dr. M. Agnes Gowdey, assistant instructor in clinical obstetrics; Dr. Helen B. Thompson, assistant in clinical surgery.

The following promotions in titles of the faculty have been made for the session 1936-37: Dr. Jean Gowing, associate in pediatrics; Dr. Miriam Butler, associate in medicine; Dr. Mary K. Bazemore, associate in Pediatrics; Dr. Elizabeth S. Waugh, associate in clinical obstetrics; Dr. Beulah Sundell, instructor in pediatrics; Dr. Margaret J. Sharpe, instructor in laboratory diagnosis; Dr. Ruth Stephenson, instructor in clinical pediatrics; Dr. Pauline Connel, instructor in clinical otolaryngology; Dr. A. Dorothy Harris, assistant instructor in clinical pediatrics; and Dr. Miriam Seaman, assistant instructor in clinical pediatrics.

Temple University School of Medicine

The degree of Doctor of Medicine was conferred upon 124 members of the senior class at the commencement exercises held in the Convention Hall, June 11. This is the largest class to be graduated in the history of the School of Medicine.

An alumni luncheon and business meeting were held, June 10, in the medical school building. Dr. S. Bruce Greenway, Philadelphia, was re-elected president and Dr. Reuben Friedman, secretary-treasurer; Dr. Charles Q. DeLuca, first vice-president; and Dr. B. F. Bowers, of Barnesboro, Pa., second vice-president.

APPOINTMENTS: Drs. John Franklin Huber, associate professor of anatomy; Thomas M. Durant, associate professor of medicine; George Elbert Farrar, Jr., assistant professor of medicine; David Soloway,

assistant professor of histology and embryology; Lyle Jenne, Walter S. Cornell, and T. Ruth Weaver, assistant professors of hygiene, sanitation, and public health; James Hale Paul, Donald Riegel, and Maurice B. Cohen, demonstrators in hygiene, sanitation, and public health; Earle H. Spaulding and William G. Goode, instructors in bacteriology; Harold Coffman Roxby and Herbert S. Raines, clinical assistants in surgery; Francis A. Harold Sanders, clinical assistant in otology; and Jacob Pomerantz, clinical assistant in experimental pathology.

PROMOTIONS: Dr. Harriet L. Hartley, from associate professor in hygiene to professor of hygiene, sanitation, and public health; Dr. Morris Harris Genkin, from clinical assistant to demonstrator in surgery; and Dr. Francis L. Zaborowski, from clinical assistant to instructor in surgery.

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES. By George R. Herrmann, M.D., Ph.D., professor of clinical medicine, University of Texas. With 98 text illustrations and 3 color plates. St. Louis: The C. V. Mosby Company, 1936. Net price, \$4.

The author states that this synopsis is an attempt to provide an acceptable indexed epitome of the principles and modern conceptions of cardiologic practice. It "is intended primarily for the plodding student and the assiduous conscientious practitioner."

An enormous amount of material has been condensed into a small space. This should make the book acceptable to those for whom it is intended primarily. Most synopses furnish uninteresting reading and fail to emphasize sufficiently the relative importance of the various subjects considered. This book does not, nor can it be expected to escape these faults. To remedy them, without lengthening the book, it would be necessary to prune the less important material in order to stress the more important. This would be worth doing. The subject matter is reasonably accurate, far above the average textbook standard in cardiology.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest by leading members of the medical profession throughout the world. Volume IV, 45th series, 1935, and Volume I, 46th series, 1936. Philadelphia, Montreal, London: J. B. Lippincott Company.

For nearly 50 years the members of the medical profession who enjoy good medical literature have been indebted to J. B. Lippincott Company of Philadelphia, Montreal and London, for publishing a Quarterly, now edited by Louis Hamman, M.D., of Baltimore, and named International Clinics. The reviewer has recently read with interest and with profit Volume 4 of the Forty-fifth series and Volume 1 of the Forty-sixth series.

There is not an article in either volume, in the reviewer's opinion, that will not firmly hold the interest of any physician who looks upon his work as being that of a profession and not as a business or trade. No medical man can make a better investment in inspiring and helpful professional reading than in subscribing for International Clinics. There are 15 to 18

articles in each volume and the authors are not only active practicing physicians but have the ability to write of their work in a most interesting way.

FOR AND AGAINST DOCTORS. An anthology compiled by Robert Hutchison and G. M. Wauchope. Baltimore: William Wood & Company.

As the title suggests, this volume contains both censure and praise for the medical profession. Since it is both enlightening and helpful for any person to see himself as others see him, this anthology should appeal to the contemplative physician.

The authors have included mostly the opinions of nonmedical writers. They have also confined their selections largely to those relating to the medical profession as a whole, excluding encomiums or condemnations of individuals. The quotations begin with prehistoric proverbs and continue with typical opinions of commentators down through the ages to the present time.

Apparently the individual physician is better liked than the profession as a whole. It is conceivable, however, that no profession is really popular with those outside of its closed circle. Certain rights and privileges and the attainment of knowledge which to the layman remain mysterious seem to engender some animosity toward the medical profession.

GOD WORKS THROUGH MEDICINE. By Victor H. Lukens, Pastor of Trinity Presbyterian Church, South Orange, N. J. New York: Fleming H. Revell Company, London and Edinburgh.

A book by a Presbyterian minister on God's healing force. The work is written from personal experience and is dedicated to 8 physicians and deeded to the Church in honor of the medical profession.

It proves from Scripture that God does not send sickness, but the extent of the divine and human resources for medical and spiritual healing is considered. Mr. Lukens distinguishes between the extravagant claims of some healing cults and the convincing appeals of the ministry of the church and of the medical profession.

Alberta—Townsend?

Press items impart that the province of Alberta has defaulted on its bonds. This is the province where the governor proposed to give \$25 a month to each of its 400,000 adult residents. How Alberta ever hoped to raise the necessary \$120,000,000 is a mystery to economists. Taxation far in excess of the \$25 per month would have been necessary, and the bonus income of the taxpayer would have been wiped out by taxes. This social experiment presents an example that may be heeded by our federal and state governments.

Press items also reveal a congressional committee's exposé of the financial transactions of the Townsends. The pity is that the total income of nearly a million dollars was contributed in nickles, dimes, and dollars by the hopeful and deluded supporters seeking a dole of \$200 per month after attaining age 60.—*California and Western Medicine*, June, 1936.

Apples Differ in Content of Vitamin C

New experiments with apples revealing that different apple varieties show marked differences in the amount of vitamin C they contain were reported at the meeting of the American Home Economics Association.

Using guinea pigs to test the nutritive value of western apple varieties, Dr. E. N. Todhunter, of the State College of Washington, reported that apples lose vitamin C when stored. Destruction of vitamin C, he said, increases with the length of time apples are kept in storage and is progressively greater with storage temperatures above 32 degrees Fahrenheit.—*Science News Letter*, July 11, 1936.

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THE DOCTOR AND THE PUBLIC

Pictures that are overdrawn are caricatures or cartoons, but we get many a hearty laugh from them, and it is more than likely that Dr. J. P. Warbasse chuckled as he wrote this catalogue of various kinds of doctors in his book on *The Doctor and the Public*, published by Paul B. Hoeber. He says:

"Some doctors come plunging into the chamber of the sick like a fireman about to extinguish a conflagration; they alarm the patient. Some come like a detective looking for a criminal, and give the patient cold creeps. Others enter stealthily like a cat stalking a bird, and are beside the patient and pounce upon the pulse before any one is aware; they fill the patient with a weird sense of the chase. There is a class that come like purring doves, as though they would make love; they are thought nice by sentimental ladies. There are the doctors with the doleful faces, like the hired mourners who follow the catafalque; if the patient is bad they make him worse; if he is not they cause him to smile. A common lot enter like the monologue artist on the vaudeville stage and start a barrage of wisecracks that entertain the nurse and amuse themselves, while the patient waits for business to begin. Then there is the radiant doctor who has studied how to impress himself upon others and fill the room with the effulgent aura of his personality; he impresses only the weak-minded. There is the pompous doctor of the school of hope, who comes with a strong expression and eyes beaming with glad tidings; he scares the demon of disease and makes the patient fearful of the size of the doctor's bill. Some doctors enter in a casual way, apparently unconscious of the patient's presence, and talk about the weather or the fire, while the patient longs for succor. The egotistic kind first must tell how busy they are and how little sleep they snatch between the rings of the telephone, how fast they have to drive to reach the outposts of disease, and how extraordinary are the cures they make; these give comfort to some, but mostly to themselves. There is the stumbling lout, whose bag upsets the vase of flowers, and who sets his bulky hulk upon the bed; the patient forgives much in the hope that the doctor is mighty also in healing power. The business-man physician whose manners smack of the marts of trade, smart, abrupt, and dapper, impresses the patient that he is attending a board meeting and wants the minutes read at once; the patient wishes he were more sympathetic. And then comes the doctor of mystery, all quiet and sedate, with soft voice and furtive words and sanctimonious manner; the patient, if of the susceptible type, thinks of wonders and of miracles.

"When the patients do well under their administrations, which in 9 cases out of 10 they do, each of these peculiarities becomes glorified into a healing virtue, and the doctor goes on cultivating his idiosyncrasy. The vast number of highly qualified physicians come under none of these classifications. Most physicians are just plain doctors. They may be tinctured with some of these traits, but not enough to matter. They exemplify good bedside manners. They possess urbanity; it is obvious that they are gentlemen; they do and say the thing that is fitting; they go about their business with dignity, directness, and dispatch; it is clear that they have the matter in hand; and then, when they have finished, they say the few words that indicate sympathy and understanding, and quietly take their leave."—*N. Y. State J. M.*, Feb. 1, 1936.

HYCLORITE



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THE SCREEN TEST AND ITS MODIFICATIONS*

Screen Parallax, Screen Maddox Rod, and Screen Comitance

JAMES WATSON WHITE, M.D., NEW YORK, N. Y.

Any test to be practical must be accurate and readily applied to a large percentage of cases. It must be available in both office and clinic and to patients of all ages and degrees of intelligence. The screen test with its modifications fills these requirements better than any other test. Many tests are not applicable because the patient is too young to co-operate or because of a degree of amblyopia or suppression that makes the test impossible. Among the tests so limited are the phorometer, Maddox rod, or in fact all of the tests that depend on double vision or fusion. These tests may be used in the phorias and lesser tropias, but even here their use is often limited and often they do not show the true state of the muscle imbalance. They may in one case sufficiently relax the fusion impulse, while in another the patient by bringing his fusion into play can change the findings completely, for the fact that the images are dissimilar does not entirely discourage an attempt to fuse.

Commonly an exophoria by screen test is an esophoria by many of the other tests. This may be a valuable observation as it shows the examiner the patient's ability to overcome a deviation. An esophoria may be considerably higher by many tests than by the screen test, which more completely breaks up the fusion and convergence impulse. It is often important to determine the difference in the amount of deviation as found by different tests, as it shows the ability to overcome a deviation under different conditions. This, however, is not done routinely. When the amount of deviation is measured by the tropometer and many other tests, although the actual degree of squint may be quite ac-

curately measured, the intimate details as secured by the screen test and especially the screen comitance test are entirely overlooked. For example, a failure of abduction may be due to a paralysis of the external rectus, or to a hypertense or fibrous internus. A study of secondary deviation and contractions, or the appearance of the conjunctiva at the insertion of the external rectus when an attempt is made at abduction, will make the diagnosis more certain and the operative procedure more definite.

DESCRIPTION

The screen test is conducted as follows: The patient is directed to look at a spot light, candle, or other definite object placed at a desired distance. In cases of amblyopia the examiner must be certain that the patient is fixing centrally. This can be definitely determined by watching the eye when directed to fix. The screen is moved from one eye to the other, the rate of movement depending on the promptness of the patient to change fixation to the opposite eye. The test object is usually placed at 20 feet and at 13 inches, but in certain cases it is often advisable to have the distant object more remote or the near object still closer. The test is conducted in the same way regardless of the distance at which the test object is placed. An example of the importance of varying the distance is in cases of divergence excess. In this anomaly the exophoria is greater at 20 feet than at 13 inches, but it may still be an exophoria although at some point beyond 20 feet the phoria often changes to an exotropia and may increase in amount. In divergence paralysis and convergence spasms the tests are of more value when made at 20 feet, 10 feet, 3 feet, 18 inches, and 6 inches. Refinements in diagnosis often

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depend on the amounts of deviation at these various distances.

When true orthophoria is present, the eye behind the screen does not deviate but remains in the position of fixation that it had when fixing with the fellow eye. When the screen is moved to the other eye, there is no movement of the eye that has just been uncovered. Any movement whatever will denote a deviation from true orthophoria.

In routine work, if the eye is seen to move to the left as the screen is moved from the right to the left eye, an exophoria or exotropia is present. A prism is placed base in before either eye until the movement is reversed. A more complete relaxation is secured when the screen is not removed as the test is continued, but the prism is changed behind the screen. The prism should always be held in the symmetrical or posteronormal position, in which positions the readings are practically the same. If the eye is seen to move out as the screen is moved from one eye to the other, there is an esophoria or an esotropia, in which case the prism is placed base out before either eye in strength sufficient to reverse the movement of the eye. If the right eye is seen to move down, the prism is placed base down before this eye or base up before the left eye. With a square prism it is most convenient to correct a lateral and vertical deviation at the same time. For instance, in the case of an exotropia combined with a right hypertropia, the prisms may be placed base in and base down before the right eye, or base in and base up before the left eye. The degree of deviation is between the prism which overcorrects the deviation and the one which undercorrects it. For instance, if an exophoria is undercorrected with a 14Δ prism but overcorrected by a 16Δ prism, the amount of the deviation is 15Δ . Experience helps the examiner to judge when the movement is just stopped and the strength of this prism is the true measure of the deviation. Cases occur in which the readings will vary when the prisms are placed before the different eyes.

The screen test can be made as readily in the 6 cardinal fields and is a most important test in the diagnosis of muscle paresis, especially of slight amounts. For convenience the test in the 6 cardinal positions is made at from 15 to 18 inches. A further use of the screen test is to determine the fixing eye. This is done by directing the patient to fix the test object when first one eye, then the other, is screened and unscreened. This test determines whether the condition is a phoria or a tropia and, if a tropia, which eye is chosen for fixing. This test should

be made for distance, near, and in the 6 cardinal fields, as the choice of the fixing eye may change for different distances or directions.

Occasionally, to correct a deviation, more prism is required when placed before one eye than before the other. This is seen most often in muscle paralysis and in postoperative cases, and depends on both the amount of paralysis of a muscle and on the amount of primary and secondary deviation.

Precision in using the test may be acquired by trying it on a patient who is practically orthophoric. A 10Δ prism is placed in turn base out, in, up, and down, and the movement of the eyes is noted. Smaller and smaller prisms are used. When a change of movement can be detected with a 1Δ prism, the degree of accuracy is quite sufficient. A movement of redress is at times confusing. For example, in testing a convergent strabismus, if the prism is placed base out and the eye moves first out and then in again, this is termed a movement of redress and the prisms should be increased until the first movement is in.

PARALLAX TEST

The parallax test is a subjective test and so is dependent on the co-operation and observations of the patient. Some patients have no trouble observing the movement of the test object while others are quite stupid about it, and this is often in inverse proportion to the amount of intelligence or education of the patient. It is a very delicate test when properly observed, but is quite tedious and valueless when complete co-operation is lacking. The writer uses it much less often than formerly. The test is conducted at the same time as the screen test. As the examiner observes the eye moving, the patient is asked if he sees the test object move. When the eye reverses movement by the screen test, the patient should see the object reverse movement. For example, if the right eye diverges behind the screen, the eye is in a position to have a crossed diplopia. As the screen is moved to the left eye, the patient's eye moves to the left and picks up the object which has seemed to him to have moved to the left. This is termed a crossed parallax. An homonymous parallax is observed in an esophoria or esotropia, a right parallax in a right hyperphoria or tropia, and a left parallax if the left eye is higher. The test is extremely sensitive in many patients with a slight hyperphoria and is often observed in amounts less than 0.5Δ .

When the examiner sees the eye move in one direction while the object seems to the patient to move in the opposite direction, it is termed a

perverse parallax. This is observed chiefly in postoperative convergent squints and is due to faulty fixation or faulty projection.

SCREEN MADDOX ROD TEST

This test was described by Maddox in 1898 and by others since. It is a most delicate and valuable test in slight phorias and tropias.

The Maddox rod is placed before one eye and the patient asked to fix a spot light or candle. A screen is then placed before the rod to break up fusion further. When the screen is removed, a hyperphoria, for example, which had been present has increased. Behind the screen and before the rod is placed a prism of sufficient strength to cause the image of the rod to pass through the light when the screen is first removed. The test may be used for esophoria and exophoria as well, but it is of especial value in hyperphorias. After testing hyperphorias as described above with the rod before the right eye, the rod should be placed before the left eye. The finding may correspond exactly with that when the rod is placed before the right eye. However, and not infrequently, when the rod is placed before the left eye, a left hyperphoria is observed, although a right hyperphoria was found with the rod before the right eye. This is a double hyperphoria, and careful measurements in the upper and lower corners will reveal a paresis of a pair of elevators or depressors, the same muscle in each eye being parietic. For example, although in the primary position there was 1Δ of right hyperphoria when the rod was over the right eye, there was a left hyperphoria of 1Δ with the rod before the left eye; a left hyperphoria of 3Δ was found in eyes up and right, whereas in eyes up and left there was a right hyperphoria of 3Δ . Other fields being normal, there is proved a slight paresis of both superior recti, and the use of the screen Maddox rod before each eye in turn was the means

of finding it. When the right hyperphoria so measured in the primary position is 2Δ and the left hyperphoria is 3Δ , it will be found that the left hyperphoria in eyes up and right is greater than the right hyperphoria in eyes up and left, proving the right superior rectus to be the more parietic.

SCREEN COMITANCE TEST

In the screen comitance test the screen is held in such a way that, although the patient sees the object with only one eye at a time, the examiner is observing the movements of both eyes. This test should be made in the 6 cardinal positions. It may be made at the same time as the screen test but is better made as a separate observation.

When making the test with the sound eye fixing, the parietic eye is seen to lag (primary deviation); when fixing with the parietic eye and putting into it the added impulse necessary to fix the object in the normal field of the parietic muscle, the associate or yoke muscle of the other eye receives the same added impulse and overshoots (secondary deviation). Usually the more the paresis, the greater the secondary deviation. In extreme cases this is often not true; the muscle is so paralyzed that fixation is not attempted, and hence the secondary deviation is correspondingly small.

CONCLUSION

The screen test with its modifications has been criticized because of inaccuracies, length of time necessary to make the tests, and for other objections. These criticisms, however, prove only a lack of acquaintance in interpreting the tests and a lack of dexterity in making them. A small amount of practice and careful observation will be amply repaid by giving the examiner a keener appreciation of the variations in motor anomalies than can be secured by any other means.

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INFLAMMATORY PSEUDOTUMOR OF THE ORBIT*†

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Cases of inflammatory pseudotumor of the orbit are of infrequent occurrence. In a review of this subject in 1910, A. Birch-Hirschfeld reported 30 cases. In 1923, when W. L. Benedict and M. S. Knight made their report, they were able to find only 5 case reports in the intervening

13 years. However, these authors believed that the frequency should be greater because they had observed 6 cases within 3 years. In a review of orbital conditions in 1931, Birch-Hirschfeld listed 15 case reports within 5 years by various authors. Since that time I have found 6 case reports in an examination of the literature that has not been exhaustive. Contrary to the above opinion, A. B. Reese claims that these cases are fairly common, but that they are sel-

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dom mentioned in the literature because we hesitate to broadcast our mistakes. B. Samuels believes that these cases are on the decrease because of the availability of the Wassermann reaction and adequate arsphenamine treatment.

Inflammatory pseudotumors of the orbit are characterized by a moderately rapid process of proptosis that is not accompanied by the usual symptoms of inflammation. There is in addition a loss of mobility of the globe, often lateral as well as anteroposterior displacement of the globe, swelling of the lids, and chemosis. As the retrobulbar tissue increases, it becomes firm so that the globe cannot be pressed back into the orbit. A palpable mass may or may not be present. There is frequently a loss of vision, and intra-ocularly there may be changes such as engorgement of retinal vessels, retinal hemorrhages, and choked disk. There is no elevation of temperature or high leukocytosis.

In an analysis of 30 cases, Reese made the following generalizations: The average exophthalmos was 7 mm.; a mass was palpable in about one-half of the cases; the vision was affected in about two-thirds of the cases; if regression occurred, this took place within 4 or 5 months, and the condition was never recurrent.

Histologically the tumor mass consists of connective tissue made up of young as well as old fibrocytes and hyaline tissue. Within this are localized masses of small round cells with a few plasma cells. Areas of necrosis are not found.

Most authors adhere to the classification given by Birch-Hirschfeld. There are 3 groups according to this classification. In Group 1 are cases in which there is the syndrome of benign or malignant neoplasm, but in which recovery occurs either spontaneously or upon the administration of drugs such as potassium iodide, mercury, or quinine. In Group 2 are cases in which the diagnosis of orbital tumor is made clinically, but no tumor is found when the orbit is opened. In Group 3 are cases in which a tumor is diagnosed clinically and is found at operation, but in which the microscopic examination reveals only chronic inflammatory tissue.

The etiology in these cases has always been a matter of conjecture and debate. There does not seem to be any evidence for considering the process tuberculous. A number of authors attribute these cases to a late manifestation of syphilis in which the Wassermann reaction is negative. There have been reports in which the exophthalmos has diminished under antisyphilitic treatment. In several cases this treatment had to be prolonged before regression occurred. On the other hand, regression has occurred without specific medication. Careful inquiry into the

history of many of these cases demonstrates that some type of inflammatory condition had preceded the appearance of the exophthalmos. Trotter believed that this led to a lymphatic obstruction, which in turn produced a solid edema that formed the retrobulbar mass. Williamson-Noble noted that there may be an excessive and prolonged regeneration of lymphocytes, forming a tumor mass that may persist long after the exciting bacteria or their products have been removed.

Treatment has followed along 3 lines. It has consisted of antisyphilitic medication, radiation, or operation. Approximately half of the cases have come to operation. It is not within the scope of the present report to detail the various orbital operations performed.

CASE REPORT

E. K., male, age 27, was first seen on Apr. 4, 1927, at the Hospital of the University of Pennsylvania. At that time he complained of pain in the left eyeball, swelling of the left eyelid, and headache. About a month previously he had noticed a burning and irritation of both eyes. The condition in the right eye disappeared in about a week, but the left became increasingly worse. Severe headache, chiefly frontal, began at this time. Slightly less than 2 weeks from the onset of this condition an exophthalmos was noticeable on the left side, and the left lids became swollen. During these 2 weeks the patient had chills and a fever which recurred nightly. Previous to the time of admission to the hospital he had had 2 blood Wassermann tests, both of which were negative, and an operation on his ethmoid sinuses, which yielded no pus. The only other history of importance was an attack of tonsillitis and an ethmoid sinus operation one year previous to the onset of the present illness.

The physical examination was entirely negative except for the eye findings. The vision of the right eye was 6/6, and of the left eye 6/9 minus one letter. The following notes are made from the observations of the ophthalmologist: The Hertle exophthalmometer reading on the right was 16 mm. and on the left 27 mm. The measurement from the center of the nose to the inner limbus of the right cornea was 30½ mm. and to the inner limbus of the left cornea was 31½ mm.

The right eye was entirely negative both extra-ocularly and intra-ocularly.

On the left eye the upper lid was red, swollen, and edematous. The edema and redness extended as far as the lower margin of the eyebrow. There was only a slight edema of the lower lid. The left globe was on a plane about 2 mm. lower than the right. There was a well-marked ptosis, and the eye was divergent. Only a very slight rotation of the globe was possible. The widest excursion was outward to the extent of about 15°. There was chemosis and injection of the conjunctival and subconjunctival vessels. The left pupil was slightly smaller than the right, and the direct and consensual reflexes were prompt. Intra-ocularly the media were clear, the temporal margin of the disk was hazy, and all the other margins were entirely obscured. The veins were full, darker than usual, and pressed and tortuous. The appearance was that of an early choking.

There were no noteworthy changes in the blood

count. Although the blood Wassermann reaction was negative, the patient was placed upon antisyphilitic treatment. Roentgenographic examination of the sinuses showed haziness of both frontal sinuses and clouding of the left ethmoid and left maxillary sinus. Clinically the nasal examination gave evidence of a recent left middle turbinectomy and ethmoid curettage.

Because of an increase in the ocular signs, an exploratory incision was made through the brow 10 days after admission. There was no evidence of pus, but a resisting mass could be palpated in the apex of the orbit.

For a short time following the operation the patient became free from ocular and orbital pain and the chemosis was slightly less marked. This improvement lasted about one week, after which pain recurred and the exophthalmos increased so that by May 30 the Hertle exophthalmometer readings were $16\frac{1}{2}$ mm. on the right and $30\frac{1}{2}$ mm. on the left. There was a typical, well-marked choked disk on the left, and the globe was practically fixed in a position of slight divergence. The vision in the left eye was reduced to 6/60. On the following day the left eye was enucleated, and the apex of the orbit was found to be completely filled with a dense, firm mass that had to be removed in a number of pieces. Following the operation the orbital cavity filled rapidly and smoothly with granulation tissue and the surface became epithelized.

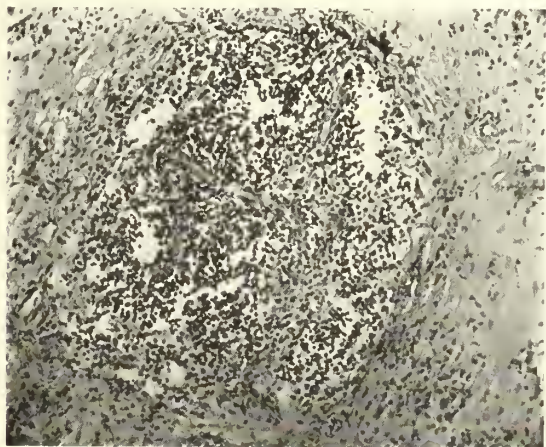


Fig. 1. Inflammatory pseudotumor of the orbit.

The following is the pathologic report: The section shows old hyalin and fibrous tissue in abundance and some recently formed blood vessels. There are foci of lymphoid tissue well surrounded by connective tissue. There seems to be no acute process going on. This is not an actively malignant growth. It suggests chronic granulation tissue. The lymphoid inclusions suggest the possibility of Mikulicz' disease but are much smaller than in the one acceptably diagnosed case seen by the pathologist. It does not seem to be a tumor of nerve origin.

The diagnosis of chronic inflammatory tissue was concurred in by 2 other pathologists.

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ABSTRACT OF DISCUSSION

JAY BESSON RUDOLPHY (Philadelphia): The rarity of inflammatory pseudotumors of the orbit and the prob-

lem of differentiating between them and real primary tumors make Dr. Fry's paper particularly interesting.

Benedict and Knight state that in most instances inflammatory pseudotumors of the orbit cannot be satisfactorily diagnosed without microscopic examination of tissue involved. They give as the 4 principal physical signs: (1) Disturbance of the mobility of the eyes; (2) proptosis, usually with lateral displacement of the eye in the affected orbit; (3) swelling of the lids; (4) increase in bulk of retrobulbar tissue.

Williamson-Noble in his paper makes the following statements relative to the preoperative diagnosis and treatment: (1) Negative Wassermann reaction does not exclude presence of gumma. An heroic course of mercury may settle diagnosis. (2) Blood counts should be taken with special reference to differential white count to rule out lymphocytosis. (3) All cases of proptosis must be considered. He stresses particularly: (1) Examination of the urine, especially for sugar; (2) Wassermann test, repeated after provocative dose of salvarsan; (3) exclusion of tubercular infection; (4) differential blood counts and estimation of blood coagulation time; (5) careful search for focal infections and roentgen ray of teeth and sinuses; (6) paramount importance of history; (7) elimination of Graves' disease; (8) finally, an exploratory operation, at times indicated before proceeding to a radical extirpation of the complete contents of the orbit.

Dr. Fry's case falls in Group 3 of the Birch-Hirschfeld classification. The 4 characteristic signs are present. The history of an inflammatory condition characterized by severe headaches, chills, and fever, and an attack of tonsillitis, in addition to an ethmoid sinus operation (one year previously) was most significant from an etiologic standpoint in view of the negative results of the other examinations.

The report of the microscopic examination of the tissue involved confirmed the diagnosis of inflammatory pseudotumor of the orbit.

J. THOMAS KRALL (Philadelphia): Inflammatory pseudotumor of the orbit is a condition about which we know very little. The most important thing in regard to this condition, as Dr. Fry has explained it, is the question of preoperative diagnosis in view of the results to the eye. Too much attention cannot be focused on this particular phase of inflammatory tumors of the orbit. Preoperative studies should be well carried out and more attention paid to the blood count and to a possible leukocytosis by the Schilling method—all this would be of great value in ruling out inflammations in contradistinction to a tumor mass of the syphilitic or nonsyphilitic type. The most usual causes of orbital inflammation being those of paranasal sinus origin, as well as metastatic, these must be gone into very carefully before anything is attempted in an operative way.

I should like to ask Dr. Fry what particular feature of this case caused operative interference—the rapid increase in exophthalmos or some other symptoms which they regarded as calling for operative interference at that time? It is an extremely important tumor because of what may happen when it is operated upon. The question is: How long can we let this go before anything is done in the way of mercury, iodides, and antisyphilitic treatment in general?

DR. FRY (in closing): The etiology in this case is some type of generalized inflammatory condition, exactly what I cannot say. It is probably not syphilitic in this case, because in addition to negative Wasser-

mann tests there was no response to antisyphilitic treatment. The history of a number of these cases indicates a definite infection prior to the appearance of the tumor.

Dr. Krall asked why operation was done at the time it was. There had been an increase in the exophthalmos of about 3 mm. within approximately 2 weeks, the pain had increased, and we knew that there was a tumor mass in the orbit. We also knew that the patient had a

choked disk that was becoming more marked, and that his vision had decreased from 6/9 to 6/60.

The diagnosis in these cases is very difficult. At present there is a patient who has been under observation for over a year, in whom we suspect this condition, but the orbital tissue has not yet been examined. The vision is still normal, and there seems to be no indication for operative procedure.

HAZARDS ENCOUNTERED IN GOLD THERAPY*

With Report of 2 Cases

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The admission of 2 patients in close succession to the medical wards of Mt. Sinai Hospital, suffering serious consequences from repeated gold injections, prompts a report of these 2 cases because of the increasing use of this therapeutic medium not only in the treatment of tuberculosis and tuberculous-like diseases but also in other chronic granulomas such as arthritis deformans and in mental diseases.

Gold is a century-old therapeutic agent, but its use has been limited by virtue of crude preparation, uncertainty of dosage, and untoward constitutional effects on patients.

In the past 20 years, gold shared with other metals the impetus in chemical research to satisfy an ever increasing chemotherapeutic demand. Chemical combinations of gold either in colloidal or crystalline form have been improved from time to time, the object being to lessen the toxicity of the drug without impairing its therapeutic efficacy. Of the many preparations, the most extensively used was the earlier gold potassium cyanide. This was followed by krysalgon, triphal, and finally sanocrysin or gold sodium thiosulphate, introduced by Möllgaard of Copenhagen some 10 years ago.

Sanocrysin is a crystalline body, easily soluble in water, slowly decomposable, does not easily precipitate serum, and is not supposed to form gold ions in the body. According to Möllgaard, the minimal lethal dose of the drug is 30 to 50 mg. per kilogram in animals. It is supposed to retard the growth of the tubercle bacillus in 1 to 1,000,000 dilution and prevent growth in 1 to 1000 dilution. He also states that it makes the fatty system which protects the tubercle bacilli penetrable to hydrogen and metal ions; that it prevents injected guinea pigs from developing generalized tuberculosis; that in the tuberculous organism it produces reactions expected on injection of a substance having bac-

tericidal influence on the tubercle bacilli, but that in therapeutic doses it produces no reaction in the nontuberculous.

The paucity of case reports in the American literature on the therapeutic use of gold is striking. The outstanding publication is that of Schamberg and Wright, who were the first to use the drug in lupus erythematosus. They reported some 25 patients treated by themselves and colleagues with very excellent results. The results in other skin conditions were not as striking, and in some they were indifferent. This popularized the gold treatment in lupus to such an extent that 4 years later, in 1931, H. P. Towel reported its use in 300 more cases in America.

The foreign literature, however, abounds with reports of the use of the drug not only in skin conditions but in pulmonary and other forms of tuberculosis as well as in leprosy and chronic arthritis. While the results in lupus erythematosus reported in foreign literature parallel those in America, the reported results in other conditions are indifferent. In many case reports the opinion is expressed that its toxic effects either caused or hastened the death of the patient (Medical Research Council, England, 1925 — Wurtzen — Opitz — Elliott — Shield — Langmead—*etc.*).

Regardless of its mode of action, whether cellulotropic or actually bacteriolytic, the beneficial results from its use, especially in lupus erythematosus, give it a place in the therapeutic armamentarium.

The conservative therapeutic dose of gold sodium thiosulphate is initially 50 mg. dissolved in 2 c.c. of distilled water. This may be increased at weekly intervals, depending on the individual susceptibility and the tolerance of the patient. Monach and Traub suggested its use intradermally into diseased areas in skin conditions in 10 mg. doses.

Recently Lichtenstein advocated the patch test

* Read before a General Meeting of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 2, 1935.

to determine allergic sensitivity. This might also be useful before treatment is instituted.

Great caution must be exercised in the use of the drug because of its toxic effects in susceptibles; cumulatively it is not unlike the other heavy metals such as arsphenamine, mercury, etc.

Gold is largely eliminated through the kidneys. Its distribution in the animal is mainly in the liver and kidneys. Small amounts only are found in the intestines and skin. Möllgaard denies that the drug has any injurious effects on the liver; but the work of Brown, Saleeby, and Schamberg on the toxic effects of the drug clearly demonstrated that the liver and kidneys suffer the greatest degenerative changes. They also observed that marked histologic changes may take place in the kidneys before the blood picture shows any definite abnormality. Recent experiments in our laboratory confirmed these findings, and in addition we were able to extract gold from the degenerated kidneys of the treated rabbits.

The reactions following injection of gold may be divided into (1) the immediate and subimmediate, and (2) the cumulative.

The immediate reactions are the anaphylactic or nitrotoid type, in which the cardiovascular mechanism initially suffers by virtue of vasospasm, thrombosis, and capillary rhexis, producing varying degrees of facial flushing followed by cyanosis, syncope, shock, nausea, and vomiting. After the patient reacts, generalized aches, especially headache, fever, and edema, may follow. Pruritus and dryness of the mouth are common manifestations during this period. Albuminuria and casts are the rule. Skin rashes may appear subacutely, or aggravation of the skin lesions already present may occur. The patient usually recovers.

When patients develop such an attack due to susceptibility to the drug, greater caution in its future use or its abandonment often saves the patient from the more dangerous state produced by the cumulative effect following repeated injections. These are essentially the symptoms due to either hepatitis or nephritis of varying severity, bringing about syndromes caused by degenerative changes in these organs. Although these organs bear the brunt of such intoxication, the other systems of the body, if susceptible, can be profoundly influenced, e. g., the hematopoietic system in which blood dyscrasias such as granulopenia, aplastic anemia, and purpura are reported.

The following case reports are striking examples of the effects of gold on the liver of one patient and on the kidney of the other.

CASE REPORTS

CASE 1.—C. N., age 21, single white female, was admitted to Mt. Sinai Hospital on Jan. 9, 1933, with generalized itching, jaundice, and marked weakness. Four weeks prior she received 2 intravenous injections of gold sodium thiosulphate, 5 days apart, for vitiligo of the neck and chest. Following the injections there were no untoward reactions, but 4 days after the second injection she experienced generalized weakness and malaise, soon followed by a diffuse maculopapular rash and marked itching. The temperature was 101° F. The rash disappeared after several days, but pruritus persisted and jaundice supervened, closely followed by nausea, fetid taste in mouth, anorexia, increasing weakness, and clay-colored stools.

Until this illness the patient's health had been excellent with only measles and whooping cough in infancy. A negative familial history was reported.

Physical examination disclosed that the patient was poorly nourished and diffusely jaundiced. The areas of vitiligo were sharply outlined and light in color. Blood pressure was 110/65; temperature, 99° F. Aside from evidence of cardiovascular asthenia, slight tenderness over the liver, and small diseased tonsils, physical examination was essentially negative. The liver and spleen notably were not palpable.

The clinical presumption was toxic hepatitis due to intravenous gold sodium thiosulphate.

Urine examinations revealed persistent moderate albuminuria; they were positive for bile, negative for urobilinogen in all dilutions; fine and coarse granular casts were observed on several examinations; no leucine, tyrosine, or cystine crystals were observed, and the examinations were persistently negative for gold.

The laboratory findings throughout the course were as follows: Blood count—hemoglobin, 80 per cent—70 per cent; red blood cells, 4,290,000—3,800,000; white blood cells, 9400; polymorphonuclear cells, 72 per cent; small cells, 28 per cent; *urea nitrogen*—14.2–15.5–12.9–10.5–16.2; *nonprotein nitrogen*—24.4–36.2–25–30; *sugar determination*—85–90–95–100; *cholesterol*—189–209 mg.; *serology*—negative; *bleeding time*—3½ minutes; *coagulation time*—7½ minutes; *blood platelets*—230,000; *fragility test*—hemolysis began at .42 and ended at .28; *van den Bergh test*—strong, immediate, direct, followed by a very slight deepening in color at the end of 15 minutes; *blood serum*—total protein, 5.72–6.08; total albumin, 4.83–4.8; total globulin, 1.29–1.28; *blood calcium*—10.6 mg.; *blood phosphorus*—4.0; *icterus index*—49.3 (on admission)—49.6–50–57–90–117.3 (Feb. 15)—100–71.3–52–34.2–18–11.9 (on discharge); *feces*—clay-colored on admission, then brown to brownish green; occult blood positive; urobilin positive; bilirubin positive; *galactose tolerance test*—1.1 gm. of galactose excreted in 5½ hours after the ingestion of 40 gm. of galactose; *blood culture*—negative.

Treatment consisted of the following: Three whole blood transfusions, continuous venoclysis, (dextrose saline), sodium thiosulphate, phenyl salicylate, thyroid extract, hydrochloric acid dilute, phosphoric acid dilute, and nitric acid dilute; gynergen and histamine for pruritus (with no improvement), in addition to a high carbohydrate, low protein diet. The remainder of the treatment was entirely symptomatic and directed toward maintaining the cardiovascular tone, sedation, and elimination.

For 2 weeks following admission the jaundice, nausea, and vomiting were difficult to control. The icterus index finally reached 117.3. The patient gradually improved, jaundice disappeared, and icterus index on dis-



Fig. 1.—Experimental rabbit liver following gold injections, showing diffuse toxic degeneration.

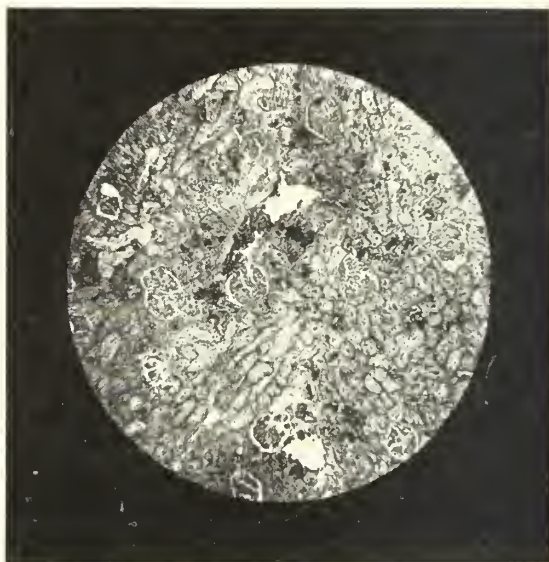


Fig. 2.—Experimental rabbit kidney following gold injections, showing diffuse toxic degeneration.

charge (Apr. 4, 1933) dropped to normal. Since then the patient has been tonsillectomized, has maintained good health, as evidenced by both physical and laboratory examinations. A check-up as recently as Sept. 14, 1935, revealed a normal blood count and chemistry, including icterus index. The areas of vitiligo remain unchanged.

CASE 2.—M. G., age 20, single white female, admitted with nausea, weakness, and moderate generalized edema. The patient had been treated without success for 1½ years for a condition of the face diagnosed as lupus erythematosus.

In April, 1933, a specialist instituted intravenous sanocrysin therapy. Following the third week after treatment was begun, weakness and anorexia developed, accompanied by increase in weight and edema, especially pain and edema of the legs and feet. When the

physician's attention was called to this, he suggested arch supports for relief and continued intravenous injections. For the next several weeks generalized edema became pronounced, accompanied by marked oliguria.

Following symptomatic treatment by the family physician for several more weeks, with no improvement, the patient was brought from her home in North Carolina. When admitted on Aug. 26, 1933, examination revealed moderate generalized edema and an erythematous rash, butterfly in shape, over both cheeks. Blood pressure was 145/90; temperature, 100° F. There were ulcerative stomatitis, marked upper respiratory infection, and poor myocardial tone with gallop rhythm, making for a presumptive diagnosis of severe subacute nephritis due to gold.

During a month's stay in the hospital the patient became progressively worse until uremic manifestations



Fig. 3.—Case 2, showing marked liver changes. Note similarity to rabbit's liver.



Fig. 4.—Case 2, showing marked kidney changes. Note similarity to rabbit's kidney.

supervened. Terminal complications were septic temperature, bronchopneumonia, and myocardial failure.

The laboratory findings were as follows:

Urine—oliguria—2-4 ounces a day, cloud of albumin; 5-30 white blood cells; red blood cells always present; hyaline, coarse and fine granular casts, also waxy casts; *blood count*—hemoglobin 64 per cent—2 transfusions—80 per cent; red blood cells, 3,400,000-3,740,000; white blood cells, 8400; polymorphonuclear cells, 56 per cent; small lymphocytes, 44 per cent; *urea nitrogen*—35-45-66-96.5-105-109-160; *nonprotein nitrogen*—111.2; *sugar*—82-106; *cholesterol*—308; *calcium*—6.5-7.28-5.8; *phosphorus*—8.6-9.16; *total protein*—4.33; *serum albumin*—1.44; *serum globulin*—2.89; *creatinine*—2.1-2.6-3.56-3.46; *alkali reserve*—44-37 vol. per cent; *chlorides*—537 mg.; *serology*—negative; *blood culture*—negative; *feces*—negative for tuberculosis; *spinal fluid*—plus 12 mm. Hg.; occasional white blood cells—occasional red blood cells; direct smear revealed no organisms; culture negative; one day before death pneumococcus was isolated; reducing substances present; *nose and throat culture*—hemolytic *Staphylococcus aureus* and nonhemolytic *Streptococcus*; *eyes*—papilledema, also retinitis with hemorrhages in left eye; *basal metabolic rate*—minus 14 per cent, minus 17 per cent; *roentgen-ray examination of sinuses*—pathologic ethmoids and sphenoids; ureteral catheterization revealed no obstruction.

Treatment consisted of sodium thiosulphate; blood transfusions; continuous venoclysis of glucose in normal saline; calcium gluconate; maintenance doses of digitalis; cortin; thyroid extract; sedation; spinal drainage; elimination by enemas; hot packs; salines; high carbohydrate, low salt, and maintenance protein diet.

Necropsy revealed moderate generalized edema, cloudy swelling of all organs, especially involving the kidneys and liver, with terminal bronchopneumonia. Grossly, the liver weighed 1570 gm.; the parenchyma was yellowish and brown and evidenced considerable congestion. Histologically, cirrhosis and fatty change were noted. The left kidney weighed 298 gm.; the right, 272. The surface was smooth and the capsules stripped easily; the parenchyma had a yellowish cast. Blood vessels were very prominent, and areas of advanced degeneration surrounded by hemorrhagic zones were seen. The kidney tissue was very soft. Microscopically, the typical picture of subacute glomerulonephritis with marked degenerative changes and cloudy swelling was seen.

COMMENT

It is noteworthy that neither patient experienced any acute nitritoid reactions, but that the hepatic syndrome in one, and the renal in the other, insidiously and gradually developed; that when symptoms of cumulative intoxication finally set in, the seriousness of the disease was not recognized; and that when treatment finally was instituted, it proved almost fatal in the first case and was too late in the second.

In many of the reported cases in which gold was used, mention is made of albuminuria and in some jaundice. Stormy constitutional courses are reported in these patients without cognizance being taken of the destructive pathology produced by this metal.

Schanberg and Wright, however, are among the first who recognized not only the immediate danger of injection of the drug but also warned against the ultimate cumulative effects of the drug on the system.

Due to the impossibility of determining individual tolerance and susceptibility, it is well to bear in mind that gold preparations are toxic and that it is best to begin initially with a very small dose, probably not exceeding 20 to 25 mg. The smaller dose of 10 mg. injected into local lesions is probably the safest. Before instituting gold therapy, in order to lessen the possibility of its toxic effects, it is wiser to make a system survey to determine organic functional capacity and the presence of focal infection so that these may be eradicated. Gold should never be used in the presence of evident liver or kidney dysfunction, pregnancy, fevers, or in low constitutional states.

When instituting gold treatment, the intervals should be at least 5 days apart. Blood icterus, urea, and urine examinations should be performed at frequent intervals, and it should be borne in mind that albuminuria and casts indicate renal damage even before blood values become abnormal. A rise in icterus and urea calls not only for cessation of gold treatment but also for recognition that severe damage of liver and kidneys, or both, has already occurred. The patient should be treated accordingly.

2006 Spruce Street.

ABSTRACT OF DISCUSSION

CARROLL S. WRIGHT (Philadelphia): Gold has been used increasingly as a therapeutic agent in many and diversified diseases during the past decade. As its use has increased, attention has been more and more directed to the many untoward reactions that it may induce.

Mild reactions resulting from gold therapy are undoubtedly frequent but not necessarily serious or contraindication to further administration of the drug. Serious reactions and even death occur altogether too frequently, as is evidenced by the numerous reports in recent literature, but many of these tragedies are preventable and undoubtedly will become rare with a better understanding of the warning signs of gold intolerance and methods of prevention.

Driver and Weller have classified reactions to gold under 4 headings: (1) Immediate reactions, including anaphylactic reactions, febrile reactions, metallic taste in the mouth, and protein reactions due to colloidal gold; (2) delayed toxic reactions, including stomatitis, gingivitis, hepatitis, digestive disturbances, and albuminuria; (3) reactions involving the skin; and (4) deaths. This classification includes virtually all of the types of reactions mentioned in the literature.

At the annual convention of the American Dermatological Association in May, 1935, I reported the results of gold therapy in 76 cases of lupus erythematosus

which I had treated and kept under observation for the past 10 years. Of the 76 patients, reactions had occurred in 19, or 25 per cent. The incidence and types of reaction are as follows: Dermatitis, 8 (10.5 per cent); fever, 4 (5.25 per cent); purpura, 2; and jaundice, albuminuria, metrorrhagia, recurrent pruritus, exacerbation of old eczema, cirrhosis, and death, one each.

At first glance this would indicate that gold is an exceedingly dangerous drug; but, with the exception of the one fatality, none of these reactions proved serious nor resulted in any permanent ill effects. The one fatality occurred in a case treated in 1925, before the dosage or dangers of gold were understood. We learn to examine the urine frequently for the appearance of albumin, to question the patient carefully for the symptom of itching which invariably precedes the development of an erythrodermia, and to stop the drug and start treatment with sodium thiosulphate when such manifestations appear. Do not give the drug to patients with fever, blood dyscrasias, pulmonary tuberculosis, kidney damage, or to aged patients. Begin

with exceedingly small doses, sometimes not over 5 or 10 mg. and never more than 25 mg. as an initial dose, and do not increase the dose beyond the point required for therapeutic effectiveness. Just how cumulative gold may be we do not know. One patient can tolerate a total of several thousand milligrams of the drug, whereas another may not tolerate a total of 25 or even 10 mg. In one of my patients, a woman, age 72, a total of 9 mg. provoked a severe albuminuria and high fever.

Gold is an invaluable drug to the dermatologist, for no other therapeutic agent has proven so effective in the treatment of lupus erythematosus, always a disfiguring disease. As is true of every heavy metal, reactions will occur and are not always preventable. These reactions are no more serious than those resulting from the use of arsenic or bismuth, although perhaps more frequent. Do not discredit nor discard this therapeutic agent, but take warning from reports of serious reactions, such as those reported by Dr. Rubenstone and others, and use the drug only with the utmost care.

THE RÔLE OF PSYCHIATRY IN THE PENITENTIARY*

A Study of 200 Psychotic Prisoners

CORNELIUS C. WHOLEY, M.D., PITTSBURGH

The importance of psychiatry in prison affairs is little understood. One person of every 15 inhabitants at some time becomes a mental case. Pennsylvania provides a special institution for 800 "criminal insane." This contradictory phrase designates an insane person who commits a criminal act. To be guilty of a criminal act implies the capacity of knowing right from wrong, and this is not compatible with the true meaning of insanity. Again, an insane person may know right from wrong but be unable to control his actions; therefore, he cannot be regarded as criminal.

The psychiatrist knows that it is often a matter of accidental circumstance as to whether an individual arrives in a psychopathic hospital or in prison. If, as a result of an epileptic furor, some one is murdered, the individual goes to prison. If no such catastrophe occurs, the individual may land in a psychopathic hospital. In either case he may be entirely unaware of what happened during his epileptic maniacal amnesia. (Case I.) A paretic whom I treated some years ago, in an uncontrollable fit of delusional jealousy, missed putting a bullet through his wife's brain by a very narrow margin. Suspicion of insanity took him to the hospital. Had the bullet's course varied one-half inch he would

have gone to prison. There are crimes of passion in which it is unquestionable that the individual has been so blinded by emotion and so bereft of volitional control that it is difficult to regard him as responsible. Many alcoholics serve terms for deeds of violence for which they have no recollection because of their amnesia at the time of the deed. I am not shielding such individuals from responsibility but mention this because of the psychopathology underlying their conduct. Psychiatry is important in the handling of criminals medicolegally and in their prison care and eventual disposition.

The law has not advanced in its interpretation of criminal responsibility in keeping with the progress which has been made in psychiatry, but this is due in part to the extreme difficulty in modifying legal procedure. Insanity as a defense at law is comparatively recent. The so-called right-and-wrong test as laid down in the celebrated McNaughton case of nearly a hundred years ago still serves, generally speaking, as the basis for determining responsibility in cases in which the plea is insanity. A much better understanding by our courts of the criminal insane exists today.

The psychiatrist entertains no slushy sentimentality toward the criminal class. If his advice were followed in regard to the paroling or freeing of prisoners, society would be vastly

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

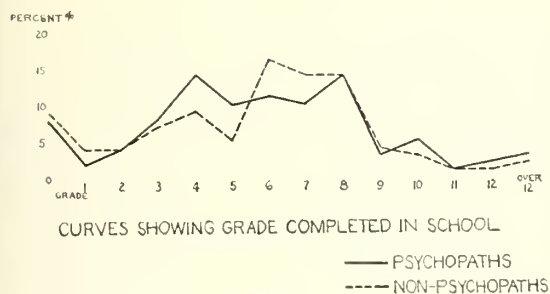


Chart 1

better protected from irresponsible and dangerous criminals, who today are often given their freedom solely because of having completed their sentence with little concern as to their further depredations upon society. Some are definite mental cases, but even a greater problem is the degenerate criminal type whose previous record and perverse personality clearly show that he is incurable and will remain a menace for life. Such psychopaths and recidivists would often be institutionalized permanently if the advice of the psychiatrist would be followed. This situation emphasizes the importance of the indeterminate sentence in the major types of crime and in cases of repeaters of even minor criminal acts.

The psychopathic and neurotic conditions encountered in a prison population are essentially the same as those found in the general population. Due allowance has to be made for the effect upon the prisoners of being isolated and ostracized by society. There is a general reaction to the situation which expresses itself in suspicion and desire for revenge. Facts are falsified in efforts at self-justification, and in the psychopathic such reactions are greatly exaggerated.

Certain types of psychosis and psychopathic personality are much more apt than others to culminate in criminal acts. This is very noticeable in dementia praecox. Many heboids develop an unmoral, unsocial, unethical trend which renders them callous to criminality and to moral and social requirements. From this group are recruited the prostitutes, the tramps, the petty thieves, and those dominated by the more intelligent criminal class. They may commit bizarre, revolting, and seemingly unprovoked crimes, including murder. On the other hand, this same group supplies supersensitive, prudish, hypochondriacal, fantastically delusional recruits who ordinarily find their way into psychopathic wards. The two apparently opposite divisions suffer from the same fundamental psychopathology, but at least during the early

stages the behavior of the respective subgroups leads them to very different activities and consequently different institutional disposition. They are all cases of heboidophrenia. Certain arteriosclerotic psychoses of later life tend to degenerate into aggressive sexual behavior, rape, sodomy, *etc.*, which frequently culminates in a term in prison rather than in a psychopathic ward. Similar distinctions could be made in other psychoses, a fact which should be kept in mind in studying prison patients.

Prison environment creates a general paranoid or persecutory reaction, especially if discipline is carried to an inhuman degree and conditions are such as to allow entirely inadequate outlet for the emotional life. The average prisoner's character renders him susceptible to this petulant paranoid reaction because usually he has been antisocial. Certain crimes of passion must be excluded as well as those occurring during amnesic periods of alcoholism and epilepsy. There are circumstances culminating even in murder which at times leave the prisoner with a brooding sense of injustice. For example, after a long period of persecution and even threats upon his life, a person in a state of uncontrollable fear and rage may kill his enemy and brood over what to him seems an unjust punishment, which together with the separation from a family to which he is devoted may create a psychosis of an acute per-

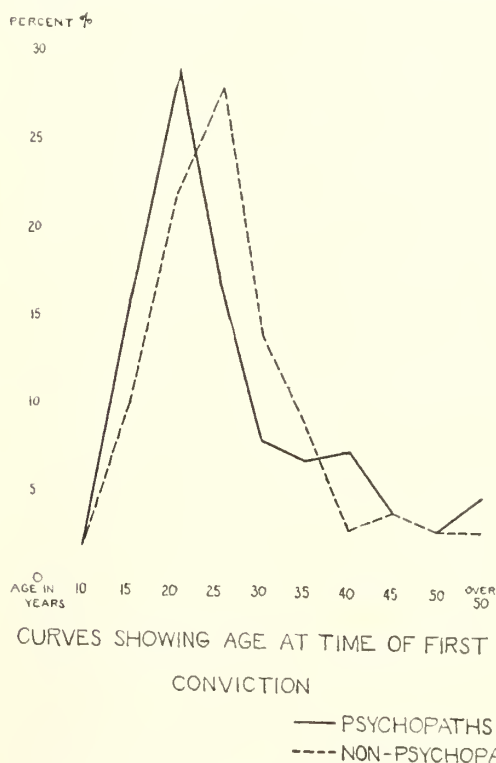


Chart 2

secutory character that may take on active delusions and hallucinations. This would constitute a typical example of what is called a prison psychosis.* Such individuals have often been law abiding, domestic, and in no sense criminally constituted.

Inmates whose prison life has resulted from such emotionally determined crimes often frankly admit their deeds and recite the details which have led to them, feeling that they have justified the acts. Being unable to accept the intolerable fate which has befallen them, they are literally driven into a psychosis. On the other hand, the hardened criminal perpetually proclaims his innocence and invents an alibi. He is the victim of collusion, double-crossing, raw deals, *etc.*, although he may have been in prison numerous times for practically the same offenses. In such cases the evidence of his conviction has been indisputable. Some of these persons are psychotic and others are not. This alibi complex in one instance reached the extreme degree in which a prisoner insisted for more than a year that his was a case of mistaken identity, this in the face of overwhelming evidence of his identification by witnesses, relatives, and his own finger prints. At times in some individuals this seems a laudable reaction against being thought criminal.

In a detailed, comprehensive, carefully controlled study in which 239 psychopathic cases were compared with 200 nonpsychopathic cases, it was found that few significant differences between the 2 groups existed. The psychopaths were classified under the following headings: Constitutional psychopathic inferiority, simple dementia praecox, syphilis, epilepsy, feeble-mindedness, arteriopathy, paranoia, and organic dementia.

Psychopaths and nonpsychopaths were studied with reference to the following conditions: Marital status, alcohol, nativity, schooling, age



CURVES SHOWING AGE AT TIME OF PRESENT CONVICTION

— PSYCHOPATHS
--- NORMAL

Chart 3

at leaving home, age at first conviction, crimes, Woodworth test, nativity of parents, status of home, condition of home, mental age (Binet), race, employment, previous convictions, religion, age, Wassermann reaction, and venereal disease.

The following are some of the facts revealed:

1. A larger percentage of psychopaths than nonpsychopaths were single. This is in keeping with the results found in other studies and tends to show that the psychopath is unwilling to assume any social responsibilities which he can avoid. This fact might be construed to imply that the psychopath is inherently unstable and that his avoidance of marital ties is but an indication of this instability.

2. More of the psychopaths were teetotalers than were the nonpsychopaths.

3. A larger percentage of psychopaths come from homes in which either one or both parents were of foreign birth. It is to be expected that in such homes there is present a social conflict between the foreign culture represented by the parents and the American culture of which the youth is a part. Just what might result from such a conflict is not definitely known. It is readily conceivable, however, that it must place a terrific strain upon the personality of the growing child.

4. Eighty-three per cent of the psychopathic group were white against 74 per cent of the non-

* Several years ago during a strike some of the workers remained loyal to the company. Among these was a man with a large family; he was an excellent worker, dependable and industrious. While going to and from his work he was constantly harassed and threatened by the strikers. This continued for several months. He was called scab and generally reviled. He had been allowed officially to carry a revolver because of the known menace to his life. One night, upon returning sober from a christening, he was recognized by several drunken strikers who began cursing him and threatening violence. He fired, mortally wounding one of the threateners, and fled. The night was foggy. Pursuit was taken up by officers; the man, mistaking them for his would-be attackers, turned and fired again, killing one of the officers. At the trial he was condemned to the chair, but in a second trial the court was satisfied that the man, in his intense state of panicky fear, believed he was defending himself from his original murderous pursuers and had no conception of the fact that their place had been taken by the officers. It was contended by the psychiatrist that this man had already been in a highly emotional state by reason of the long period of intimidation and anxiety resulting from the tense situation and daily threats, and that in the final episode he was in a state of panic and acted almost automatically in obedience to the instinctive impulse of self-defense. This is an instance in which the convicted man might readily have developed prison psychosis had not pneumonia ended his life before such a prison test of his mental resistance came about.

TABLE I
MARITAL STATUS OF PRISONERS

Status	Psychopaths		Nonpsychopaths	
	Number	Per cent	Number	Per cent
Single	128	54	87	43
Married	57	24	63	32
Divorced	10	4	12	6
Divorced and remarried	12	5	7	3
Forced marriage	3	1	—	—
Separated	26	11	26	13
Common-law marriage	—	—	5	3
Unknown	3	1	—	—
	239	100	200	100

psychopathic, whereas only 17 per cent of the psychopathic group were negro against the 26 per cent of the nonpsychopathic, indicating that in this particular sample the negro tends less toward psychopathy than does the white.

5. The psychopath shows greater instability in his work record. These results are entirely in keeping with the unstable personality of the psychopath.

6. Twenty-one per cent of all crimes committed by psychopaths were murders whereas only 12 per cent of the crimes of the nonpsychopaths were murders. A larger percentage of psychopaths tend toward crimes of violence than do the nonpsychopaths. A larger percentage of robberies are committed by the nonpsychopaths, leading to the conclusion that, on the whole, the psychopathic crimes tend to be against the person whereas nonpsychopathic crimes are more against property.

7. Psychopaths who commit crimes tend to commit them at an earlier age than do the nonpsychopaths.

Just how important environmental factors may be in particular psychopathies is largely a matter of conjecture. So far as the psychopaths studied as a group are concerned, there seems to be little of importance in environmental factors. If each case is considered individually, and analyzed by itself, the environment may assume a more important rôle in activating the psychopathic trend.

The pathologic results of alcohol ramify conspicuously in murders and in the activities of the numerous psychopathic inferiors encountered. Through alcohol this group of inherently unstable individuals obtain an easy release of their antisocial feelings and childish but dangerous impulses. Their marked suggestibility is probably fanned into action by the dramatic portrayal through movie and press of the heroics of criminality. Out of this same group of psy-

chopathic personalities come most of the perversities of sex, and one of the great problems of penal institutions is to offset the difficulties which arise from this morbid distortion. An additional problem presents itself to the prison psychiatrist in differentiating between the truly feeble-minded or imbecile group and those more distinctly of psychotic heredity. Feeble-minded individuals may develop a psychosis, and at times combinations of imbecility and psychopathy are found, perhaps epileptoid or praecox in character or with a manic depressive ingredient. There are even combinations of more than 2 of these components. The toxic and degenerative effects of syphilis are clearly determining factors in some instances in the commission of crime, and drugs may play a rôle.

The details of this statistical study have been made possible by the psychologists, Dr. Giardini and Mr. Jess Spirer, working at the Western State Penitentiary, Pittsburgh.

CASE REPORTS

CASE 1.—This case represents an instance of crime in which the nature of the deed is so unusual, violent, bestial, and unprovoked as to indicate at once an abnormal mental condition in the perpetrator.

The inmate, a bachelor, age 35, had been supporting a common-law wife for 2 years. They got along well together. He was a fairly steady worker but a heavy drinker, this tendency having been especially noted for several weeks previous to his crime.

A neighbor woman was called to the inmate's home on the morning of the crime and was met at the door by the victim, the common-law wife. She was taken upstairs. The prisoner was in bed shouting that he was going to die that day and demanding his Bible. They brought him the Bible, and then the prisoner ordered the neighbor woman to leave or he would kill her. She left and notified a policeman and a physician.

Two officers had to force their way into the room. They found the prisoner in underclothing and the woman in a nightgown, both in bed, the prisoner astride the woman, chewing at the flesh of her face. He had crushed her skull with a chair and had mutilated her genitalia. Wrenched away, the prisoner stared at the officers and tried to have intercourse with the dead body, at the same time continuing to chew the face,

TABLE II
ALCOHOL ADDICTION

	Psychopaths		Nonpsychopaths	
	Number	Per cent	Number	Per cent
Abstinent	77	32	45	22
Moderate	77	32	64	32
Heavy	35	14	45	23
Drinking factor in crime	44	19	43	21
Pathologic drunkenness	6	3	2	1
Unknown	—	—	1	1
	239	100	200	100

TABLE III
AGE OF LEAVING HOME

Age	Psychopaths		Nonpsychopaths	
	Number	Per cent	Number	Per cent
Unknown	12	5	7	3
0-10	15	6	8	4
11-15	73	30	46	23
16-20	84	35	88	44
21-25	38	16	40	20
26-30	9	4	6	3
31-35	6	3	5	3
Over 35	2	1	—	—
	239	100	200	100

his mouth bloody and several teeth hanging from their sockets.

A confession made by the prisoner some hours later recited the crime in detail. His story was corroborated by the officers, who were satisfied that "he knew what he was talking about."

The prisoner related in court that he had lived with and supported the victim for 2 years. On the morning of the crime he had been down stairs getting breakfast, when for some unexplainable reason he had a premonition that he was going to die and told the victim about it. She got the family Bible and both tried to pray. She told him that he would not die. That is as far as the prisoner could remember. He did not remember being in the death room, seeing the neighbor woman, the 2 officers, or the detectives, or making the confession which they claimed he made. He did not know of killing the woman until shown a newspaper account of it in the jail the next morning.

It is important to state that on the evening of the day of the crime the prisoner had a major epileptiform seizure.

History.—Family history negative; semiskilled laborer; fair work record; school until age 13, fourth grade; border-line intelligence; ran away when a boy; bed-wetter until puberty and at times since; knocked unconscious at age 14 by head blow; ichthyosis over thighs; "blind-like spells" of late years; malaria few months before crime; amnesic for 2 days 8 years earlier, following an attack of influenza; prison record good; good adjustment to prison life; no abnormal neurologic reflex findings; Wassermann reaction negative.

Diagnosis.—Psychopathic personality of epileptic constitution. Grand mal attack, epileptic furor with amnesia and later convulsive seizure, all precipitated by toxicity of alcohol, malaria, and exhaustion.

Comments.—This case is of great importance medicolegally because of the confession being obtained during the dissociated amnesic state. The individual while in this automatic condition recites what he has done during the abnormal period, but when regaining memory recollects nothing more of his activities than a somnambulist can recall of his sleep-walking acts. Hence there is need of correcting such testimony as "the prisoner knew what he was talking about." In this instance the individual passed into a frenzied delirious condition during which all his higher restraining mental influences of judgment, will, and memory were severed, and he automatically reacted to the most savage perverted instincts. This case represents an extreme instance of such an amnesia, of which there are many variations.

CASE 2.—There are many cases like the following in which a vicious background coupled with poverty, idle-

ness, and gang suggestion play upon inherent instability in developing criminal careers.

Before the commission of the crime for which the inmate, age 27, is now serving time there had been a long record, including larceny of automobiles, desertion from the army, wife desertion, suspicious person charges, to say nothing of the burglaries and other automobile thefts for which he was not apprehended. The present prison crime came about as a result of a "pal" needing money to bail his girl out of jail. The prisoner immediately suggested that he would assist his "pal." They robbed 2 "mooney joints" and a grocery store, netting them \$200. Next a car was stolen and "pick-up girls" given a ride. The owner of the car received 6 bullets in the legs when he and a friend tried to recover the car. Detectives joined the chase, capturing the prisoner after a thrilling effort on his part to escape.

Psychoclinical Investigation.—Intelligence quotient 90, intelligence rating normal. Characterized as aimless and apathetic with poor social and leisure habits and a devil-may-care attitude. Drug habit in mild form (marijuana cigarettes) and moderate alcoholic addiction. Childish boasting about his crimes. History revealed vacillating temperament, unreliability, gun-toting, long association with gangsters. Severe case of measles at age 3 necessitated relearning to walk and talk. Syphilitic infection in 1929. Occasional somnambulism.

Social Status.—Stopped school at age 13, sixth grade; disliked school; truant. After age 10 his motherless home was one of poverty and alcoholic debauchery. Six other siblings apparently leading respectable lives. Shotgun wedding at age 19; lived at expense of wife's family; deserted her for the army; deserted army after few months. Truck driver for short periods.

Conclusion.—Psychiatrically, prisoner one of heterogeneous group, more or less psychopathic. Apparently encephalitic infection following measles was important in determining his irregular degenerate career. Environment in this case, as in others, illustrates that brothers and sisters, though equally exposed, do not always succumb to its vicious influence. Such individuals practically never change their criminal habits. When once definitely recognized, they should not be turned back upon society.

There are many variations of this type among the great increase of youthful convictions. They present evidence of constitutional inferiority, are often of limited intelligence, incapable of moral development, emotionally unstable, and addicted to sordid social and leisure habits.

TABLE IV
CRIMES COMMITTED

Crimes	Psychopaths		Nonpsychopaths	
	Number	Per cent	Number	Per cent
Larceny	30	13	20	10
Burglary	53	22	49	24
Embezzlement	—	—	—	—
Forgery, fraud	5	2	11	6
Robbery	—	—	—	—
Extortion	36	15	47	23
Assault	14	6	14	7
Homicide	52	21	23	12
Rape	21	9	16	8
Sodomy	10	4	4	2
Arson	3	1	5	2
Prison escape	11	5	1	1
Miscellaneous	4	2	10	5
	239	100	200	100

They are derelict socially and present habitual petty delinquencies. In a general way they are the product of constitutional or acquired defects, frequently of poverty and disrupted family background. Alcohol and venereal disease add to their degeneracy. They constitute a very large percentage of the repeaters or recidivists. Most of them require custodial institutional care; a few may get along successfully outside under strict supervision.

CASE 3.—This inmate, age 38, fair family background, unmarried, ran away from home at age 14, and was first sentenced to a reformatory for larceny shortly thereafter. Two years later there was a federal sentence also for larceny. In another month he was in a state penitentiary for automobile theft, resented for larceny 3 months after this term, and finally reimprisoned for parole violation, from which he escaped to be immediately recaptured. In prison his conduct has been that of insubordination, insolence to officers, shirking work, stealing, and perverse sexuality. When he left home at age 14 he tramped over the country aimlessly from one town to another. He stole an automobile after war service because he heard that certain hot springs would benefit him. He escaped from a prison farm because he did not like the work although his term would have ended 5 months later.

Case 3 is closely allied to Case 2 but more definitely of the *praecox* constitution. A large youthful group exemplified by Case 3 give a history of running away from home around the age of puberty. Usually they serve in reformatories and jails and finally the penitentiary. It is remarkable how closely they show a definite crime pattern, repeating the same offense over a long period of years, showing no tendency to profit by repeated punishments for their offenses. They are restless, impulsive, nomadic, at times hypochondriacal, sporadically alcoholic, unruly, and resentful of authority. They have no set occupation nor goal.

121 University Place.

ABSTRACT OF DISCUSSION

JOSEPH G. WILSON (Lewistown): Dr. Wholey has introduced no controversial themes or theories, and there is no cause for disagreement in the conclusions he has drawn.

I have been particularly impressed with his findings that, on the whole, the psychopathic crimes tend to be against the person whereas the nonpsychopathic are more against property. This is in substantial agreement with a study made of 1340 prisoners selected at random from the federal penitentiaries at Lewistown, Pa., and Atlanta, Ga. (Atlanta, 767; Lewistown, 573). The crimes of these prisoners varied from rape to larceny and included a fair sampling of every federal law violation serious enough to be called a penitentiary offense. In this study it was found that the crimes of exactly one-half were committed by persons who fell within the normal group according to the psychiatric classification. This included those committing both crimes of violence and crimes of dishonesty. By separating the two it was found that the normal group was more inclined to crimes of dishonesty than to crimes of violence, the proportion being 51.7 per cent of the former to 37.5 per cent of the latter. Twenty-nine per cent of crimes of violence were committed by persons with an intelligence quotient

under 80, and 21 per cent of such crimes were perpetrated by persons who fell into the general psychopathic group, under which were included not only the frankly insane but also the psychopathic personalities and the epileptics.

It is undoubtedly true that the negro tends less toward psychopathy than does the white. By the same token the negro adapts himself better to prison life than does the white. Given decent treatment and a little encouragement, he seems to take a special pride in keeping his cell or dormitory in a sanitary condition and his personal effects and clothing in good order. Recently while making a sanitary inspection of the prison in company with one of the custodial officers, I commented upon the extremely neat conditions of the Negro dormitory and said to one of the negro prisoners who happened to be near, "Why is it that when you fellows are detailed to clean our offices and the hospital wards, we have to stand over you all the time to keep you from loafing on the job and see that you get the dust out of the corners, whereas here in your own quarters you do everything without being told?" His face spread into a broad grin as he chuckled, "I reckon its 'cause when we works in your office we is slaves, and when we works here we is masters." The saving sense of humor almost universally possessed by the negro is probably one of the reasons his race contains fewer psychopathic personalities than does the white.

The title of Dr. Wholey's paper is far more embracing than his treatment. Probably limitation of time is responsible for his failure to mention one of the most important rôles of the psychiatrist in the penitentiary. I refer to the very substantial aid that a good, level-headed prison psychiatrist can render the custodial force. Close contact with the psychiatrists and the keepers and mutual co-operation are the watchwords at the federal penitentiaries. This co-operation is productive of the following results:

1. The guards (or keepers) are a great help to the psychiatrists in establishing a diagnosis.
2. The psychiatrists are a great help to the guards in maintaining discipline.
3. As this mutual contact and co-operation becomes closer and closer, the disciplinary problems become less and less.

The mutual co-operation between the psychiatrist and the custodial force results in a much more intelligent handling of malingering and alleged malingering than can be possible in an institution without these facilities. This is especially evident in the differential diagnosis between malingering and psychoneurotic complaints. In this connection, it should not be forgotten that the pain originally malingered may become a neurotic pain and that the neurotic pain may be purposely exaggerated.

The psychologic explanation of the transformation of a malingered pain into a psychoneurotic pain is found in the fact that the unconscious is derived from the conscious. The malingering is conscious, and being conscious it has to be learned. The moment it becomes thoroughly learned it passes into the realms of the unconscious and into the category of reflex acts or automatic responses. In everyday language, this psychologic truth is expressed simply and clearly by the phrase: "He has told that lie so often that he now believes it himself."

To show how an originally malingered pain may later become a genuine neurotic pain is cited the example of a prisoner veteran who tried to deceive the medical staff and draw compensation on account of an alleged injury to the left knee. The roentgenogram revealed a slight abnormality in the knee which was supposed to

have been hurt. The patient was shown the picture and his case talked over with him. Then he really did begin to have pain. Some months later, when the case came up for readjustment of compensation, a roentgenogram of the other knee was taken and the same abnormality existed there! Both knees were alike, and the slight abnormality had existed in both of them from birth and was in no sense disabling. But it was too late. The psychoneurotic pain in the left knee was firmly established.

In such cases could the doctor be appropriately sued for malpractice because he gave a patient a disease he wanted instead of treating him for one he did not have?

A neurotic pain having its original cause in unconscious motivation may be consciously and deliberately exaggerated. Thus it happens that these borderline cases may have the elements of malingering superimposed upon a true neurosis. These are indeed difficult cases to handle. The psychiatrist recognizing the basic underlying cause of the neurosis is loath to admit that his

patient has found that he can lead an easier life if he pretends to be sicker than he really is. The custodial officer is firmly convinced that the patient is deceiving the psychiatrist. They are both right and they are both wrong. It is in such cases that the clinical director or even the chief medical officer may have to assume the responsibility of making a compromise between the custodial and the medical staffs in order to do the patient as much good as possible.

There is no doubt that the psychiatrist in prison is there to stay. Dr. Wholey has particularly emphasized the rôle of psychiatry in the matter of diagnosis, and I have endeavored to supplement his treatment of the subject by emphasizing its importance as an aid in maintaining discipline and preserving the prisoner's morale.

DR. WHOLEY (in closing): I am very glad Dr. Wilson supplemented my paper by emphasizing the importance of the psychiatrist in the prison. I know of no place where he may function with a greater degree of help to the community as well as to the prison itself.

BACTERIAL TOXEMIA*

Symptoms Simulating Systemic Diseases; Diagnosis; Treatment

MYER SOLIS-COHEN, M.D., PHILADELPHIA

The rôle of focal infection is generally recognized in the causation of systemic diseases. What is not so well known is that the toxins elaborated by the bacteria in a focus of infection may, without producing pathologic changes, give rise to symptoms similar to those occurring in organic disease. W. W. Wood believes that many so-called focal infection syndromes may be proven to be the manifestation of toxemia or hypersensitiveness instead of real secondary infection.

The infectious origin of the symptoms in bacterial toxemia is seldom recognized or even suspected. As the patient describes his symptoms the physician is led to suspect the presence of some systemic disorder. If the physical and laboratory findings fail to confirm this suspicion, the physician either disregards them and makes a diagnosis of organic disease, or considers the case one of neurasthenia or hypochondriasis. The nature of the treatment will depend upon the diagnostic impressions. The gastro-enterologist is likely to prescribe a diet and do a gastric lavage or biliary drainage, whereas the neurologist may order a rest cure or institute psychoanalysis. On the other hand many patients who suffer as acutely as if they had organic disease are told that there is nothing the matter with them but imagination and are advised to devote more time to recreation and exercise.

SYMPTOMATOLOGY

The most prominent manifestations of bacterial toxemia may be grouped under asthenia. They are malaise, lethargy, lack of energy, of ambition, and of "pep." weariness, indolence—often mistaken for laziness—chronic fatigue, a tendency to become easily tired or exhausted, inability to concentrate, disinclination to make decisions, failure of memory, somnolence—especially on reading or attending a lecture or concert—difficulty in rising in the morning, failure to feel refreshed after a good night's sleep, and diminished sexual power and desire. Many of these symptoms are also referred to by Thomas R. French and others.

Pains and aches in the head, in the body, especially the back, and in the limbs are complained of frequently. Many of the lesser ills of the body, according to Frank Billings, in the form of subjective soreness of the tissues, joints, muscles, or nerves are possibly the result of slight infection from a focus in the mouth or throat or some other region of the body.

The other symptoms as a rule simulate those characteristic of disease of the various tissues and organs.

Heart disease is suggested by dyspnea, palpitation, tachycardia, arrhythmia, weakness, exhaustion, weak or faint spells, vertigo, precordial pain, weak pulse, abnormally low or abnormally high blood pressure, and cardiac sounds that are

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

weak and of poor quality. In a case of tachycardia, reported by Henry Dintenfass, tooth extraction, medication, and complete rest caused no improvement, but 3 hours after tonsillectomy the pulse became normal and remained so.

Tuberculosis is often considered when there is loss of weight or failure to gain, anorexia, general malnutrition, and—more rarely—a low-grade fever, chilliness, rigors, and sweating. E. Ross Faulkner refers to persons with chronic sinusitis suffering from exhaustion and fatigue similar to that found in tuberculous patients. Cough and expectoration, due to infection in the upper air passages, increase the suspicion. Toxemia from an upper respiratory infection may also coexist with active pulmonary tuberculosis in a mixed infection.

If bacterial toxemia occurs in a patient with a healed pulmonary lesion, symptoms from the toxemia, combined with the physical signs in the lungs, frequently lead the physician to diagnose active tuberculosis. Such patients have been known to spend their lives making the rounds of sanatoria, always being discharged with "disease arrested." It is not uncommon to find an inactive tuberculosis of the tracheobronchial lymph glands in children who have disease in the nose and throat, in whom the symptoms are all due to the upper respiratory infection. These patients never improve until their tonsils and adenoids are removed or until their resistance to the infecting organism is raised by a potent specific vaccine.

The group of symptoms simulating gastrointestinal disease includes anorexia, nausea, vomiting, pyrosis, heart-burn, gastric and intestinal pains, increased and visible peristalsis, intestinal spasm with spastic constipation, mucous colitis, eructation, aerophagy, and flatus. B. C. Corbus, Russell L. Haden, and Wilder Tileston also call attention to the digestive disturbances associated with focal infection.

The neurologic picture is characterized by nervousness, by irritability, by what is variously termed chronic nervous exhaustion, chronic fatigue or neurasthenia, by paresthesias, by diminished power or even paralysis, by impaired vision and hearing, by twitching, various movements and spasms, and occasionally by convulsions. The psychic phenomena observed are depression, psychasthenia, introspection, hypochondriasis, hysteria, melancholia, phobias, and—more rarely—delirium and actual mental disease. The causation of some of these symptoms by focal infection is also mentioned by B. C. Corbus, Henry A. Cotton, E. Ross Faulkner, G. B. M. Free, Russell L. Haden, Daniel J. McCarthy, and Wilder Tileston. According to

George W. Mackenzie, focal infection is more responsible for nerve deafness than all other causes put together.

Bacterial allergy is a common manifestation of bacterial toxemia, appearing as asthma, migraine, hay-fever, and urticaria and other dermatoses.

Urticaria may also be included among the dermatologic symptoms of bacterial toxemia, of which pruritus, dermatitis, and eczema are the most common.

Symptoms pointing to the upper respiratory tract as the site of the causal focal infection are frequent attacks of coryza, sore throat, cough, and otitis media; the existence of nasal, post-nasal, or aural discharge; a hack or clearing of the throat, cough, expectoration, headache, scotomata—often associated with failing vision, impaired hearing, wheezing, and asthma.

There may be few or no local symptoms from infection in a pulpless tooth.

EXAMINATION OF THE PATIENT

Frequent physical findings are pallor, poor posture, a rapid and weak pulse, tachycardia, abnormally low or—less frequently—abnormally high blood pressure, heart sounds that are weak and of poor quality, slight dullness at the pulmonary apices (unaccompanied by other abnormal signs), and flat feet.

The examination should always include a thorough search for foci of infection. The most frequent primary sites of focal infection are the nares and the accessory sinuses, the tonsils or—after tonsillectomy—the tonsillar fossae, and the nasopharynx. Dental, gastro-intestinal, genitourinary, and lower respiratory foci are, as a rule, secondary rather than primary.

In examining the throat it is often necessary to pull aside the anterior pillars in order to disclose imbedded tonsils, and to press upon the tonsils in an effort to express pus. The presence of liquid pus may be regarded as evidence of active infection.

Injection of the fauces and the presence of pus in the nares or on the posterior pharyngeal wall indicate the presence of infection of the throat or sinuses. It usually is necessary to have the nose and throat examined by a competent specialist. All otorhinolaryngologists, however, have not the same knowledge, competency, and experience, and many may not recognize some types of throat and sinus infection. Roentgen-ray studies of the sinuses may be of some help, but roentgenologists are not equally skillful in taking and interpreting radiographs of the sinuses. Many sinus experts at times ignore

both positive and negative roentgen-ray findings in arriving at a diagnosis.

The physician must be careful not to be misled by a report that no focus of infection is present in the nose and throat or that all foci of infection have been removed from this region. What the otorhinolaryngologist making such reports really means is that he is unable to detect the presence of pus or of tissue that looks diseased. It is impossible for him to exclude the presence of infecting bacteria, which frequently persist after a perfect tonsillectomy and adenoidectomy, being found in the tonsillar fossae and in the nasopharynx, where they continue to multiply and elaborate toxins. In patients suspected of upper respiratory infection the writer made 74 pathogen-selective cultures of apparently normal tonsillar fossae, 147 cultures of the nasopharynxes, and 305 cultures of tonsillar fossae and nasopharynxes together. Bacteria pathogenic for the patient were found in 97 per cent, 95 per cent, and 93 per cent, respectively, of those cultures. More than 10 years ago he demonstrated that the nasopharynx may be, and frequently is, a focus of infection, although most physicians fail to realize this fact. Consequently the many published comparisons of tonsillectomized and untonsillectomized persons are of little value. Why should the tonsillectomized group be expected to be freer from disease if the infecting organisms are still present in the tonsillar fossae and nasopharynx?

Thomas R. French believes that the bacteria harbored in all the infratonsillar lymphoid structures are in a state of continual activation, exciting and maintaining at all times a mild systemic poisoning or toxemia which finds expression in a lowered level of both physical and mental health and vigor.

After an infected sinus has been opened, cleaned out, and drained, the infecting germs may still persist in it and in the nasal chambers, where they may continue to act as a bacterial focus of infection. Of 230 pathogen-selective cultures of the nares and 35 of the sinuses, taken by the writer in patients who had received expert treatment for sinusitis, 78 per cent of the former, and 57 per cent of the latter contained infecting organisms.

More reliance should be placed upon a history of repeated respiratory infections, frequent headaches, and a more-or-less constant nasal or post-nasal discharge than upon a negative report from an otorhinolaryngologist or radiologist, however expert or famous he may be.

A thorough inspection of the teeth is always required. The presence of pulpless teeth, crowns, bridges, or empty spaces where teeth have been

removed calls for a radiologic examination of the whole mouth, including 14 films giving 2 views from different angles of every tooth and tooth space. The possible existence of residual pathology must always be considered.

Foci of infection may also be found in the gastro-intestinal, genito-urinary, and lower respiratory tracts.

Intestinal toxemia is another possibility to be borne in mind, although Thomas Horder says that many patients said to be suffering from intestinal toxemia in reality are probably subject to subinfection with *Bacillus coli*.

Examination by a neurologist may be necessary, but neurologic findings are often invalidated by an attitude which concentrates all the attention on the mental and nervous phenomena to the exclusion of the physical and bacteriologic findings.

LABORATORY EXAMINATIONS

Blood examination often discloses a secondary anemia. The urine not infrequently contains albumin and casts whereas the blood urea nitrogen is normal, indicating toxic irritation of the kidneys, rather than a true nephritis.

In some cases it is necessary to order gastric analysis, gallbladder drainage, examination of the feces, radiologic studies of the gallbladder and of the gastro-intestinal tract, an electrocardiogram, a basal metabolism test, blood chemistry estimations, blood and spinal fluid Wassermann tests, and radiographic studies of the heart and lungs in order to determine whether organic disease is present.

BACTERIOLOGIC STUDIES

Of greatest importance in bacterial toxemia is a thorough bacteriologic examination of every possible focus of infection by a method that not only will disclose all the germs present but in addition will determine their infectivity for their host.

In chronic and focal infections the mere presence of a microbe in a culture from an infected area or from infected material is no proof of that germ's infectivity for its host and no evidence of any relationship between that organism and any existing disease. Many persons carry in and on their tissues virulent bacteria which are not harming them. Bacterial infection, therefore, must be distinguished from bacterial infestation or invasion. It is important to know which of the germs present are of etiologic significance and which may be ignored as lacking infectivity for their host, however pathogenic they may be for other human beings or for various laboratory animals.

Most bacteriologists regard the germ that predominates in a culture as the causal one, an inference which, however justifiable in acute and local infections, is unreliable in chronic and focal infections. The predominating organisms were not even pathogenic for their host in 169 (44 per cent) of 384 cultures in glucose brain broth made in chronic and focal infections by Fred Boerner and the writer. Numerous investigators have pointed out that contaminating microbes may overgrow the etiologic germ.

The various serologic tests for agglutinins, precipitins, and complement-fixing bodies are not regarded as valid by those most competent to judge. Many investigators, including the writer, have seriously questioned the diagnostic value of the intracutaneous test. Rosenow's theory of selective affinity and the method of differentiation based upon it have not been accepted by most of the leading bacteriologists and clinicians. Utilization of the electrophoretic potential as yet lacks general confirmation.

THE PATHOGEN-SELECTIVE CULTURE

Fifteen years ago the writer, in conjunction with George D. Heist, presented a method of culture that is useful in selecting the causal organism from a mixed culture in chronic and focal infections. In addition it discovers germs that do not appear in ordinary cultures, including glucose brain broth. Favorable experiences with this method, now termed the pathogen-selective method and sometimes referred to as the Cohen-Heist method, have been reported by investigators in America, England, and Australia, who confirm the writer's original claims.

In this method each culture taken is inoculated simultaneously in 2 media—in a deep tube of glucose brain broth and in the patient's fresh, whole, coagulable blood. The technic is given in "Approved Laboratory Technic" by John A. Kolmer and Fred Boerner. Bacteria that are killed by the patient's blood are regarded as nonpathogenic for him in the sense that they are unable to produce in him blood infection or a systemic disease. The germs that survive and multiply in his blood, however, indicating the absence in it of bactericidal power against them, are looked upon as pathogenic for him and of etiologic importance in a chronic or focal infection.

DIAGNOSIS

The diagnosis of bacterial toxemia without coexisting systemic disease must be based upon the history, the discovery of a focus of infection containing bacteria capable of infecting the pa-

tient, and the inability to find any other explanation for the symptoms.

Disappearance of the symptoms following removal of the focus of infection is the best supporting evidence.

There may be difficulty in distinguishing between symptoms due to bacterial toxemia and those due to psychic disturbances, the result of a subconscious endeavor to escape from an undesirable situation. Both conditions frequently coexist. Many persons, however, when free from toxemia, will endure with equanimity the same domestic and business troubles to which they succumb when toxic. The writer has so often observed the disappearance of these symptoms with the cure of the focal infection that he lays greater stress on the toxic element.

One must avoid confusing bacterial toxemia with endocrine dysfunction, nonbacterial allergy, and lack of vitamins.

A peculiar characteristic of bacterial toxemia is the failure of medication to influence the symptoms.

TREATMENT

The treatment of bacterial toxemia consists in the complete removal of the foci of infection, which must include the destruction of the infecting organisms and the rendering innocuous of their toxic products.

Infected tonsils and adenoids unquestionably should be eradicated. This may be all the treatment required. Thomas R. French employed in addition curettage of the infratonsillar bodies for the relief of symptoms which had not been dissipated by tonsillectomy.

A sinusitis secondary to tonsillar infection may disappear after tonsillectomy, especially if followed by vaccine therapy. An infected sinus, however, may require local treatment or operation, although both these measures may be contraindicated. Much depends upon the state of the patient's resistance, which sometimes is reflected in the color and condition of the mucous membranes. It usually will be necessary to rely upon the judgment of a rhinologist who possesses wide knowledge and experience in diseases of the sinuses. Frequently vaccino-therapy is all that is required in sinusitis.

Infected teeth may either be extracted or treated. The skillful dentist can often successfully treat an infected tooth. The frequent reinfection of a properly treated pulpless tooth is due not so much to faulty technic as to germs carried to it in the blood stream from a primary focus of infection in the upper respiratory tract. Therefore, it is much less likely to occur after the removal of this primary focus.

Foci of infection in the lower respiratory, gastro-intestinal, and genito-urinary tracts may require appropriate treatment. Inasmuch as most of them are secondary to a primary focus in the head or throat, they also may disappear with its removal.

Sometimes following operation a patient regains his lost or lowered resistance without further medical assistance, but in most cases the physician must come to the aid of nature. Frank Billings stressed the building up of the natural defenses of the body in addition to the removal of foci of infection. Resistance to infection is raised by general hygienic measures and by artificially stimulating the production of specific antibodies which destroy the infecting bacteria and neutralize their toxins. The latter is accomplished by the administration of a vaccine containing both the infecting microbes and their soluble toxins.

VACCINOTHERAPY

The pathogen-selective cultures made from all the suspected foci are utilized by the writer in preparing a vaccine of which 90 per cent consists of the organisms that grew in the patient's blood and 10 per cent of those that failed to grow in it. The broth culture in which the germs are growing constitutes the vaccine, which consequently contains the metabolites produced by the bacteria during their growth. The details are given in "Approved Laboratory Technique" by Kolmer and Boerner.

The pathogen-selective vaccine as a rule is extremely potent and requires the greatest skill in its administration. As much as 2 billion micro-organisms may be given to some patients, but others at times can take only a quintillionth of this amount.

In determining the initial dose the writer makes intracutaneous tests in the forearm with 3 strengths, such as one germ, one thousand germs, and one million germs. The smallest dose that gives a reaction is then injected subcutaneously.

The appropriate dose of vaccine is one which produces a favorable reaction or a very slight unfavorable reaction. The former should be repeated until it no longer causes a favorable reaction, when it should be increased slightly. A dose producing a slightly unfavorable reaction may likewise be repeated or it may be slightly reduced, but it should never be increased. When a dose is followed by a moderate or a marked unfavorable reaction, the next dose should always be reduced to from one-tenth to one-billionth of that amount.

The interval also is determined by the character of the reaction. A dose that causes a favorable reaction should be repeated just before this good effect begins to wear off, usually in 5 to 7 days. After a moderate or marked unfavorable reaction it is well to wait 10 to 14 days or even longer before administering the next dose, which should not be given until several days after all the symptoms of the unfavorable reaction have disappeared.

SUMMARY AND CONCLUSIONS

1. Toxins elaborated by the bacteria in a focus of infection may, without producing pathologic changes, give rise to symptoms similar to those occurring in organic disease.
2. The symptoms simulate those present in disease of the circulatory, gastro-intestinal, nervous, locomotor, lower respiratory, and other systems, leading on the one hand to the diagnosis of systemic disease and on the other to a diagnosis of neurasthenia, hypochondriasis, *etc.*
3. Examination fails to confirm the suspicion of organic disease suggested by the symptoms but discloses focal infection.
4. Every possible focus of infection must be examined bacteriologically by a method of culture that not only discloses all the germs present but in addition determines their infectivity for their host.
5. Such a method is the pathogen-selective method, which in chronic and focal infection selects the causal organism from a mixed culture.
6. It is necessary to distinguish between symptoms due to bacterial toxemia and those due to systemic disease, psychic disturbances, nonbacterial allergy, endocrine dysfunction, and lack of vitamins.
7. Treatment consists in the complete removal of the focus of infection, which includes the destruction of the infecting bacteria and the rendering innocuous of their toxic products through the artificial stimulation of specific antibody production.
8. The latter is accomplished by the administration of a potent vaccine, such as the pathogen-selective vaccine, which contains both the infecting microbes and their soluble exotoxins.
9. The administration of a potent vaccine, such as the pathogen-selective vaccine, requires the greatest skill, inasmuch as the dose may vary from 2 billion organisms to a quintillionth of this amount. The initial dose depends upon the result of graduated intracutaneous tests. Subsequent doses are based upon the general, focal, and local reactions to the preceding dose. The

interval is determined by the character of the reaction to the last dose.

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ABSTRACT OF DISCUSSION

ANGELO L. LUCHI (Wilkes-Barre): The present-day attitude of practitioners toward focal infection suggests the following grouping:

1. The enthusiasts, who are obsessed by its theoretical implications. A good example of this obsession is the concept of "septic psychoses."

2. The skeptics, who synthesize their attitude by cynically paraphrasing Voltaire's definition of a physician "as a man who removes tonsils, about which he knows little, from a body of which he knows less."

3. The indifferent, who never think of focal infection except in the most obvious cases.

4. The conservatives, who realize that focal infection as a fad has passed. Their opinion is more critical of methods of investigation and of statistical analysis. Focal infection receives from them sympathetic attention in the routine study of poorly defined states of chronic ill health.

To rule in or to rule out focal infection in the individual case and to determine the identification of the focus or foci is usually a difficult problem. Its solution has more than academic interest; the practitioner knows and fears the complications of corrective surgery, such as pulmonary abscess, hemorrhage, or septicemia following tonsillectomy, or meningitis after sinus operation, or the harm from a single too strenuous prostatic massage. Complications are particularly feared in lesions of the eye or heart muscle. There is also the loss of confidence on the part of the patient, engendered by faulty diagnoses and poor results.

It is necessary to consider a formidable list of conditions in the differential diagnosis of bacterial toxemia, because its existence can be accepted only by exclusion. However, in the study of cases of chronic ill health, focal infection should be considered routinely and adequately by a special, separate examination of all possible foci. Symptoms and signs should be checked against

a prepared list, which will guard against omission and serve as a record for the almost inevitable reviews of the case. All suspicious foci should then be submitted routinely to the pathogen-selective method for 3 reasons: (1) A positive culture is a strong link in the evidence for surgical intervention; (2) surgical removal of a focus, without antigenic follow-up, is a tragic farce in most cases; (3) if foci are not amenable to surgery, selective antigenic therapy is the only satisfactory therapeutic means available.

The technic of the pathogen-selective method may be carried out in any laboratory with elementary facilities for bacteriologic work. By using commercial dehydrated media in screw-capped bottles the expense and trouble is reduced to a minimum. According to McCartney, media are placed in plain one-ounce prescription bottles which are hermetically sealed with ordinary metal screw-caps and thereafter sterilized. The contents remain sterile and moist indefinitely; there is no chance of contamination, no leakage, no necessity of cold storage; transport by mail or otherwise is much more easily accomplished. In short, the small laboratory may have on hand at any time and at a reasonable expense a variety of ready culture outfits of commonly or rarely used media in perfect condition.

The injection of the vaccine prepared according to the original technic is followed occasionally by severe reactions. It is now generally accepted that the immunizing portion of any bacterial antigen is nontoxic in nature and originates from the ectoplasm rather than from the endoplasm of the bacterial cell. Following the work of Ferry, Fisher, and Horder, we have extended the original technic by preparing a vaccine containing the so-called ecto-antigens only without any toxic material. The live organisms, both pathogenic and saprophytic, are taken from solid culture media and agitated separately for a few minutes in physiologic salt solution. The final suspension, in the usual proportion of 9 parts of pathogens' extract and one part of saprophytes' extract, is rapidly cleared of organisms by centrifugation or filtration. The resulting solution contains only a small amount of protein, has good antigenic properties, and has never given rise to unpleasant reactions. We use it routinely, by intravenous injection, for the dual purpose of immunization and desensitization.

CALCULUS FORMATION IN THE FRACTURE AND TRAUMATIC GROUP*

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It has been definitely established that stone formation does occur in patients who are immobilized for long periods as a result of simple or compound fractures, particularly of the femur or bony pelvis, and in cases of osteomyelitis; that in many instances they develop bilateral or unilateral renal calculi, causing grave damage to one or both kidneys.

These observations have been recorded in the literature by numerous observers. E. H. Paul calls attention to the frequency of stone formation following gunshot wounds in bony suppura-

tion and reports 20 cases. He thinks that there is a very definite relationship between suppuration and the formation of the renal calculi in the cases reported. He also points out that in 90 per cent of the cases there were definite signs of infection in the affected kidney and stresses the rôle of infection as a very important, if not the most important, cause of renal calculi.

This is further supported by Hyrntschak, of the Wilhelminen Krankenhaus of Vienna, in a paper on the "Operative Treatment of Bilateral Nephrolithiasis." He stresses the supreme importance of infection as an etiologic factor. He reports 15 cases. In 13 of the 15 cases the

* Read before the Section on Urology of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

stones on both sides were composed of phosphates. In all the urine was infected. In 3 of the cases there were bone injury and osteomyelitis. Urostrasis, infection, and prolonged immobility are given dominant position as the causes of calculi formation.

Joly records 2 cases of bilateral stones following gunshot fractures of the femur and one case of unilateral renal stone occurring in a patient with a fractured pelvis.

Randall in his paper entitled "Prevention of Recurrence of Urinary Calculi" emphasizes the importance of stasis and infection as outstanding factors in stone formation, particularly of the earthy or triple phosphate variety.

The problem of the actual cause of stone formation is still unsolved, and it is impossible in a brief paper to review the excellent contributions of Keyser, Higgins, and other workers on the causes of stone formation, or the extremely interesting contributions made by the groups at the Massachusetts General Hospital and the Mayo Clinic on the relations of hyperparathyroidism to stone formation.

A brief report will be made of clinical observations on a small group of patients seen in the past few years at the Mercy Hospital, Pittsburgh. The series is small; in some of the cases the data are inadequate; and the unavoidable errors that get into any clinical observation are such that deductions as to the sequence following the injury can be of a speculative value only. In only one case in the group could a pre-existent renal lesion be established. This patient had a stone removed from the kidney 6 years before the injury. The other 9 patients had no clinical evidence of lithiasis previous to the injury. This in itself cannot be accepted as *a priori* evidence that stones were not present at that time. Unless there is exact information as to the condition of the kidneys before or at the time of injury, positive conclusions cannot be drawn from the findings. The constancy of certain findings in all cases was impressive. Alkaline urine, urinary infection, phosphatic stones—these 3 factors have all been strongly stressed, particularly by Randall and Higgins.

One patient (Case No. 9) in the series, stone-free on admission, with fractures of the first, fourth, and fifth lumbar vertebrae, acid urine, negative roentgen-ray findings for stone, and catheterization necessary for 48 hours, was in bed 6 months and developed bilateral stones with such extensive damage to kidneys that his death occurred from urosepsis.

The average period in bed was 5 months; the average time from the original injury to the recognition of the stones was 20 months. In 4

of the patients, the lesions were bilateral; in 4, unilateral; and in 2, vesical. In 3 of the unilateral group the damage was so extensive that conservative surgery was impossible and the kidney had to be removed. In the bilateral group, nephrolithotomy was performed; there was an average of one month's interval between operations. Vesical calculi were removed by cystotomy. There was no mortality in the 9 operative cases. Postoperative measures instituted to prevent recurrence were along the lines suggested by Randall.

CASE REPORTS

CASE 1.—S. W., white male, age 24, glass worker. Injured Oct. 13, 1933. Fractured pelvis and ruptured urethra. Roentgen-ray studies at the time revealed patient to be stone-free. Acid urine, free from infection. Hospitalized in suburban hospital for 46 weeks—in bed 36 weeks. One year from the time of injury began to complain of incontinence. On admission to Mercy Hospital Jan. 10, 1935, alkaline urine, multiple perineal fistula, flexion deformity of the left hip, 10 per cent motion. Two large calculi in bladder, the smallest being the size of pigeon's egg. Cystotomy, removal of stones. Retrograde operation for the correction of urethral deformity and perineal fistulas. Attempted manipulation of left hip, intertrochanteric fracture of femur sustained. Chemistry of stones, triple phosphates, calcium carbonate, and urates.

CASE 2.—F. T., white male, age 19, student. Injured Jan. 8, 1934. Fractured pelvis and ruptured urethra, automobile accident. In a suburban hospital 5 months. Roentgen-ray investigation at the time of admission negative for stones, acid urine. Sixteen months after injury admitted to Mercy Hospital with complete urinary suppression. Gravely ill. All the signs of urosepsis. Loss of 67 pounds since injury. Roentgen-ray examination revealed bilateral renal calculi. Large calculus in the left ureter. Catheter passed above stone, obstruction relieved. Urinary suppression combated with intravenous fluids. Urine, alkaline pyuria. Under renal decompression, patient improved materially. After several transfusions, bilateral pyelolithotomy, with a month's interval, was performed. Recovery uneventful. Has regained normal weight. Now attending California State Teachers College.

CASE 3.—J. D., white male, age 17, student. Had an unrecognized osteomyelitis of the left thigh and hip, complete absorption of head of femur. In bed in a suburban hospital for 6 months. One year after injury developed pain in right loin, hematuria, passed large stone. On admission to Mercy Hospital, alkaline urine, marked pyuria. Roentgen-rayed—multiple calculi in the right kidney and upper ureter. Right nephrectomy and ureterolithotomy. Pathologic report on kidney—chronic suppurative pyelonephritis. Chemistry of stones showed phosphatic nature. Recovery uneventful.

CASE 4.—H. H., negro male, age 24, miner. Fractured pelvis, ruptured urethra. June 27, 1930. No evidence of calculus on admission. Urine acid. In bed 4 months. Left hospital without any urinary complaints. Readmitted one year later, pain in both quadrants, frequency and dysuria. Alkaline urine, very purulent. Roentgen-ray examination revealed large, bilateral renal calculi. Bilateral nephrolithotomy, interval of 6 weeks.

Six months after operation, roentgen-ray examination revealed small fragments of stone in the right kidney, either recurring or overlooked at the time of operation.

CASE 5.—F. M., white male, age 24, blacksmith. Ruptured bladder, perforation of rectum. Aug. 30, 1917. Urine acid on all examinations. Roentgen-ray examination negative for stone. Readmitted Sept. 16, 1921, 4 years after injury, for relief of pain in right loin; alkaline urine, huge stone occupying pelvis and calices of the right kidney. Right nephrectomy. Pathologic report—chronic suppurative pyelonephritis and leukoplakia of renal pelvis. Uneventful recovery. No record of chemistry of stones.

CASE 6.—J. McC., white male, age 28. Severe injury due to explosion of shell, August, 1918. Complete recovery after hospitalization. Eighteen months after injury began to have pain in the lumbar region. On admission to Mercy Hospital Dec. 1, 1920, urine alkaline and purulent. Large stones completely filling the kidney pelvis. Operation, pyelolithotomy. Uneventful recovery. No record of stone chemistry. Data on this case incomplete.

CASE 7.—T. B., white male, age 36, miner. Fractured pelvis and lumbar spine. Urine acid on admission. Roentgen-ray examination negative for stone. Later, roentgen-ray examination revealed multiple stones in right kidney. Operation, right nephrectomy. Pathologic report—chronic suppurative pyelonephritis, leukoplakia of pelvis of kidney. No record of stone chemistry.

CASE 8.—M. V., white male, age 33, miner. Fracture of the fifth lumbar vertebra Jan. 21, 1928. Urine acid on admission, stone-free. Some vesical paralysis, had to be catheterized. In bed 6 months. Three months after admission developed multiple vesical calculi which were removed by cystotomy. Recovery complete. No record of chemistry of stones.

CASE 9.—P. B., white male, age 33, structural iron worker. Fell 35 feet Aug. 20, 1930. Fracture of the first, fourth, and fifth lumbar vertebrae. Urine acid on admission. No roentgen-ray evidence of calculus. Had to be catheterized every 12 hours for 48 hours after admission. In bed 6 months. Developed chills, fever, and pain in left renal area. Extensive bilateral calculus. Death—urosepsis.

CASE 10.—G. M., white male, age 44, structural iron worker. Fractured pelvis and ruptured urethra 12 years before admission. Chronic urinary retention that had to be relieved by the passage of sounds from time to time. Admitted to Mercy Hospital Mar. 1, 1933, in acute retention. Multiple strictures of the urethra, marked periurethral infection. Suprapubic drainage of bladder. Retrograde operation. In bed 5 months. Stone-free while in hospital. Seen 2 years later at City Hospital, Mayview, alkaline pyuria, bilateral renal stones. Nephrolithotomy. Chemistry of stones, phosphatic calculi.

As a result of our observation and that of others, we are justified in concluding that some stone-free patients with a normal urinary tract who incur injuries of the type described will develop urinary stasis, urinary infection, and phosphatic stones with tragic consequences unless prevented or recognized early. Through the courtesy of the Surgical Division at Mercy Hos-

pital, we are asked to see these potential stone formers on admission, and we are attempting to institute a program designed to prevent the underlying causes of calculus formation in this group. It will be in charge of Dr. H. D. Goehring of the Department of Urology.

THE PLAN

On admission

Careful study of condition of urinary tract. Roentgen-ray examination of kidney and bladder.

Clinical and bacteriologic study of the urine. Functional evaluation.

After admission

Prevention of stasis and infection. Frequent changing of position; not difficult in modern fracture bed.

Prevention of infection; extreme care in any instrumentation.

One of the most important factors in the prevention of formation of this type of calculus is the maintenance of a constantly acid urine. If the Ph. can be kept between 4.9 and 5.2, the danger of the precipitation of the alkaline salts will be greatly minimized. These infections are exceedingly difficult to combat once they have gone over to the alkaline side. An attempt is made to maintain a constantly acid urine by the administration of ammonium chloride, an acid base diet, and forced fluids.

At the same time that measures are being instituted for the preventive side, a carefully controlled study of the potential stone formers in this group is being instituted.

Investigation on the infectious side, bacteriology, etc., etc.

Metabolic—with particular reference to calcium and phosphorus disturbances and vitamin deficiency.

Disturbance of the parathyroid. Report of further experience will be tabulated and published later.

CONCLUSION

1. Stone formation does occur in stone-free patients who are immobilized for long periods with fractures of bony pelvis or long bones, or with osteomyelitis.

2. Grave renal damage may result, in some instances so severe as to terminate in urosepsis and death.

3. In many of this group 3 factors are constantly observed: Stasis, urinary infection, and alkaline urine.

4. As a result of our observation and that of others, we are instituting a plan with the hope of preventing these serious complications.

Mercy Hospital.

ABSTRACT OF DISCUSSION

ALEXANDER RANDALL (Philadelphia): The time has passed when we are interested only in the diagnosis and the removal of renal and vesical calculi. Just as in the case of vesical calculi, it is time that we looked upon renal calculi as being but a symptom of some form of urinary dysfunction. In other words, stone is no longer a disease entity; it is but a symptom of some urinary

dysfunction. If that theory is put into practice, urologic surgery will be abreast of medicine; medicine today is interested more in prevention than in therapy. Urologists also will be interested in preventive surgery rather than in removing only a symptom.

Dr. McCague has observed an interesting group of cases that have shown certain particular earmarks which do not dovetail with the rest of the clinical story. He is more interested in the prevention of such conditions than in their occurrence or diagnosis, or possibly the operative removal of a renal or vesical calculus.

If we accept the point of view that calculus is a symptom, not a disease, we are going to get further than we are today by looking upon it as an effect. Progress in calculus surgery will not come until more is known about the actual cause of a stone's formation. There are 5 plausible theories as to why a stone forms. First, there is the theory of diet, now exemplified in experimental vitamin-A deficiency.

The second theory is that of infection. It was Paul who said that, if every case of calculus were traced to its actual cause, an infection would always be found present.

The third theory is very interesting, probably more pertinent in certain cases than in others; it is that of colloidal imbalance.

Next is the theory of stasis, one of the long-recognized factors in conditions not only of the lower urinary tract but also of the upper urinary tract as well.

Finally there is the theory of stone in association with parathyroid adenomas. This theory is pertinent only when calcium is one of the chemical constituents.

None of these theories explains why the stone originates and grows; they are probably secondary factors. Actual stone formation depends upon one of 2 causal factors. First, there are primary renal stones occurring in a kidney otherwise healthy insofar as drainage is concerned. In such a kidney there must be some form of nidus on which salt crystallization can occur. When it does occur, it is made up simply of the type of urinary salt which at that moment is supersaturated in the urine. This is typified by the case of a perfectly well man who suddenly in the middle of the night is thrown into most violent kidney colic and the next day on roentgen-ray study presents a stone blocking the left urethral passage. That stone has been growing over a period of time. It has been in the course of formation but at the same time has been unmoved or unmoving in the renal pelvis. It has crystallized upon a primary renal pelvic lesion, and due to its growth has been suddenly dislodged from its fixed point and the patient is seized with renal colic. That is one group that can be placed in a class by itself.

The second group should be called secondary stones because they are secondary to some form of renal urinary stasis. They form as secondary to a primary hydronephrosis, and as such are identical with the vesical calculi seen in cases of prostatic obstruction.

Dr. McCague found in his cases rather consistent alkaline urine and phosphatic stones. There is a large group of organisms having the power of splitting urea, freeing ammonia, causing an alkaline urine, and it being their normal habitat they build their house and live comfortably in it. Dr. McCague's therapy is accurately aimed at the causes. Drainage has to be perfect. Alkalinization has to be overcome.

The question arises as to whether or not, because of this rather large group of cases which Dr. McCague has seen in a short time, there may be an infectious carrier in his service. This same picture has gone

through quite a number of urologic services. A sudden series of cases develop alkalinization of the urine, wretched fistula conditions, increase of pain, and increase of mortality. This thought is mentioned simply with the idea that perhaps it might have something to do with Dr. McCague's service. We are all constantly faced with this danger in our own services. It is an ugly complication, but with modern methods it is quite easily conquered and will disappear as soon as normal urinary acidity can be established.

ELMER HESS (Erie): About 8 or 9 years ago I had a patient admitted to the hospital in *extremis*. He died and permission for a necropsy was obtained, but at the last moment the undertaker quered the necropsy. I refused to sign the death certificate. The State wanted to know why. I maintained that the man had been admitted to the hospital under suspicious circumstances. The officials ordered the undertaker to disinter the body so that a study could be made. Upon necropsy examination it was discovered that both kidneys were filled with calculi. The man had terminal pyelonephrosis and an osteomyelitis at the site of fracture. Two years before he had fallen off a ladder and fractured the femur. He had been hospitalized for months and had gone home with a limp, the fracture not completely reduced, but he was an elderly man and they allowed him to go.

This case corresponds very nicely with the experiences and reports of Dr. McCague, and there is an angle to these cases that must not be left unconsidered. They may become compensation or court cases, and the opinion of the attending urologist may be vital.

Several months after this patient's death I was called by the widow as a witness when she applied for compensation. I attributed this man's death to a calculous pyonephrosis secondary to an osteomyelitis which was discovered at the site of fracture in the femur. The insurance company fought the granting of the compensation on the basis that the patient had had renal disease prior to his accident, a situation which they were able very conclusively to prove, but there had been no evidence of urinary calculi prior to the accident. The insurance company was obliged to pay the claim. That death was caused by urogenital sepsis with a calculous complication in already damaged kidneys was upheld by the court, and the article by Dr. Paul on "The Relationship of Calculous Urogenital Sepsis Secondary to Chronic Osteomyelitis" was the authority used to prove the opinion given. Dr. McCague's paper is the first one on this very important medical and legal subject that has appeared since the masterpiece by Paul.

LEON HERMAN (Philadelphia): It is very comforting to have a theory such as that described by Dr. Randall, but, after all, this remains purely hypothetical since there is very little proof of such a factor in the pathogenesis of stone. There is every reason to believe that the condition is of most diverse origin. We have had several cases presenting calcifying papillitis, and it is conceivable that this may occasionally be the starting point of stone. The same is true of intratubular deposits of urinary salts.

In connection with this phase of the subject, I desire to present the case of a boy, age 12, who was admitted to the Pennsylvania Hospital with osteomyelitis of the right tibia. At this time the urine was perfectly clear and normal. The infected tibia was drained, and some time thereafter the patient developed albuminuria followed by microscopic pyuria and eventually gross pyuria. Renal pain then appeared, and roentgen-ray studies dis-

closed the presence of 3 calculi in each ureter with calcification of the left kidney. The stones were removed and, like the urine, were found to contain the *Staphylococcus aureus* in pure culture, which had likewise been cultured from the pus in the tibia.

Dr. McCague seems to be of the opinion that stasis is the primary fault, but it would seem that in some instances, at least, this is a secondary development. We recognize the vital importance of primary stasis in the case of the neurogenic bladder, which is highly subject not only to infection but also to stone formation. We are particularly interested at the moment in the possibility of overcoming stasis due to central nerve injury by means of stimulants such as mecholin. In a recent case of retention due to poliomyelitis, the use of this drug obviated the necessity for catheterization.

LYOYD B. GREENE (Philadelphia): In discussing the paper of Dr. McCague, I shall relate briefly the history of one case. A man, age 27, was admitted to the hospital in March, 1933. There was a history of his having fallen from a 20-foot pole. On admission there could be seen a fracture of the body of the twelfth dorsal vertebra. The kidney areas showed plainly and were negative for calculi. This man had an indwelling catheter for 6 days, after which he voided naturally, but 6 days later he had a chill followed by fever for several days. Urine was negative on admission. I saw him on the seventieth day, when he had symptoms of ureteral obstruction on the left side. Cystoscopy revealed an obstruction at 20 cm. in the left ureter, and the roentgeno-

gram showed many calculi widespread over both kidney areas. The patient passed many phosphatic stones and finally succumbed of pyemia on the one hundred and seventy-seventh day. The only remaining calculus had blocked the right ureter, causing a rupture of the upper pole and perinephritic abscess. The necropsy revealed multiple abscesses in the lungs, liver, and left kidney.

DR. RANDALL: I know I am out of order, but, if my remarks missed Dr. Herman, I am fearful that I left a mistaken impression. I was trying to correlate what I said with Dr. McCague's cases. In looking at stones as of these 2 groups, in the first there is no concern particularly about the kidney drainage. We should be interested in searching that particular case for a focus of infection elsewhere. It is interesting to see how frequently and how closely an infectious process elsewhere in the body antedates primary stone formation. The important thing is to see that that patient rids his body of any form of infection. In the true secondary stones, the removal of a condition causing urinary stasis becomes paramount.

DR. McCAGUE (in closing): Regarding the point that Dr. Randall mentioned as to the possibility of a carrier, it should be stated that we see these patients after they have developed the urinary tract infection and stones. Even with the best of care, infections in fracture of the pelvis and rupture of the urethra will occur. The boy with the osteomyelitis of the femur had no instrumentation at all. This is not an uncommon observation.

PERFORATED GASTRIC AND DUODENAL ULCER*

ROBERT L. SCHAEFFER, M.D., ALLENTOWN, PA.

A series of 25 consecutive personal cases operated upon from July 7, 1928, to Aug. 24, 1935, is presented.

Perforation of gastroduodenal ulcers is a serious surgical emergency attended by a high mortality, one which must be diagnosed early and operated upon as soon as possible. There is no surgical emergency which requires as quick action by the surgeon as a perforated ulcer. All these patients should be operated upon as soon as the diagnosis is made.

This condition is on the increase. I operated upon 9 cases of perforated ulcers between Jan. 1, 1935, and Oct. 1, 1935. Prior to that time I had no more than 4 cases in any one year. Possibly the return of beer and hard liquor in conjunction with the highly seasoned and indigestible foods that are eaten late at night has some bearing on these perforations. Four of the 9 patients whom I had during the first 10 months of 1935 gave a history of eating excessive amounts of sea food and drinking large quantities of beer. All of these cases, however, presented a history of indigestion for some months

prior to the perforation. One patient had made definite arrangements to be operated upon for a gastric ulcer in another hospital during the month of September.

Writers do not agree on any definite cause for the perforation, but in this series 35 per cent of the patients had a heavy meal either with or without alcohol a few hours before the perforation. The majority were under medical treatment but were indiscreet and did not obey the doctor's orders.

Sex.—In this series there were 3 females and 22 males or 7 times as many males as females. William J. Mayo states that the duodenum has a more transverse position in women, giving better contact with the neutralizing bile and pancreatic juice. The history of this series of cases would indicate that the mode of living, including eating and drinking habits, of men had a definite influence upon the perforation.

Occupation.—Occupation had no relation to the causation or perforation of the ulcer in this series, no patients giving a history of heavy lifting and only one of a blow to the stomach.

Age.—There were 8 patients between ages 50 and 60, and 7 between ages 40 and 50. More

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than 50 per cent of the cases, therefore, occurred in the fourth and fifth decades of life. The youngest patient was age 18 and the oldest age 74. Five cases occurred in the second decade, 2 in the third, and one in the sixth. The average age for 25 cases was 43.8 whereas in Donald Guthrie's series of 71 cases the average was 44.

Season.—Season seems to have very little if any influence upon the perforation. Contrary to Wayne Babcock's report that exacerbations usually occur in winter, there were none in January, one in February, 4 in July, one in August, etc.

Heredity.—Heredity apparently has no influence.

Symptoms.—Twenty-four of the 25 cases presented a history of stomach trouble varying from 20 years to 10 days prior to perforation. One patient stated that he never had had stomach trouble or indigestion prior to the perforation. One patient had complained for 11 years, one for 9 years, one for 8 years, 2 for 7 years, one for 5 years, and 2 for 2 years. Nearly all of the patients had received some form of medical care prior to the perforation. The perforation was accompanied by a sudden, abrupt, unbearable, excruciating pain in the abdomen in 20 patients or 80 per cent of the cases. In the 5 remaining cases the perforation was walled off by the pancreas and omentum so that these patients had little or no pain.

One of these 5 cases came to operation, 2 months after the perforation, with a huge collection of fluid and a large opening into the duodenum so that the patient developed a duodenal fistula. Three weeks later a posterior gastrojejunostomy was done. The patient made an uneventful recovery but was in the hospital 44 days.

Another patient, Miss B., age 52, consulted me in May, 1933, complaining of a fistulous tract in the left side just below the costal margin and above the ileum. She stated that in November, 1932, or 6 months previously, she had fallen and struck her abdomen. This accident was followed by considerable abdominal pain. In January, 1933, she noticed a lump in her left side, which was opened and left a draining sinus. Two years later, when she came under the service of Dr. Isidor S. Ravdin, the sinus was still draining.

Another patient came to the hospital complaining of pain in the right upper quadrant and in the region of the right kidney for 19 hours prior to admission. There was no rigidity, no vomiting, and only moderate tenderness with leukocytosis of 18,000. This case was diagnosed

as postcecal appendicitis, but upon operation a perforated ulcer in the duodenum was found with very little soiling of the peritoneum.

In 80 per cent of the cases the pain was sudden and excruciating with the abdominal muscles fixed, the patient immovable in bed, the legs flexed upon the thighs, and the thighs upon the abdomen. The facies were anxious and gray, the respirations shallow, the pulse slow, and the temperature almost normal. Vomiting was present in only 40 per cent of the cases. The characteristic pain which is present in the beginning of the attack remains constant for some hours. Then it becomes more intermittent and, as the peritonitis spreads, may cease entirely and the patient become moribund. The pain in 20 per cent of the cases was so severe that it could not be exceeded in severity by any that a human being can suffer. So profound was the instant impression that 2 of these patients died a few hours after the operation. Authors have reported that some patients died suddenly in this way before operation. None of this series died before operation. These patients are prostrate with agony; the eyes are wide open and watchful; beads of perspiration stand out upon the brow. The patient breathes shortly and quickly. He cannot take deep inspirations; the attempt to do so ends in a groan and a spasm of pain. An examination of the abdomen is resented. The abdominal muscles are held with a rigidity that never relaxes for a second. The abdomen is retracted and not distended until in the last stage. The muscles do not relax by any change of position; they are never off their guard. The diaphragm no doubt is also rigid, which explains the shallow respirations. A careful examination of the abdomen reveals an area of more extreme tenderness and resistance than the rest, that is, to the right of the midline and above the umbilicus. These symptoms with a history of previous indigestion are ample for an assured diagnosis of an abdominal perforation and probably of a duodenal perforation.

This train of symptoms is soon followed by a steady uninterrupted rise in the pulse rate. As the frequency increases, the quality becomes poorer. If observed from hour to hour, the change is always for the worse. In 20 per cent of the cases, tenderness became more marked on the right side and the right iliac fossa became so exquisitely tender that they were diagnosed as acute appendicitis with perforation, operation revealing the perforated ulcer. This mistake is excusable because, if a normal appendix is found at operation but the peritoneal cavity is filled with free fluid and free gas, the diagnosis is

easily made. In the majority of my cases, gas escaped as soon as the peritoneum was opened and this gave the clue to the proper diagnosis. In one case the patient gave no history of chronic ulcer, having complained for only 2 days prior to admission to the hospital.

The absence of liver dullness stressed by some writers was not a predominant symptom in these cases. This symptom was present only in the late cases. The severity of the symptoms is likely to be less if the perforation occurs when the stomach is nearly empty, if the perforation is very small, or if it is partially blocked. Even after perforation has been present for 12 or more hours, the temperature may be subnormal, the leukocyte count but slightly increased, and the pain not very intense though the board-like rigidity is very seldom absent. Fluoroscopic roentgen-ray examination may be of value to determine air between the liver and diaphragm, but this procedure should be condemned. If a patient has such an acute abdominal condition, even though correct diagnosis is impossible, he should be operated upon as soon as possible. Such a patient should not be subjected to further trauma by being moved for roentgen-ray examination. In this series of cases the distance the patient was moved by automobile or ambulance had a direct bearing upon the mortality. One patient who succumbed soon after operation had to be brought many miles by ambulance from a secluded summer bungalow which was found by a physician only after searching for hours.

DIFFERENTIAL DIAGNOSIS

The acute abdominal conditions which most often simulate perforation of a duodenal or gastric ulcer are:

Acute Appendicitis.—This condition was mistaken in 5 of the 25 cases because the onset was sudden and accompanied by epigastric pain followed by vomiting, the pain in a few hours being localized in the right iliac fossa. The patient appears seriously ill in either case. In both instances there is a very acute abdominal condition, and operation should be performed immediately. In doubtful cases a right rectus incision should be made instead of the McBurney incision.

Gallstone Colic.—In this series 2 cases were diagnosed as acute gallbladder disease prior to admission to the hospital, and one of these cases was not diagnosed before operation. In gallstone colic the suffering is intense and epigastric. The patient, however, is more restless, the abdomen not so rigid, and there is less shock present. One of my associates a few months ago

called me at 2 a. m. because he thought his patient, who was a rather obese woman with extreme epigastric pain, had a perforated ulcer. This patient was very restless, and the abdomen was not very rigid except in the right upper quadrant. I told him that women rarely had perforated ulcers and that obese persons seldom had ulcers. A hypodermic of morphine was administered, and the next morning the patient refused to go to the hospital because she felt so well.

Acute Intestinal Obstruction.—This often presents symptoms similar to those occurring in acute perforated ulcer. They differ from each other in that the upper abdominal pain in the case of the perforated ulcer is severe and continuous whereas in intestinal obstruction it is more likely to be intermittent in character, being more severe during hyperperistalsis. As time goes on, vomiting is more pronounced in obstruction. Shock is more pronounced in perforated ulcer than in intestinal obstruction. The board-like rigidity is not present in acute obstruction. This condition was not mistaken in any of our cases. Gallstone colic and acute appendicitis were the only mistaken diagnoses in this series, and operation was delayed only in one case which was diagnosed as cholelithiasis both by the family physician and myself. The operation was delayed until the next morning, but fortunately this patient made an uneventful recovery.

Acute Pancreatitis.—The pain in both conditions is severe, is located in the upper abdomen, and is accompanied by shock. A history of peptic ulcer is important evidence in favor of perforation. The symptoms on inspection and palpation are very similar in both conditions. In acute pancreatitis the skin is moist; in ulcer, dry. In pancreatitis the pulse is rapid and thready; in ulcer the pulse is strong and slow. Vomiting is more persistent in acute pancreatitis. The immobility and fixation of the entire abdomen are more marked in perforation. The patient is more likely to be elderly and obese in acute pancreatitis than in perforated ulcer.

Renal Colic.—This condition may simulate perforating ulcer, but the patient is more restless and not as fixed as in perforation. The pain is more radiating and the abdominal muscles not of the board-like rigidity.

Crisis of Tabes.—This can be differentiated by a less rigid and fixed abdomen accompanied by the signs and symptoms of tabes dorsalis.

PROGNOSIS

If operation is performed within 12 hours of the time of perforation, recovery is usual in the

uncomplicated case. In this series there were 5 deaths or a mortality of 20 per cent. All of the patients admitted to the hospital were operated upon although 3 were almost moribund upon admission. In 3 cases 24 or more hours intervened between the time of perforation and operation. In one fatal case, operation was performed within 3 hours after perforation, but this patient was age 74 and died from acute cardiac failure. In another fatal case, operation was performed 9 hours after perforation, and this patient died on the eleventh day from an embolus. In cases in which 15 hours, 18 hours, 19 hours, and 40 hours respectively intervened between the time of perforation and operation, the patients recovered. The majority of patients die who are operated upon 30 or more hours after perforation. A large perforation, a full stomach, and a rapid leakage are unfavorable. Small perforations, an empty stomach, youth, and prompt operation favor recovery. The distance the patient was transported had an unfavorable influence upon our cases.

TREATMENT

The treatment of acute perforation is immediate operation regardless of any degree of shock that may be present as the patient's condition rapidly improves after relief of intraperitoneal tension. In these acute abdominal cases the surgeon is called upon to display the best qualities and use the best judgment he possesses if the best results are to be obtained. Quickness in operating, a sound judgment, and a light hand are essential.

The proper preoperative hypodermic and the selection of the anesthetic which adds the least shock to the already shocked patient are also important. Nitrous oxide-oxygen anesthesia combined with a local block and given by a trained and experienced anesthetist has been found most satisfactory.

On opening the peritoneal cavity, fluid escapes. If it is bile-stained, this is indicative of perforation of the duodenum or the stomach. The site of perforation can usually be located quickly by the noise of air bubbling through the fluid. Before the ulcer is sutured, the peritoneal cavity should be emptied by suction, not by mopping and thus irritating the serous membrane with sponges.

When the perforation is located, gauze packing is carefully made to protect the parts from further soiling. Fortunately in a very great majority of cases the ulcer is on the anterior surface of the duodenum and immediately beyond the pylorus. The packing is then held

with retractors by an assistant and the ulcer brought as far as possible into the wound.

The ulcer may be excised or sutured. I do not excise all ulcers. When the tissues are edematous and soft, it is difficult to excise the ulcer and requires the expenditure of valuable time. In cases in which the infiltration of the surrounding tissues is not extensive and the ulcer is easily accessible, I excise the margins of the ulcer before suturing. When the tissues are not too friable and inflexible, the ulcer is infolded by fine chromic catgut applied by a curved needle which passes through all the coats. The first tier of sutures is reinforced by a second tier of interrupted Lembert's through serosa and muscularis, both tiers extending well beyond the ulcer. Under ordinary conditions this would be simple, but if there is much infiltration and the parts are friable the stitches will cut through as soon as sufficient tension is made to tie them. This is unfortunate because it weakens the parts and makes the placing of other sutures even more difficult. Under these circumstances we pass further outward from the center and pick up healthy stomach wall, which is flexible and easily sutured. Over the site of suturing an omental flap is placed and sutured. This is indicated especially if the suturing has been difficult.

Many leading surgeons are confident that the foregoing procedure of simple suture is the procedure of choice and that no more need be done to cure the patient. About 50 per cent of our cases were treated in this way, and the other 50 per cent had an immediate gastro-enterostomy done. The advocates of the simple suture claim that it is a quick and uncomplicated procedure to meet a grave emergency and that it adequately meets the emergency, that the operative mortality is lower, that the postoperative course is smoother, and that the ulcer heals and remains healed. They also claim that gastro-enterostomy does not prevent the recurrence of the hemorrhage or the formation of new ulcers. In our cases the primary gastrojejunostomy had no bearing on the mortality. The advocates of primary gastro-enterostomy claim that this procedure does not increase the mortality in early cases and that the danger of spreading infection has been overemphasized, that the immediate postoperative course is much smoother and fluids can be given much sooner by mouth, that the perforation cannot be closed adequately without producing pyloric obstruction of considerable degree, that the ulcer heals more rapidly, and that the late results are better than with the simple suture. A certain number of simple

suture cases require subsequent gastro-enterostomy. In our cases if stenosis occurred at or near the pylorus either by the induration of the ulcer or by the suturing of the ulcer, a posterior gastro-enterostomy was done. In the late cases this procedure should not be followed nor should it be a routine procedure, but in selected cases a primary gastro-enterostomy may be performed.

Pyloroplasty or resection was not done in any of our cases. Surgeons differ also as to the advisability of drainage. I sleep better when the lower abdomen has a cigarette drain. I very seldom drain the upper abdomen. All late cases should be drained. Drainage may be omitted in the early cases with little fluid in the peritoneal cavity. Drainage was instituted in all our cases in this series except one. The cigarette drain is never left in for more than 48 hours.

As soon as the patient is returned to bed he is placed in the sitting posture and given a continuous enteroclysis of tap water. The sitting posture is more comfortable for the patient and allows the contents to gravitate into the pelvis which is drained by a cigarette drain. A siphon suction apparatus is used in all cases with a Jutte tube in the stomach, and it is probable that no small measure of the success attained in recent cases is attributable to this procedure. Since this suction drainage was instituted, there have been no deaths in the last 12 consecutive cases, 9 of which have been operated upon since January, 1935. As soon as the suction works satisfactorily, the patient is given water frequently in good quantities; in this way the stomach is kept free from gas, bile, and gastric secretions.

This siphon apparatus is a modification of the Wangenstein apparatus and has replaced the use of the stomach tube in all cases of peritonitis. If John B. Deaver were living today, he no doubt would instruct his interns to carry a Wangenstein suction apparatus in their pockets instead of the stomach tube. There is such an apparatus in each of our surgical wards. It is of greater aid to the surgeon and more comfort to the patient than anything else advanced in surgery in the past 10 years. The patients are very comfortable, do not gag, do not become distended, do not get acute dilatation of the stomach, and frequently fall into a refreshing sleep.

This simple procedure has saved more lives in my practice than anything else which I have instituted in the past 20 years. In the last 15 cases of perforated appendix there has not been a single death. During the month of August, 1935, 11 cases of perforated appendix with general peritonitis were operated upon without mor-

tality. Before the use of the suction apparatus a few of these patients would probably have died. With the use of this apparatus, fluid may be given by mouth immediately after operation instead of 6 or 8 hours later.

POSTOPERATIVE DIET

Water is given freely as soon as siphon suction apparatus is instituted, but there should be no feeding until all signs and symptoms of peritonitis have subsided. On the second or third day, after there are no symptoms of peritonitis, the patients are given strained broths in small quantities every 2 hours. After the fourth or fifth day a standard ulcer diet is given. After discharge from the hospital the patient is instructed to go to his family physician for further treatment.

All these patients have been followed up and found to be alive. A large majority are enjoying good health but are still on a restricted diet. All who had chronic perforations and, as a result of these chronic perforations, developed duodenal fistulas are not well today.

CONCLUSIONS

The following conclusions may be drawn from the analysis of 25 cases of perforated ulcers:

1. Correct diagnosis and immediate operation are important; the time interval between the perforation and the operation has a definite bearing upon the mortality.
2. There were 88 per cent males and 12 per cent females.
3. Primary suture should be done if possible, and an immediate gastro-enterostomy if the ulcer cannot be satisfactorily sutured or if pyloric obstruction is feared.
4. The siphon suction should be used in all cases; it is a most valuable adjunct in the post-operative treatment.
5. All patients should receive specific instructions regarding diet when they leave the hospital.
6. All the patients remained well except those who had chronic perforations.

38 North Eighth Street.

ABSTRACT OF DISCUSSION

ISIDOR S. RAVDIN (Philadelphia): Certain important facts have been brought out in the paper. It is now universally agreed that the surgical mortality of perforated ulcer will bear a direct relation to the time elapsing between perforation and operation. The increased frequency with which operation is delayed while roentgen-ray studies are being made has been justly criticized. In only the occasional patient should this be necessary, and even then it is frequently not desirable.

It has been our impression that spinal anesthesia is

the most satisfactory anesthetic in these patients. It permits of rapid operation with a minimum of trauma.

The question of doing more than simple closure of the perforation is still being debated. The advocates of combining closure of the perforation with a more radical operation frequently point to the fact that the mortality in the more radically treated cases is often no higher than in the more conservatively treated cases. The explanation of this probably lies in the fact that only the better risks are subjected to the more radical type of therapy.

It is to be expected that following perforation there will be a variable amount of edema in the tissues around the perforation. If closure by direct suture is difficult, the method suggested by Graham of Toronto is an excellent one to adopt. He places a plug of omentum over the perforation and gently approximates the wall of the stomach or duodenum around this. With this simple, rapid method of treatment he has operated on 36 consecutive perforated ulcers without a death.

The older advocates of the more radical operation based their concept in part upon the supposedly more rapid gastric emptying after the formation of a new stoma. Studies we have made lead us to conclude that a number of weeks must elapse before normal gastric emptying takes place, and even then the stoma does not provide for any more rapid emptying than occurs in the normal stomach when foodstuffs are placed in it. The old concept of Patterson which was the original basis for the radical operation is, therefore, fallacious.

Even when considerable edema after closure of the perforation threatens to obstruct the lumen of the gut, the use of the Jutte tube for suction drainage of the stomach in the interval will keep the patient comfortable until continuity of the lumen is re-established. Dr. Schaeffer has rightfully given this procedure credit

for an improvement in the morbidity and mortality statistics of certain acute abdominal crises.

By early operation, carefully and simply performed, and by adequate postoperative therapy the mortality of operations for perforation may be still further reduced.

SAMUEL J. WATERWORTH (Clearfield): We should not do posterior gastro-enterostomy in these cases; in fact, I never do it. The apparatus that Dr. Schaeffer described is probably saving many lives.

DR. SCHAEFFER (in closing): We should stress a great deal more than we do the importance of getting these patients to the hospital early. Many of my patients were kept at home too long. The attending physician often thought that they had gallstone colic and administered a hypodermic. We should teach the general practitioner not to give a hypodermic in that or any other acute abdominal case until the patient is in the hospital. It is all right then to relieve the suffering, but not before a diagnosis has been made and not until the patient has agreed to enter a hospital in order to have the abdominal condition properly attended to. The time between the perforation and the operation should be decreased by the promptness of the general practitioner in bringing the patient to a hospital, and then the work of the surgeon will be much easier.

Simple suture in all cases will suffice if these patients are operated upon early enough. Patients are sent to me after the physician has been treating them perhaps for years—sometimes as long as 20 years—for gallstone or stomach trouble of some kind. When a patient with an acute abdominal condition like this has had stomach trouble, is emaciated, and looks like a chronic dyspeptic, the physician should immediately send that patient to the hospital. In this way the high mortality in these cases may be greatly reduced.

THE ONE-HOUR, 2-DOSE GLUCOSE TOLERANCE TEST (EXTON AND ROSE)*†

HERBERT T. KELLY, M.D., PHILADELPHIA

Since Allen, in 1913, first enunciated his paradoxical law of dextrose and suggested that it might be of diagnostic value in rendering a diagnosis of latent diabetes, innumerable methods have been evolved in an endeavor to overcome doubtful glucose tolerance curves. This apparent confusion is the result of various diverse methods in making sugar tolerance tests and in laboratory technics. These are, upon close scrutiny, negligible in comparison with the prevailing differences in such practical details as determining the amounts, preparing and administering glucose, timing the tests, collecting and preserving the blood and urine samples. Since it is a well-known fact that sugar begins quickly

to disappear from the blood as soon as it is withdrawn from the vein, glycolysis accounts for many irregularities that result in the atypical appearances of curves. Therefore, it has been my practice for a number of years to add 10 mg. of sodium fluoride to the oxalated tubes in order to prevent glycolysis.

The alimentary glucose tolerance test is the best method to study clinically the mechanism and measurement of an organism's ability to metabolize carbohydrates. It is based upon sound physiologic principles, to which all agree, and has been satisfactorily explained by MacLean and DeWesselow. Exton and Rose have proposed a new alimentary glucose tolerance test calculated to obviate many of the questionable features encountered in the older tests as variously applied.

The time selected to make the test, the amount of glucose, the antecedent diets, the emotional

* Read before the Section on Medicine of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

† Much of the material used in this paper, for which the author acknowledges his appreciation, was obtained from the laboratories and metabolic clinics of the Presbyterian Hospital of Philadelphia and the Graduate Hospital of the University of Pennsylvania, Philadelphia.

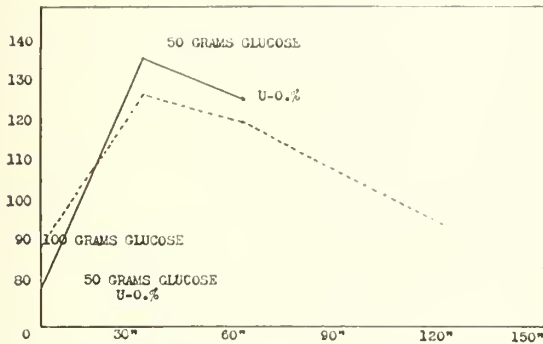


CHART 1.—A typical normal result of the new test (solid line), and a typical flat curve of the older test (broken line).

factors, and the rate of absorption from the intestine of ingested glucose are some of the principal factors which influence alimentary glucose tolerance tests.

The new test was designed to obviate these factors and can be performed in one hour. The specificity of the one-hour, 2-dose test is based on Allen's paradoxical law of dextrose, and all available data indicate the results of the new test to be more reliable, more convenient, and of inestimable value in affording an early diagnosis of latent diabetes. Beardwood, Fowler, and the writer have accepted the one-hour, 2-dose glucose tolerance test, which is carried out as follows:

1. Collect blood and urine samples and give first dose of glucose (50 gm. in 15 per cent solution), allowing one to 2 minutes for its ingestion.
2. Thirty minutes after ingestion of the glucose, collect blood sample and give second dose of glucose (50 gm. in 15 per cent solution), allowing one to 2 minutes for its ingestion.
3. Thirty minutes after ingestion of the second dose of glucose, collect blood and urine samples.

The typical criteria of normal response to the one-hour, 2-dose test are: (1) A fasting blood sugar within the normal limits of the particular blood sugar method employed; (2) a rise in blood sugar which does not exceed 75 mg. in the 30-minute sample; (3) the blood sugar in the 60-minute sample is less, the same, or does not exceed the 30-minute sample by more than 5 mg.; and (4) all urine samples are negative to Benedict's test. (Chart 1.)

The criteria for determining diabetes in the one-hour, 2-dose test are a more or less steep rise of not less than 10 mg. of blood sugar in the 60-minute sample following the second dose of glucose, and the relation of blood and urine sugar values to the severity of the disease.

The test, by virtue of its specificity and dependability, has aided materially in elucidating doubtful regular 3-hour glucose tolerance curves.

Furthermore, the time limit of one hour makes it possible for the physician to perform the test in a greater number of suspected cases. According to Joslin and Dublin there are 400,000 recognized diabetics and about half as many undiagnosed cases in the United States. Since the mortality is conspicuously increasing irrespective of improved methods of treatment, the greatest opportunity lies in earlier diagnosis of this disease in order to control it and prevent the inevitable and often incapacitating complications.

Ordinarily, according to our present laboratory criteria, if glycosuria is absent and the fasting blood-sugar level ranges between 80 to 120 mg., the possibility of diabetes is immediately dismissed. However, with the increasing recognition of the close association of familial tendency, obesity, endocrinopathies, gallbladder disease, and protracted infections with diabetes, more accurate methods should be employed in cases which possess such leads. Such a procedure would enable us to recognize diabetes long before the onset of the classical symptoms.

The glucose tolerance test was performed on 218 patients who had gone without food for 12 hours; these patients had a previous normal fasting blood sugar and no glycosuria. Their ages ranged from 4 to 65. All of the patients presented one or more of the above leads, and there were none with any of the classical symptoms of diabetes. Among these, 136 showed no evidence of impaired carbohydrate metabolism, whereas 82 (37.6 per cent) showed an abnormal blood-sugar curve and were classified as positive. Fifty-three (64.6 per cent) of the positive cases were checked with the 3-hour glucose tolerance test and found to run parallel.

The distinct advantages of the new test in eliminating the factor of delayed absorption of

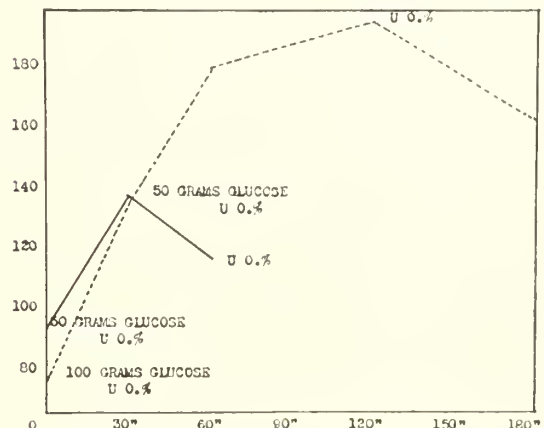


CHART 2.—Repeated fasting blood sugars normal. The new test (solid line), September, 1934, definitely excludes a diabetic tendency, but the older test (broken line), May, 1933, does not. Was refused life insurance, June, 1934 (Kelly, Beardwood, and Fowler).

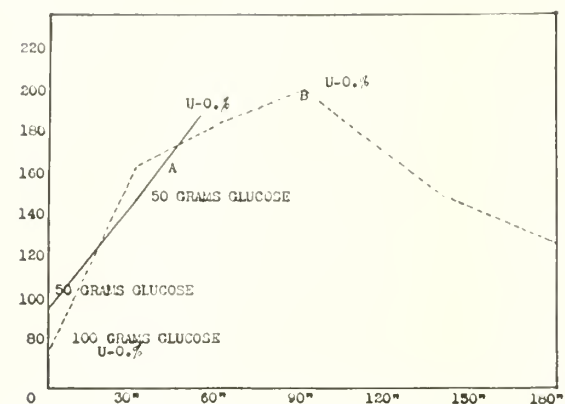


CHART 3.—A illustrates the new test, B the old test. Child of diabetic mother and father. One of 4 children, 2 of whom are diabetic (Kelly, Beardwood, and Fowler).

concentrated glucose solution, in decreasing the time of test from 3 hours to one hour, and in the consequent lessening of the emotional element are shown by the following case (Chart 2) :

A male, age 14, entered the hospital complaining of irritability, lassitude, and loss of weight. Because of unusual apprehension the first tolerance test (May, 1933) was misleading as it presented a diabetic curve. The subsequent follow-up over a 2-year period with frequent normal fasting blood sugars and then an Exton and Rose test (September, 1934) definitely showed that this boy was not a diabetic.

With proved etiologic significance of heredity in diabetics by Pincus and White, keener interest has been evident in determining the glucose tolerance in relatives of diabetics. In a group of relatives of diabetics who received the glucose tolerance test, these authors found 25 per cent with abnormally high blood sugar values. In applying the new test to 4 children in a family, both parents of which were diabetics, 2 were found with typical diabetic curves. One is shown in Chart 3.

Joslin has shown that obesity in some degree has been present in about 90 per cent of adult diabetics. Accordingly, with this knowledge, it would seem a justifiable procedure to investigate routinely the overweight individual for diabetes, especially if a familial history is present. Since in early diabetes the fasting blood sugar is normal and the urine free of sugar, the new test has been applied routinely. A case in point is the one illustrated in Chart 4. This patient, a white female, age 39, complained of overweight and nervousness. She weighed 208 pounds. Her mother had been overweight and had died of diabetic gangrene.

According to Joslin, "in adults, cholelithiasis is probably one of the most important etiologic factors in diabetes mellitus." It would seem from this that the surgeon has not fully discharged his duty to the gallbladder patient until,

in addition to the surgical treatment, he has made a study of the carbohydrate metabolism. Chart 5 shows 2 curves in a patient whose chronically infected gallbladder was removed in 1922. The first test by the older method depicted a doubtful curve. The new test gave a curve which was unquestionable, and subsequent follow-up fasting blood sugars over a period of 8 months have ranged from 100 to 140 mg.

The rôle of diabetes in decreasing resistance to infections and predisposing to their intractability is generally recognized and should put the attending physician immediately on guard. An Exton and Rose reaction, typical for diabetes, was obtained in a patient who had protracted healing of a burn on the left foot followed by 2 deep hypodermic abscesses. The urine showed no glycosuria and the fasting blood sugar was 91 mg.

Not infrequently a physician, in his enthusiasm for a diagnosis of diabetes in suspected cases, overlooks the dangers of administering at once or in divided doses large amounts of sugar. Consequently, a glucose tolerance test should never be performed unless preceded by a fasting blood-sugar determination. If the blood-sugar value of a suspected diabetic is above 120 mg. and there is still doubt as to existing diabetes, it is safest to advise the use of a 50-gm. meal, that is, a meal containing 50 gm. of carbohydrates, and determining the blood sugar at the end of 2 hours. Chart 6 shows a curve in a patient with mild diabetes who inadvertently received 100 gm. of dextrose, converting a mild diabetic into a moderately severe diabetic, who required 60 units of insulin within 6 months.

CONCLUSION

The alimentary glucose tolerance test is the best method to study clinically the mechanism

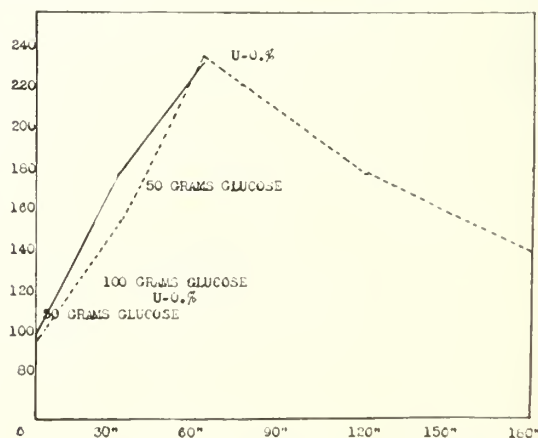


CHART 4.—A illustrates the typical diabetic curve, B the old test. Family history of diabetes. Weight of patient—208 pounds.

and measurement of an organism's ability to metabolize carbohydrates. The adoption of the technic described by Exton and Rose eliminates the irregular appearances of curves, and is less time-consuming for the patient and laboratory. Its application to that group of patients with a diabetic familial tendency, obesity, endocrinopathies, gallbladder disease, and protracted infection will aid in the early diagnosis of diabetes.

1900 Spruce Street.

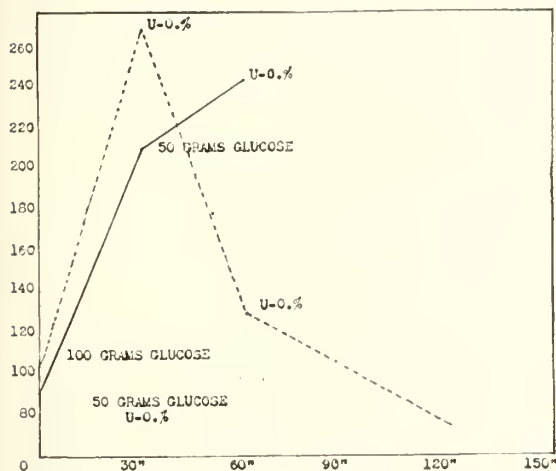


CHART 5.—The continued climb of the blood-sugar curve after the second dose of glucose is typical of diabetes (solid line); the curve of the older test is atypical (broken line). Cholecystectomy, 1922. (Kelly, Beardwood, and Fowler).

ABSTRACT OF DISCUSSION

JOSEPH H. BARACH (Pittsburgh): Increasing experience may show that this newer method of estimating glucose tolerance is more sensitive and has greater accuracy than the older methods. If that is the case, it should lead to better diagnosis and treatment.

Once the physician discovers glycosuria, he is obligated to leave nothing undone to determine whether the patient is or is not a case of true diabetes. That decision influences the entire future of the patient, and this imposes a serious responsibility on the medical advisor.

Most of my patients with renal glycosuria have been previously diagnosed and treated as diabetics. It is for such reasons as this that a method which differentiates with greater accuracy true diabetes from the innocent types of glycosuria is of distinct value.

In the light of this comparatively new glucose tolerance test, I have reviewed 30 cases of renal glycosuria. Four of them should be evaluated anew; it may be that some or all of them are diabetics. Four in 30 is a high percentage of possible error; the sooner it is eliminated, the better for both physician and patient.

The criteria for the one hour, 2-dose test as laid down by Exton and Rose are to all appearances clear-cut. A larger experience with this test will show whether these criteria will hold or not.

1. The normal individual must show a normal fasting blood sugar with a rise in blood sugar of not more than 75 mg. in the first half-hour and not more than 80 mg. above the fasting blood-sugar level at the end of the second half-hour. The urine specimens must be sugar-free.

2. A diabetic individual shows a rise in blood sugar in the first half-hour and a continued rise of more than 10 mg. at the end of the second half-hour. The urine specimen at one hour shows sugar.

3. A case of renal glycosuria should show a normal blood-sugar curve with sugar in both urine specimens.

Exton and Rose have proposed these criteria, and they should be studied carefully by all who are interested in the diagnosis of diabetes and its allied diseases.

Is it safe to say that a blood-sugar rise of not more than 5 mg. in the second half-hour indicates normal, and that a rise of more than 10 mg. at the end of the second half-hour is evidence of diabetes? This offers a very narrow margin.

If the blood-sugar curves in this one hour, 2-dose test reflect interaction between glucose and insulin, as we assume that it does, the explanation of its mechanism offers a very interesting problem.

One possibility is that a certain amount of insulin is sent forth with the first dose of glucose and another flow of insulin follows the second dose of glucose. The normal individual responds efficiently to each dose of glucose and the blood-sugar level is kept within bounds. The diabetic, having an insufficiency of insulin, does not respond well to the first dose of glucose, which uses up all the available insulin. When the second dose of glucose is taken, no insulin being available, the blood-sugar curve rises still higher.

Another explanation might be that the insulin reaction to glucose is in obedience to the "all or none" law of physiologic reaction. When glucose is absorbed, the pancreas pours out all of its available insulin. In the normal individual the amount is so large that the blood-sugar curve is kept low, whereas in the diabetic the want of insulin allows the curve to continue to rise as more and more glucose is absorbed into the blood stream.

Another question is whether a single functional test of this kind done in one hour actually is as decisive as it seems to be. May it not be that at another time or under other conditions the patient would respond with a better or worse glucose curve?

Dr. Kelly examined 218 nondiabetic patients and among them he found a diabetic glucose tolerance curve in 37 per cent. It seems extraordinary that such a large proportion of any group of patients will become diabetic. Would it not be safer to say that in this 37 per cent certain underlying disturbances caused abnormal glucose tolerance curves, that these curves reflected a disturbed

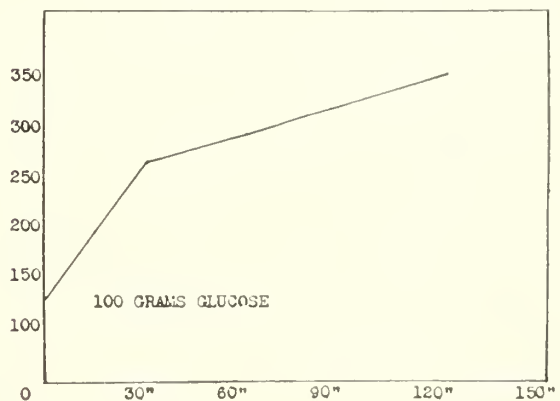


CHART 6.—Illustrates the danger of giving 100 gm. of dextrose at one time. A mild diabetic converted into a moderately severe diabetic.

carbohydrate metabolism at that time, and that some of these patients are likely to become diabetic? I would rather take this position than to assume that 37 per cent of any group are on the way to diabetes.

Are we justified in differentiating, as Exton and Rose have done, between renal glycosuria and alimentary glycosuria on the basis of this test? Shall we ignore the fact that we are quite ignorant of the pathology of renal glycosuria and alimentary glycosuria and accept these curves as conclusive?

Are we justified in giving a uniform dose of 100 gm. of glucose to all patients, irrespective of age, sex, and body weight? This introduces an element of error. We are now investigating a group of patients in whom we use a dose of glucose based on the corrected weight for the patient. The amount of glucose given is based on the fact that the average normal diet allows 5 gm. of glucose per day for each kg. of body weight. On this

basis we allow the amount that would enter into one meal, which is 1.66 gm. per kg. of body weight. Since body overweight in most instances is purely fat and since stored fat does not enter into this experiment, it seems safer to give patients 1.66 gm. of glucose per kg. of ideal body weight.

I do not hesitate to give a normal amount of glucose to a diabetic after 16 hours of fasting. For the diabetic as well as the nondiabetic, glucose is more innocent than protein or fat as high carbohydrate diets have clearly shown.

Thus, by making every element entering into this test a quantitative one, we eliminate or reduce the number of unknown factors and we will come nearer to a quantitative test and one that is physiologic. Such are the problems which this study evokes, and investigations as such as Dr. Kelly and others are now making must ultimately lead to a better interpretation and diagnosis.

CONGENITAL ECTODERMAL DEFECT*

Case Report

JOHN D. STEVENSON, M.D., BEAVER, PA.

A review of the literature indicates that congenital absence or malformation of the nails and teeth is a frequent occurrence, and that in circumscribed areas it is not out of the ordinary to find the sebaceous and sweat glands absent or impaired. It is more rare to encounter cases of extensive deformation or complete absence of all or nearly all of the cutaneous structures originating from the epiderm, as occur in the following case.

E. M., white male, age 3½, weighed 6½ pounds at birth. At present he weighs 31½ pounds. He is the sixth child born of this mother. This infant was first seen about the third month following birth.

The mother is living and well, but the father is troubled with a heart condition. A brother, age 5, and a sister, age 5 months, are both living and well. One brother died suddenly at age 5 weeks, and there were 2 miscarriages.

The patient was found to be sensitized to cow's milk and both orange juice and tomato juice; he tolerated evaporated milk and lemon juice. Later he overcame the sensitization to these 3 foods but developed a marked sensitivity to chocolate.

The patient sat up at 5 months, stood at 10 months, walked at 14 months, said words at 20 months, and made sentences at about 26 to 28 months. Teeth have never erupted.

The chief complaints are dry skin, disproportion of size of head to size of body, and dry protruding tongue.

The skin is very dry, smooth, and pale, the patient having much the appearance of an albino. Over the palms and soles the skin is reddened and quite dry. On the hands, wrists, and forearms, where the patient is washed with water, there are small eruptions, maculopapular in type, due to sensitivity of the skin to water.

The skull is large; the anterior fontanel is closed; the hair is very fine, thin, and white.

There is rather marked swelling or edema of the tissues of the orbit, the skin being darkened here. The eyes are very sensitive to light; the pupils are equal and react to light. There are no tears when the child cries.

The tongue protrudes constantly from the mouth for a distance of about one third of an inch and is very dry; otherwise the child is normal in appearance. The mucous membranes are pale and dry.

The neck, ears, and nose are negative. The heart, lungs, and abdomen are normal except for a blowing, systolic murmur at the apex of the heart which does not replace any of the heart sounds. The extremities are normal.

Ever since birth it has been noticed that the child's skin is dry and that it never sweats no matter how hot the weather. There is a hypofunction of the salivary glands, the mucous membrane of the mouth being always dry. The skin is markedly sensitive to light and burns easily in the sun; there is a marked redness of the soles and palms.

The dry protruding tongue has been present since birth. The warmer the weather, the more the child protrudes the tongue.

The baby had a large head when born, this disproportion of head to body being less marked at present.

The laboratory findings are as follows: *Urine*—reaction, neutral; specific gravity, 1001; albumin, negative; sugar, negative; micro-organisms, negative; *chemistry*—calcium, 9 mg.; cholesterol, 245 mg.; *hematology*—hemoglobin, 50 per cent; red blood cells, 2,750,000; white blood cells, 10,800; polymorphonuclear cells, 40 per cent; lymphocytes, 48 per cent; monocytes, 4 per cent; eosinophils, 8 per cent. A roentgenogram of the jaws reveals no teeth buds.

A microscopic biopsy included a small section which showed striated epithelium along one border and beneath the corium. The corium consisted of fairly densely staining connective tissue. Under low power magnification there were a number of small lines of

* Read before the Section on Pediatrics of The Medical Society of the State of Pennsylvania, Harrisburg Session, Oct. 3, 1935.

deeply stained nuclei. Those were probably sweat gland ducts although it was difficult to be absolutely certain. The nuclei were pyknotic, and what appeared to be glandular tissue was much degenerated. Occasionally a polymorphonuclear cell was present in this tissue. The squamous epithelium appeared fairly normal. There was no evidence of abnormal pigment. There was no evidence of sweat glands.

It is interesting to note that a sister of this child's mother bore a child who died at age 4. It is said that he never perspired and that he did not have a full set of teeth.

It is due to the co-operation of Dr. James K. Everhart and Dr. Maud L. Menten, the pathologist, that I am permitted to report this case.

337 Third Street.

THE NEW AMERICAN MEDICAL DIRECTORY

The Fourteenth Edition of the American Medical Directory has been completed and copies are now available for general distribution.

The directory, with nearly 2500 pages, is a vast storehouse of information. It contains not only the most complete list available of the physicians of the United States and its dependencies and of Canada, but much additional data which hospitals, libraries, and various other institutions, as well as individuals, will find useful and readily available. The directory is the only nation-wide register of physicians in which the extensive data on medical education, licensure, and society affiliations have been verified.

The 1936 edition contains 183,312 names, or 4796 more than were in the previous edition issued in 1934. The names of 13,157 physicians have been added and 7684 names have been removed because of death. More than 70,000 changes of address have been made, in addition to thousands of changes in society affiliations, teaching positions, specialties, and office hours.

In this edition, 32 states show an increase in the number of physicians; New York leads the list with 1201, followed by California (369), Pennsylvania (281), New Jersey (262), and Massachusetts (249). A slight decrease in the number of physicians is shown in Missouri, Georgia, Kentucky, Tennessee, Oklahoma, Alabama, Indiana, South Dakota, Maine, Vermont, Mississippi, and New Hampshire. When the thousands of changes of location are analyzed they seem to show a noticeable migration of physicians to the larger towns in the South Central states, a trend that was previously present also in some other sections of the country.

The first section of 221 pages in the new directory includes the constitution and by-laws of the American Medical Association, the Principles of Medical Ethics, and a list of meeting places of the annual sessions of the association since the first one in 1847, with the name of the president installed during each meeting. In this section also are lists of the hospitals that are approved for intern training, the medical libraries, the medical journals published in the United States, Canada, the Philippine Islands and Puerto Rico, the names of medical officers of the various government services, the national organizations for the various specialties with the names of their members, the membership of the new examining boards for the specialties, the med-

ical schools in the United States and Canada with a brief history of each, and the members of the National Board of Medical Examiners.

The second section is arranged by states. There is published under each state the medical practice act, the members of the board of medical examiners, members of the state board of health, county and city health officers, and officers of the state, district, and county medical societies. Following this is a list of 7220 hospitals, sanatoriums, and related institutions arranged by towns, with the name, location, bed capacity, superintendent, and type of patients treated in each institution. Then, arranged by towns, comes the great list of physicians, giving the year of birth, school, year of graduation and license to practice, membership in the state society and special societies, professorships, and Fellowship in the American Medical Association. The home and office addresses and office hours also are given for physicians in towns of more than 10,000 population.

A new feature in this edition is a key letter showing that a physician has been certified as a specialist by an approved examining board. Several of these boards have been approved by the Council on Medical Education and Hospitals since the directory went to press. The next edition, therefore, will contain a more complete list of certified specialists. An especially interesting feature of the 1936 edition is the list of American physicians temporarily located in foreign countries.

The third section, of 525 pages, is an alphabetical index of the names of 183,312 physicians; and practically every name is followed by the name of the city and state, thus indicating where in the directory detailed information about the individual physician may be found.

The bringing to completion of the Fourteenth Edition of the American Medical Directory has been a monumental task, in the pursuance of which thousands of individuals, societies, licensing boards, medical colleges, and other organizations have co-operated. For their ready co-operation and assistance the American Medical Association is thankful and deeply appreciative.

THE DOCTOR'S WIFE

Two important items that make for the success of a physician are omitted from the curriculum of medical schools. One pertains to the training in medical economics, in the business side of medicine, something that the young doctor learns, if at all, painfully throughout the years. The other deals with the domestic, or distaff, side of the practice of medicine. True enough, the medical student will find negative advice from a source least expected, from the life of Osler, who taught by example (and word) that the ambitious doctor would do well to remain a bachelor for many years, unencumbered by the anchorage of a wife and an establishment, until such time as his mark is amply made.

Not all men are suited for the profession, though they work at it a long time; not all wives are suited for the equally arduous task of being a doctor's wife. There are elaborate duties and responsibilities and attitudes for the training in which no school of matrimony has ever been proposed, save the school of trial and error. The profession of being a doctor's wife—how it has varied with the times! And if the family doctor is passing (but this is more a catch-phrase than a fact), what of the family doctor's wife? And what of the wife of the specialist, or the full-time clinical teacher, or the institution doctor, or the country doc-

tor, or the public health physician? For there are as many types of doctors' wives as there are doctors!

The time is ripe for some doctor's wife to speak up for her sisters, as did the wife of a country doctor in 1893, when she wrote *The Physician's Wife and the Things That Pertain to Her Life*. Ellen M. Firebaugh was invited to read a paper before the Æsculapian Society of the Wabash Valley on a subject close to her heart, and so well did she do her task that by popular demand her essay was expanded into a book. In a charming style, refreshing in the homely manner of presentation, and pervaded throughout with that maternal quality so necessary for her duties, she tells of the little things that she experienced as the wife of a country doctor. Her sense of humor, her never-failing patience, her understanding, her intuition, her resourcefulness, and her tolerance should serve as a model for the modern adopted daughters of Æsculapius.

Hers is no easy task. She can often make or break her doctor-husband, and where she cannot help, at least she can refrain from hindering. The horrible example is given by George Eliot in *Middlemarch*. Robert B. Carter, in *Doctors and Their Work*, quotes from Dickens a passage that should be engraved in the hearts of all wives of doctors:

"We are not rich in the bank, but we have always prospered, and we have quite enough. I never walk out with my husband but I hear the people bless him. I never go into a house of any degree but I hear his praises or see them in grateful eyes. I never lie down at night but I know that in the course of that day he has alleviated pain, and soothed some fellow creature in time of need. I know that from the beds of those who were past recovery thanks have often gone up, in the last hour, for his patient administration. Is not this to be rich?"—Editorial, *Medical Record*, Nov. 20, 1935.

DO YOU KNOW ABOUT THE VOLTA BUREAU?

Probably every one of our readers comes into contact at least occasionally with one of the 3 following groups: (1) Parents of a child who can neither hear nor speak; (2) parents of a child whose hearing is somewhat impaired; (3) adults who are losing their hearing. But although physicians are frequently confronted by the educational, social, and personal problems presented by deafness, not all of them are aware of sources of information on these problems. Therefore the Volta Bureau has prepared the following article, describing the free services which the Volta Bureau, Washington, D. C., is prepared to offer.

"We consulted several specialists, and all of them confirmed our fears, but none offered any solution of our problem." Thus the mother of a small deaf child wrote to the Volta Bureau. The sentence might be quoted verbatim from many letters written by parents of deaf or hard-of-hearing children, or by hard-of-hearing adults.

The knowledge that deafness is present and that it is incurable comes with the force of a major calamity. It is so crushing in its effect that something positive in the way of help must be offered immediately if the individual is not to spend desperate years in a bewildered effort to adjust himself. The parents of a deaf child must be told that the child can be taught to speak and can be successfully educated, and that this education may be begun at home immediately even though the

child is not more than age 2. The parents of a child whose hearing is only slightly impaired must be given advice as to his adjustment. The hard-of-hearing adult must be told about lip reading, about hearing aids, about social efforts in his behalf.

The Volta Bureau was established for the purpose of furnishing all this information to all who ask for it. Its services are free. Alexander Graham Bell, the son of a hard-of-hearing mother, the husband of a deaf wife, the lifelong friend of everyone handicapped by deafness, used the money received as a prize for inventing the telephone to found the Volta Bureau so that anyone confronting the problems of deafness might be assured of help. Advice is given as to schools and preschool training, lip-reading instruction, hearing aids, social contacts, psychologic difficulties. Although the Volta Bureau is not equipped to do employment service, it gives information in regard to the fields of activity that are open to the deaf and the hard of hearing.

The *Volta Review*, a magazine for parents and teachers of the deaf and for the hard of hearing, is on the reading table of many physicians. Pamphlets dealing with all phases of deafness except medical problems are available to all who ask for them. Lists of such pamphlets and sample copies of the magazine will gladly be sent free of charge. The Volta Bureau is located at 1537 35th St., N. W., Washington, D. C.

IF THREATENED WITH SUIT

If you are threatened with suit for alleged malpractice you should communicate at once with the secretary of your county society, the councilor for your district, or the secretary of the State Society *before consulting an attorney*.

The State Society will not undertake the defense of any member unless his application is made *within 7 days* after summons has been served by the court.

UNIVERSITY OF PENNSYLVANIA ALUMNI DINNER

A get-together dinner of the alumni of the University of Pennsylvania Medical School will be held at 6 p. m. on Wednesday evening, Oct. 7, at the Duquesne Club. The price is \$2, and the chairman of the affair is Dr. H. T. Price, 121 University Place, Pittsburgh.

JEFFERSON MEDICAL COLLEGE ALUMNI DINNER

A dinner and smoker for the alumni of Jefferson Medical College will be held at 6 p. m. on Wednesday evening, Oct. 7. Further details will be announced later by the chairman of the event, Dr. J. M. Thorne, Jenkins Arcade, Pittsburgh.



MAXWELL JOHN LICK, M.D.



Maxwell John Lick

President-Elect

MAXWELL JOHN LICK, eighty-seventh president of The Medical Society of the State of Pennsylvania, was born in Albion, Pa., Oct. 25, 1884. He is the son of Chauncey V. and Mary A. Lick, of Albion, both of whom are living.

Dr. Lick taught country school for one year before graduating from Allegheny College, Meadville, Pa., in 1908. He received his medical education at the University of Pennsylvania School of Medicine, from which he was graduated in 1912. He was resident physician to the Philadelphia Lying-In Charity Hospital for 3 months, and served in the same capacity at the University of Pennsylvania Hospital for 2 years. He also has had graduate training in foreign clinics.

Throughout his college life and medical training, he was actively engaged as a soloist and concert singer, thereby making possible his education.

Dr. Lick is a member of the Phi Delta Theta and Phi Alpha Sigma fraternities. He also received membership in 2 honorary fraternities, Phi Beta Kappa and Alpha Omega Alpha.

He entered general practice in Erie, Pa., in the fall of 1914. His work is now practically limited to general and urologic surgery. His hospital appointments consist of surgeon to St. Vincent's Hospital and urologic surgeon to Hamot Hospital, Erie.

Dr. Lick is a past president of the Erie County Medical Society, a Fellow of the American Medical Association, and a Fellow of the American College of Surgeons. He has contributed various articles to medical literature and for the past few years has spoken throughout northwestern Pennsylvania to lay audiences upon popular medical subjects.

On July 22, 1915, Dr. Lick was married to Miss Mary E. McLaughlin of Springboro, Pa. They have 2 living children, Maxwell Leon Lick, age 20, and Mary A. Lick, age 12.

The election of Dr. Lick to the presidency of The Medical Society of the State of Pennsylvania is a merited reward from his medical confreres. The confidence reposed in him pays tribute to his genial and dynamic personality. It further recognizes his superior surgical attainments and judgment. This recognition is augmented by his studious approach and clear perception of the diverse ramifications of medical economics. He fully realizes the need of the profession and has the gifted persuasion necessary to the important office which he occupies. Dr. Lick is a thinker and analyst who ponders deeply before acting, a man of high caliber, a born orator with a convincing and lovable personality.

THE EIGHTY-SIXTH ANNUAL SESSION

In 1752, when Ebenezer Arrowsmith was assisting George Washington survey the forks of the Ohio, he stumbled into a patch of poison ivy. Eagerly he sought succor from the natives of the region, but it was not until he found an old Indian medicine man that he finally obtained definite relief.

"You know," opined Ebenezer, "that's a pretty slick cure. You ought to tell other people about it. You've got a swell place for a pow-wow here."

"Ugh," agreed the redskin.

And so, 184 years later, from Oct. 5 to 8, the Eighty-Sixth Annual Session of The Pennsylvania Medical Society is being held in Pittsburgh.

The keynote of this year's convention is practicality. Exhibits which present something useful to general practitioner and specialist alike will be accented. The Scientific Exhibit Committee promises to give every visitor some new idea, technic, or bit of knowledge that he can take home and put to purposeful use. Patients will be presented in conjunction with the pertinent exhibits so that actual pathology can be seen as it appears in the sick man or woman and not as someone has drawn or photographed it. If one picture is worth 10,000 words, then one actual case is worth 10,000 pictures.

Foremost among the exhibits will be that of the State Cancer Commission. This will include moulages, frozen section demonstrations, instructions on diet, and so forth. Temple University Medical School will present 4 exhibits, ranging from cerebral hydrodynamics to miniature photography. Detective book fans and coroner physicians will be interested in the coroner's exhibit. The general practitioner will have a chance to see wooly patches on eyegrounds

instead of merely reading about them. Childhood endocrine disturbances, hand infections, and peritonitis are but a few of the essentially practical demonstrations. There will be exhibits of tuberculosis, diabetes with especial emphasis upon the newer insulin preparations, peripheral vascular diseases, air-conditioned fever therapy, the heart with anatomic, auditory, and electrocardiographic correlations, orthopedic exercises, fractures, and obstetrics. There will even be a "Thoughts for Tomorrow" booth where potential medical uses for recent research developments will be prophetically cartooned. And then, of course, there will be the Technical Exhibit where the latest in practical therapeutics and instruments are explained and demonstrated by the manufacturers.

On Wednesday evening, Oct. 7, there will be a meeting open to the public. This will be followed by the President's Reception and Ball.

For the ladies the Allegheny County Auxiliary has arranged a number of luncheons and bridges. For the men there is the golf tournament and a smoker where, if you still think you can prognosticate fighters after the Joe Louis fiasco, there will be

boxing bouts to test your discernment. Beverages, songs, and good fellowship will top off the evening.

What does Pittsburgh offer to the busy conventioneer?

If you are from the east, you will speed over the broad ribbons of concrete across the crests of the Alleghenies in as many hours as it used to take the ox-driven Conestoga wagon weeks. And if you motor from the south, you will pass through the second longest vehicular tunnel in the world. What a thrill it used to be when we were ambulance interns and whizzed through with siren screaming till all the traffic was stand-



Pittsburgh Skyline from Mt. Washington

ing on its hind legs as we zoomed over the Liberty Bridge to the Mercy Hospital.

That's another interesting thing—the bridges. Pittsburgh's Golden Triangle is bounded by the Allegheny and Monongahela Rivers, which fuse to form the Ohio. To get to the Triangle and cross the many deep tributary ravines some 350 bridges have been built in the immediate district. They range from the massive Westinghouse Memorial, which you cross on the Lincoln Highway, to little concrete structures over the culverts.

Traversing these bridges, you see gentle streams flowing placidly along and it is hard to believe that only 6 months before they all developed *grand mal*. If you are from Philadelphia and can imagine the Schuylkill widening to the Delaware, acquiring the force of Niagara, and rushing through the principal department stores and banks for 48 hours, you will get an idea of the St. Patrick's Day Flood. As you walk through the busy business sections and see a mark 2 feet above your head labeled "Water Level, Mar. 18, 1936," it seems unbelievable. But it is true.

How Pittsburgh's 22 hospitals enjoyed their siege without light or water or power you can imagine, but it is no fun to carry

a pregnant woman up 6 flights of stairs and deliver her baby by candle light. Speaking of hospitals, if you have time, see what \$8,000,000 can do for 600 beds in the shape of the new Allegheny General Hospital.

If you happen to glance out your hotel window at night and the sky is a flaming crimson, do not rush to call the fire department. It's a fire all right but the kind we like, for it means that part of a fourth of the nation's steel or one-sixth of its glass is being made. The Pittsburgh district has the largest aluminum finishing plant in the world, huge electric and air-brake manufacturing plants, massive coke ovens,

and so forth. If you are hungry, there's always Heinz with a good many more products than its advertised "57." Pittsburgh, by the way, is a port, and—whether you believe it or not—its river traffic is sixth in the nation's tonnage.

If you want to see the world's biggest single paved surface area, drive out the 9 miles (we made it in 12 minutes once) to the County Airport. Or if you want to get an airplane view without entering a plane, speed to the top of Mount Washington where the town appears as a mighty relief map—awe-inspiring either by sun or moonlight. As your car climbs the hill, you pass under one of those unique inclined railways, a fantastic form of transportation that lifts trucks, automobiles, and sightseers over towering precipices.

From Mount Washington, you can glimpse the 42-story Cathedral of Learning standing primly in the middle of Pittsburgh's civic center. If you go there, you will see the University of

Pittsburgh on one hill and Carnegie Tech on the other. In the valley are the world-famous Carnegie Library and Museum, where the International Art Exhibit is held each year. Close by rear the white columns of the new Mellon Institute for Industrial Research. Then there is the Medical Center with



Federal Building and Post Office

the Falk Clinic, Presbyterian, Children's, Montefiore, Eye and Ear, and Magee hospitals, and the Skin and Cancer Foundation. Luxurious clubs and fine public buildings are scattered throughout and are too numerous to name. You can also see Schenley Park with its municipal golf course, bridle paths, and noted Phipps Conservatory, beside which is the Allegheny County Medical Society's Memorial to its members who served in the World War. If you want to see elephants and donkeys without benefit of political speeches, drive to the Highland Park Zoo. Athletically, there is Forbes Field, where the Pirates play, and the Pitt foot-

*Block House*

ball stadium. If your wife (or you) want to do smart shopping, the city boasts some of the finest department and specialty stores in the country.

Convention headquarters, the Hotel William Penn, is the sixth largest convention hotel in the world. The convention floor occupies an entire city block. Many of the sessions will take place in the beautiful Urban Room, perhaps an unusual site for strictly medical papers but nevertheless a good one. There is the Lower Exhibition Hall, where scientific exhibits will be lined up booth after booth. Don't miss it!

Pittsburgh welcomes the physicians and their ladies to the Eighty-Sixth Annual Session. It will be a meeting which will be definitely helpful to you, which will be a source of pleasant memories for years to come, and which will renew your faith in medical progress.

THE GOLF TOURNAMENT

The annual golf tournament of the Golf Association of The Medical Society of the State of Pennsylvania will be held at the Edgewood Country Club on Monday, Oct. 5. It is an excellent course and owing to a good watering system has not suffered on account of the dry spell. Play will begin at 9 a.m. and continue until 3:30 p.m. Luncheon will be served.

The golf committee is arranging for a dinner at 7:30 p.m. Many notables of the medical profession will be present.

The Edgewood Country Club is easily accessible. Follow route No. 22—the William Penn Highway—through Wilksburg to the Churchhill Road. Turn right one mile. At this inter-

section the club has a direction sign.

We are counting on having the largest "field" in the history of the golfing association, so send in your reservation early to Dr. Harry O. Pollock, 703 Penn Ave., Turtle Creek, Pa.

Greens fee, luncheon, and dinner will be \$5. To those who may not be able to stay, greens fee is \$2 and luncheon and dinner may be arranged at the club.

The committee has arranged for a large collection of prizes to dubs, duffers, and others. Each player awarded a prize must be present at the dinner to receive the prize. If he is

not present, the prize will be awarded to the player with the next low score. In case of a tie the contestants will match for the prize.

If a player expects to play 36 holes on the day of the tournament in competition for any of the prizes except the 36-hole contest, he must announce which 18 is to count.

The McKee Cup goes to the player with the low gross score for 18 holes. In addition to the cup a medal and the association prize of \$15 is awarded. These prizes are for the second and third low gross scores.

The President's Cup goes to the player with the low net score. There are also prizes for the second and third low net scores:

In the 36-hole play there are prizes for low gross, second low gross, low net, and second low net scores.

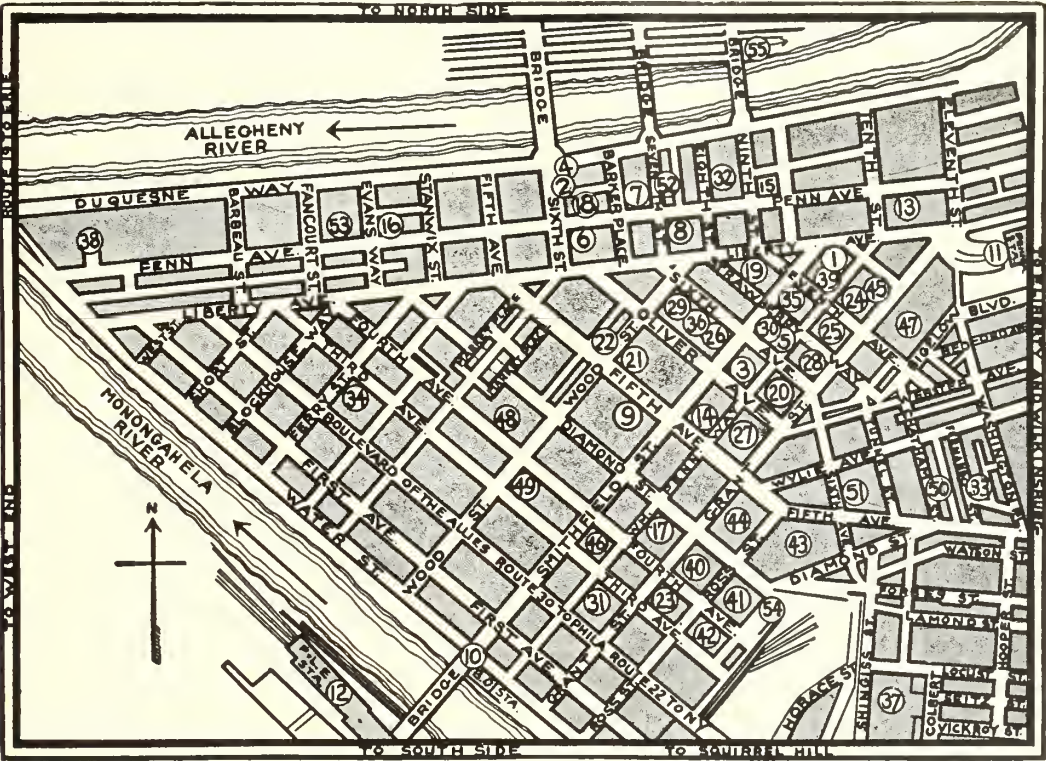
In the kicker's handicap a number is to be chosen between 70 and 80, the deciding number to be drawn by the pro or by a disinterested party.

The low scorer for 9 holes as a whole, out or in, is awarded a prize, and there is also one for the highest score for 18 holes.

*Hotel William Penn*

THE GOLDEN TRIANGLE

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Courtesy of This Week in Pittsburgh

KEY TO MAP

- THEATERS**

 - 1—Aldine
 - 2—Alvin
 - 3—Davis
 - 4—Fulton
 - 5—Nixon
 - 6—Penn
 - 7—Pitt
 - 8—Stanley
 - 9—Warner

RAILROAD STATIONS

 - 10—Baltimore & Ohio
 - 11—Pennsylvania
 - 12—Pgh. & Lake Erie
 - 54—Fourth Ave. Station

HOTELS

 - 13—Fort Pitt
 - 14—Henry
 - 15—Kilkeary
- 16—Mayfair
 - 17—Pittsburgher
 - 18—Roosevelt
 - 19—Seventh Avenue
 - 20—William Penn

PRINCIPAL BUILDINGS

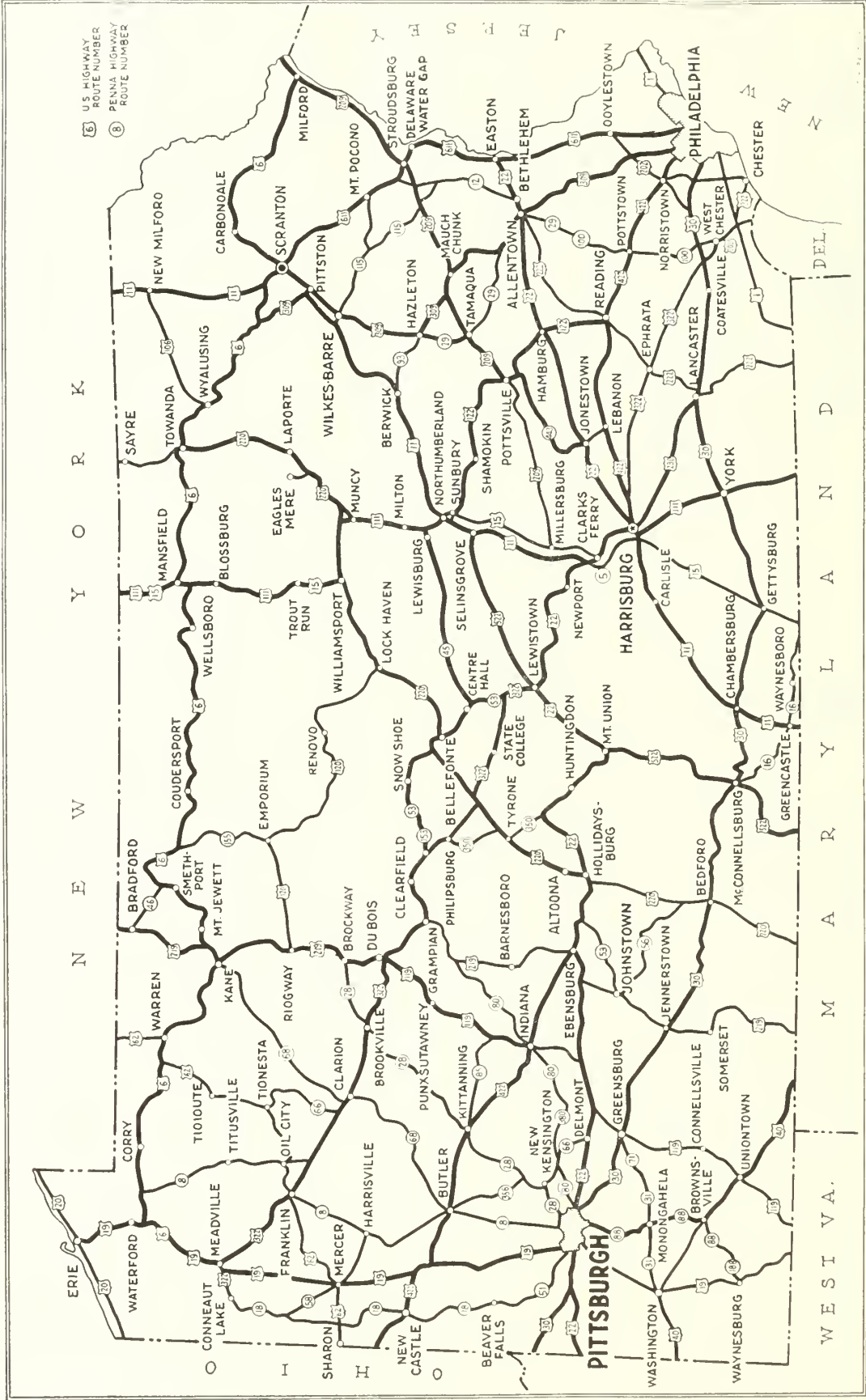
 - 21—Farmers Bank
 - 22—First National Bank
 - 23—Grant
 - 24—Gulf
 - 25—Koppers
 - 26—Oliver
 - 27—Union Trust
 - 55—Heinz Plant
 - Jenkins Arcade (Liberty, Stanwix and Penn Ave.)

CHURCHES

 - 28—First Lutheran
 - 29—First Presbyterian
- 30—German E. P.
 - 31—Salvation Army
 - 32—Second Presbyterian
 - 33—St. Peter's
 - 34—St. Mary's Catholic
 - 35—Smithfield M. E.
 - 36—Trinity

PUBLIC BUILDINGS

 - 37—Duquesne University
 - 38—Block House
 - 39—Chamber of Commerce
 - 40—City-County
 - 41—County
 - 42—County Morgue
 - 43—County Jail
 - 44—Court House
 - 45—Federal Reserve
 - 46—Old U. S. Post Office
 - 47—New U. S. Post Office
 - 48—Pgh. Stock Exchange
 - 49—Y. M. C. A.
 - 50—Y. W. C. A.



ROAD MAP OF PENNSYLVANIA

A PREVIEW OF THE SCIENTIFIC PROGRAM

For the Pittsburgh Session this year the Committee on Scientific Work has studiously assembled a program which will be of the greatest possible value to the general practitioner, for the medical profession is judged by the standard of service available to the public by the family physician. Many of the papers presented are to be amplified in the Scientific Exhibit where any subject or therapeutic procedure of particular interest can be studied at leisure. An innovation this year is a recess of 30 minutes during the first session of each section when members will adjourn to the Scientific Exhibit for an inspection tour conducted by the chairman and his associates.

There will be 2 symposiums: One on diabetes, about which so much of practical value has recently been added, and one on that rapidly growing but still confusing subject—allergy. For this symposium, the Sections on Medicine and Pediatrics will hold a joint session.

The General Session will open Tuesday, Oct. 6, at 10 a. m. The program will include the call to order by the

President, Alexander H. Colwell; the invocation by the Reverend H. Boyd Edwards; the report of the Committee on Necrology by Chairman Robert G. Barekley; addresses of welcome by the Honorable William N. McNair, mayor of Pittsburgh, and Sidney A. Chalfant, the president of the Allegheny County Medical Society; the presentation of the Scientific Program by Chairman Frederick B. Utley; the announcement of the

Scientific Exhibit by Chairman Lester Hollander; and the announcement of entertainments by Clement R. Jones, chairman of the Local Committee on Arrangements. There follows the chief feature of this session—the installation of the new president and his delivery of the President's Address.

The second General Session will open Wednesday at 9 a. m. with a presentation of one of the

occupational hazards in Pennsylvania, namely, "The Clinical Aspects of Lead Poisoning" by Thomas A. Johnson. These cases are usually seen first by the general practitioner; hence, this paper is of particular value to him. Charles H. Henninger will discuss "The Control of the Mentally Unfit," pointing out the personal, medical, and legal problems involved. Edgar S. Everhart will present "Measures for the Control of Syphilis," which will be far more effective than those in use today. Boyd Harden, by invitation, will submit a study of "The Toxemias of Pregnancy" treated by the control of foci of infection, anemia, and protein deficits. Charles L. Brown, the recently appointed professor of medicine at Temple University

Medical School, will discuss "The Clinical Features of the Macrocytic Anemias" with an appraisal of the efficacy of antianemic therapy.

There will follow a recess of 30 minutes during which the entire membership will be introduced to the Scientific Exhibit. It is earnestly suggested that each member make frequent subsequent visits to those booths which can offer him help in his chosen field of medical practice.

THE GUEST SPEAKERS

General Sessions

William S. McCann, M.D., was born in eastern Ohio. He received his B.A. degree from the Ohio State University and was subsequently graduated in medicine at Cornell University in New York City in 1915. He served as a surgical house officer at Peter Bent Brigham Hospital under Dr. Harvey Cushing up to the time of the World War, entering the United States Army in May, 1917. He served in Panama, England, France, and the Army of Occupation.

Following the war he was instructor in medicine at the Cornell University Medical College under the direction of Dr. E. F. DuBois and Dr. Graham Lusk, carrying on work in the field of respiratory metabolism. In 1921 he was made associate in medicine at Johns Hopkins Medical School, and in the following year was promoted to associate professor in medicine in charge of the chemical division of the medical clinic. In 1924 he was called to Rochester as professor of medicine in the new medical school organized at the University of Rochester. Since 1925 he has served as physician-in-chief to the Strong Memorial and Rochester Municipal Hospitals, in which the teaching of the medical school is carried out.

A member of several medical societies, he is the former vice-president of the American Society for Clinical Investigation and the present treasurer of the Association of American Physicians. He is a member of the Advisory Committee appointed by the Secretary of Labor on the prevention of silicosis by medical control.

During the past 5 years Dr. McCann has directed the use of a fund for research into the physiologic phases of silicosis with particular reference to the problem of estimating the degree of disability. The results of this study will be discussed before the General Session on Wednesday morning.

Sumner L. Koch, M.D., was born in Cavalier, N. D., July 15, 1888. He received the degree of B.A. from Hamline University in 1908, and the M.D. and M.A. degrees from Northwestern University in 1914.

Dr. Koch served his internship at Cook County Hospital, 1914-16. During the World War he was a major in the Medical Corps, U. S. A., attached to Base Hospital 12, U. S. A., and General Hospital 18, B. E. F., May, 1917, to May, 1919. He held various positions on the surgical staff of Northwestern University Medical School and Wesley Memorial Hospital from 1916 to 1929. During this period he was associated in the practice of surgery with Dr. Allen B. Kanavel. Since 1925 he has been attending surgeon to the Cook County Hospital, and since 1929 attending surgeon to the Passavant Memorial Hospital and associate professor of surgery, Northwestern University Medical School.

"Infections of the Hand" is the title of the address which Dr. Koch will deliver before the General Session on Thursday morning.

Section on Medicine

Elliott P. Joslin, M.D., was born at Oxford, Mass., in 1869. He received the B.A. degree from Yale University in 1890, the M.D. from Harvard Medical College in 1895, and an honorary M.A. from Yale in 1914.

Dr. Joslin is clinical professor of medicine at Harvard Medical School; medical director to the George F. Baker Clinic,

(Continued on page 986.)

One of the most perplexing problems which confronts Pennsylvania industries, as well as the legal and medical professions today, is "Silicosis—A Determination of Disability with Reference to Workmen's Compensation." The Committee on Scientific Work has been singularly fortunate in securing, as the first guest speaker of the general meetings, William S. McCann, professor of medicine at Rochester University, Rochester, N. Y., who has done much research in this field. Paul G. Bovard will discuss Dr. McCann's paper as it applies to Pennsylvania industries.

The third general session will open Thursday at 9:15 a. m. with a discussion of "The Psychology of Deafness" by Kenneth M. Day. The adjustment problems of the hard-of-hearing are rarely understood by physicians. Max Levin will show that "Bromide Delirium" is a common and sometimes fatal disease. The Cancer Commission of Pennsylvania has designated as its essayist this year a former president of this society, Donald Guthrie, who will discuss "Cancer of the Breast." A comparison of results obtained in patients operated upon before and after meta-

stases have occurred will be made. George R. Lacey will give a "Comparison of Agglutination Tests in a Large Series of Individuals Treated with Typhoid Vaccines by Subcutaneous and Oral Methods" following the St. Patrick's Day Flood, 1936, in the Pittsburgh district. Henry K. Mohler and Baxter L. Crawford will present "A Clinical and Pathologic Study of Acute Pulmonary Embolism and Thrombosis." The im-

portance of differential diagnosis and appropriate treatment will be emphasized. It is being recognized that the general practitioner should know more physiology, more of the normal functioning of the organs of the body. For this purpose, Edward Lodholz will discuss "The Invasion of Physiology into Clinical Medicine."

Many deformities with varying degrees of disability result from infections of the hand and their faulty treatment.

The committee takes pride in presenting as the guest speaker for the third general session Sumner L. Koch, of Chicago, who has spent so many years in the study and treatment of infections of the hand.

The Section on Medicine will meet Tuesday, Wednesday, and Thursday afternoons, Oct. 6, 7, and 8. Tuesday afternoon will be devoted entirely to a symposium on Diabetes Mellitus. At 1:40 p. m., Cortlandt W. W. Elkin will discuss the "Fluctuation in Blood Sugar Levels in Diabetics." These levels are usually highest in the morning hours. Interpretations and therapeutic suggestions will be made.

"Diabetes Mortality Approaches That of Tuberculosis" is the title of

a paper to be presented by John Davis Paul. As in all medical conditions, the early diagnosis of diabetes lessens morbidity and mortality. A later development in diabetes mellitus is arteriosclerosis, and Theodore A. Henderson, by invitation, will present "Studies of Arterial Changes in Diabetic Legs." Efforts are constantly being made to develop better preparations of medicine which can be more easily administered. Joseph H.

THE GUEST SPEAKERS

(Continued from page 985.)

New England Deaconess Hospital; and consulting physician to the Boston City Hospital. For many years he has been considered the outstanding authority on diabetes in this country and in the world. His successful treatment of diabetes, even before the days of insulin, is outstanding. He has edited a manual for diabetic patients which has gone through many editions and his textbook, *The Treatment of Diabetes Mellitus*, is the accepted standard book in its field.

Dr. Joslin's honors are too numerous to mention, and the Section on Medicine is fortunate, indeed, in having him speak on "Diabetes" on Tuesday afternoon.

Section on Surgery

George W. Crile, M.D., who will address the Surgical Section on the subject, "The Genesis and Surgical Treatment of Essential Hypertension," Tuesday afternoon, was born in Chili, O., Nov. 11, 1864. He received the A.B. degree from Ohio Northern University in 1884, and the M.A. in 1888; the M.D. from Wooster University (now Western Reserve) in 1887, and the degree of LL.D. in 1916. He studied in Vienna, London, and Paris from 1893 to 1897.

Dr. Crile has held positions as lecturer and demonstrator in histology and professor of clinical surgery at the University of Wooster, professor of clinical surgery at Western Reserve University, and visiting surgeon to the Lakeside Hospital. He is one of the founders of the Cleveland Clinic and at present is director of the Cleveland Clinic Foundation and surgeon to the Cleveland Clinic Hospital.

Dr. Crile has written extensively on surgical shock, surgery of the respiratory system, blood pressure in surgery, hemorrhage and transfusion, anemia and resuscitation, origin and nature of emotions, the kinetic drive, and has done extensive research work on the thyroid, suprarenal, and other ductless glands. He is a member of numerous medical, surgical, and other associations in this and other countries.

Frederic Wolcott Bancroft, M.D., will address the Surgical Section on Wednesday afternoon on the subject of "Inguinal Hernia." He was born in Denver, Colo., and received the A.B. degree at Leland Stanford University in 1902 and the M.D. degree at Johns Hopkins University in 1906, starting to practice in New York City in 1912.

Dr. Bancroft has served as attending surgeon and surgical director at the Lincoln Hospital, and as instructor in surgery at Columbia University. At present he is associate professor of clinical surgery at Columbia University College of Physicians and Surgeons. He is a member of the American College of Surgeons and the American Surgical Association. He was a major in the Medical Corps, U. S. A., during the World War and served overseas 7 months as chief of a surgical operating team. He is the author of numerous articles dealing with surgery.

Section on Eye, Ear, Nose and Throat Diseases

Henry P. Wagoner, M.D., received the degree of B.S. in 1909 from Charleston College, M.D. in 1913 from the Medical College of South Carolina, and M.S. in ophthalmology in 1923 from the University of Minnesota. During the war he served

(Continued on page 987.)

Barach will present "Experimental Studies on the Effects of Insulin, Protamine Insulin, and Crystalline Insulin."

Following a recess of 30 minutes, during which the section will visit the Scientific Exhibit, there will appear the first guest speaker of the Medical Section. No one can contribute so much of practical value to the general practitioner in a symposium on diabetes mellitus as Elliott P. Joslin, and the hall will surely be packed to hear him. A sequela from the injudicious or long-standing use of insulin is atrophy of the subcutaneous fat or muscle tissue. James A. Shelly will offer suggestions for preventive measures. Diabetes mellitus and tuberculosis are not infrequently associated. Ruth Wilson will suggest the therapy which will offer the best prognosis for these unfortunate patients.

Following the election of section officers at 1:45 p.m., Wednesday, Joseph B. Wolffe and Alexander Silverstein will discuss "Acute Psychosis Due to Coronary Thrombosis." The control of agitation and motor activity in order to protect the cardiac mechanism will be stressed. Louis B. La Place will set forth the "Principles Governing the Restriction of Exercise in the Treatment of Heart Disease." This difficult problem confronts every general practitioner, for each patient should take enough exercise in some form to prevent circulatory hypostasis. "Pituitary Basophilism" is not always clearly understood. Charles William Dunn will discuss the initial symptoms, the well-developed clinical picture, and will offer therapeutic sugges-

tions. George J. Kastlin will present a "Classification of the Blood Cell Dyscrasias," which will lead to a better understanding and treatment of the various diseases of the blood. Kenneth Fowler, by invitation, will offer "The Interpretation of Some Hematologic Findings" in the hope of more accurately indicating therapy and prognosis. William P. Belk will consider "The Significance of the Size and Hemoglobin Saturation of Red Blood

Cells in the Clinical Study of Anemia."

This is regarded as great practical value as the nuclear shift in the study of infection. "Liver Therapy in Hemochromatosis and in Various Types of Anemias" will be discussed by Luther I. Fisher and Henry A. Rothrock, Jr. This paper will be illustrated by case histories. Undulant fever is probably more common and widespread than the medical profession realizes and is frequently mistreated for various other conditions. It is timely, therefore, for Henry F. Hunt to present "A Study of Native Agglutinins for Brucella in Human Blood Sera." The conclusions are based on 1000 routine determinations. Peptic ulcer exists in every community so that any contri-

bution to its understanding and treatment is welcome. Russell S. Boles has been given this assignment. "Dysfunctional Uterine Bleeding" is disturbing alike to the patient and to the physician. Catharine MacFarlane will show that therapeutic results do not always follow therapeutic theory.

The third meeting of the Medical Section will be a joint session with the Section on Pediatrics,

THE GUEST SPEAKERS

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as a first lieutenant in the Medical Corps with the A. E. F. At present he is associate in ophthalmology at the Mayo Clinic and associate professor of ophthalmology on the Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. He is a member of the Minnesota Academy of Ophthalmology and Otolaryngology, the Medical Society of South Carolina, the American Medical Association, and the American Ophthalmological Society.

"The Clinical Interpretation of Vascular Lesions in the Retina in Hypertensive Disease" is the title of the paper which Dr. Wagener will read before the Section on Eye, Ear, Nose, and Throat Diseases on Tuesday afternoon.

Albert Carl Furstenberg, M.D., received the degree of B.S. from the University of Michigan, and in 1915 the M.D. from the same institution. He interned at the University of Michigan Hospital, following which he was appointed an instructor in the Department of Otolaryngology, University of Michigan Medical School. He was later advanced to the rank of assistant professor, then to associate professor, and in 1932 was made professor of otolaryngology and director of the Department of Laryngology, University of Michigan Hospital. In 1935 he was appointed dean of the Medical School of the University of Michigan.

He has produced a number of scientific articles, one of which included a comprehensive study of osteomyelitis of the skull and revolutionized the treatment of this disease. His research on osteomyelitis of the skull led to some interesting discoveries on the method of spread of infection and evolved a method of radical surgical interference which has brought about a successful cure in a large percentage of patients afflicted with this devastating disease. The investigation of this lesion also led to some interesting discoveries in respect to bone regeneration in the skull and demonstrated the extent to which osteomyelitic defects are restored through the medium of bone regeneration after radical excision of the calvarium is performed.

Dr. Furstenberg has likewise made an exhaustive investigation of infections in the neck with mediastinal complications. In respect to the latter disease he has devised a method of draining the mediastinum through the lower cervical region, a technic which has likewise brought about several cures following traumatic perforation of the thoracic esophagus from foreign bodies.

His most recent study is that of Meniere's symptom complex, in which he has demonstrated the relation of sodium metabolism to this condition and has offered a medical therapy which has relieved the symptoms of this disease in a large percentage of cases.

"Acute Infections of the Mouth, Pharynx, and Cervical Region" is the title of the address which Dr. Furstenberg will deliver before the Section on Eye, Ear, Nose, and Throat Diseases on Wednesday afternoon.

Section on Pediatrics

Roy Graham Hoskins, M.D., is director of research at the Memorial Foundation for Neuro-Endocrine Research, Boston, Mass., and the Worcester (Mass.) State Hospital. He was born of English and Scotch-Irish ancestry in Nevinville, Iowa, on July 3, 1880. His earlier years were spent on the frontier in western Nebraska, but in his high school and university years he

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at which a symposium on allergy will be presented. Beginning at 1:30 p. m., Thursday, J. Alexander Clarke, Jr., and Arthur L. Bolden will stress "Accurate Diagnosis in Hay Fever" based upon differential atmospheric pollen counts. The profession as a whole is confused about "The Role of Allergy in the Practice of Medicine." Leo H. Crip will attempt to clarify this subject and will set forth the diagnostic and therapeutic management of the allergic patient. Harry B. Wilmer and Merle M. Miller will discuss "Glucose Tolerance and Metabolism in the Allergic Individual, with a Report of Glucose Tolerance Observations in 600 Patients." There is no more distressing patient than the asthmatic, struggling as though each breath would be the last. Leslie N. Gay, Baltimore, Md., as guest speaker, will give the treatment of asthma in all types of patients from infancy to old age. The program of the Medical Section will close with a consideration of that always dreaded disease with its many complications, "Influenza," which will be discussed by another guest speaker, Thomas Francis, Jr., Rockefeller Institute, New York City, who has done so much research in this very important field.

The Surgical Section will meet Tuesday, Wednesday, and Thursday afternoons. At 2 p. m., Tuesday, Harold A. Kipp will present the "Diagnosis and Treatment of Tumors of the Cardiac End of the Stomach." This has been a difficult field, and the profession will welcome this paper. Each year contributions are made to the better understanding and treatment of peptic

ulcer. Edward J. Klopp will discuss "The Principles Underlying the Surgical Treatment of Peptic Ulcer" and will attempt to indicate those cases which are definitely surgical.

Following a recess, during which the section will visit the Scientific Exhibit, George Crile, Cleveland, as guest speaker, will consider that ever-perplexing problem about which we know so little, essential hypertension, in a paper entitled

"The Genesis and Surgical Treatment of Essential Hypertension." Thoracic surgery is advancing rapidly. W. Emory Burnett will show how bronchiectasis and lung abscess may be relieved. Pleural exudates are not always successfully treated. William Rowland Davies will offer suggestions in a paper entitled "Negative Pressure Drainage of Pleural Exudates." Postoperative atelectasis is far more prevalent than is recognized and is often wrongly diagnosed as pneumonia or pleural exudate. Joseph A. Perrone will give the prevention, diagnosis, and treatment in his assignment, "Bronchoscopy as a Treatment of Postoperative Atelectasis."

At 2 p. m., on Wednesday, J. Torrance Rugh will

discuss "Spasmodic Torticollis and Its Successful Relief by Prolonged Fixation." Any procedure which will safely lessen the travail of childbirth is welcomed both by the physician and the patient. Owen Jones Toland will add his contribution in "Refinements of Technic in Barbiturate Obstetric Analgesia." Judged by the results obtained, there is no universally satisfactory treatment for hernia. Moses Behrend will

THE GUEST SPEAKERS

(Continued from page 987.)

lived in Kansas, from the university of which state he was graduated in 1905. The following year was spent in the special study of zoology for which he received a Master's degree in 1906. After a year in the medical school at the State University and a year of high school teaching he went to the Harvard University from which a Ph.D. in Medical Sciences was obtained in 1910.

The next decade was spent as a professor of physiology at the Starling, Ohio, Medical College, Columbus, Ohio, and the Northwestern University Medical School at Chicago, as an officer in the Sanitary Corps attached to the staff of the Surgeon General of the Army, and as a medical student at the Johns Hopkins University. From this institution he received the M.D. degree in 1920.

After a year as associate in physiology at the Johns Hopkins Medical School, he accepted the headship of the Department of Physiology at the Ohio State University, from which institution he moved to Boston in 1927 to assume his present position as Director of Research of the Memorial Foundation for Neuro-Endocrine Research. This foundation is conducting an endocrine research project at the Harvard Medical School as well as collaborating in a study of the schizophrenic psychoses at the Worcester (Mass.) State Hospital.

Dr. Hoskins served as associate editor of the 4-volume work, *Endocrinology and Metabolism*, that appeared under the chief editorship of Dr. Llewellys F. Barker in 1923. He is editor-in-chief of the journal *Endocrinology* and is author of a semi-popular book on the internal secretions entitled *The Tides of Life*. He has published numerous original articles, largely in the field of internal secretions.

Dr. Hoskins will discuss the "Present Status of Endocrinology in Its Relation to the Child" before the Section on Pediatrics on Tuesday afternoon.

Section on Dermatology

Harold Newton Cole, M.D., of Cleveland, Ohio, received the Ph.B. degree at Bucknell University in 1906, and the M.D. degree in 1909 at Western Reserve University. After graduation in medicine he was given the Hanna Research Fellowship in Pathology at his Alma Mater, 1910-11. In 1917 he was elected a member of the American Dermatological Association and served as its president in 1930. Bucknell University honored him in 1918 with a Sc.D. degree. He served as secretary to the Section on Dermatology and Syphilology of the American Medical Association during the years 1920-22, and was elected to the chairmanship of that body in 1923. He was elected in 1930 as a corresponding member of the Danish Dermatological Association, and in the same year was elected a member of the Council on Pharmacy and Chemistry of the American Medical Association, in which capacity he has served to date. He is the author of numerous articles on dermatology, syphilology, and allied subjects.

His research on lymphogranuloma inguinale was among the earliest in this country and his experience is now recorded in medical literature. His investigation of cosmetics and their dermatologic aspects is well recognized, and his research on absorption and the excretion rate of the various heavy metals used in the treatment of syphilis has been well acknowledged.

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seek to improve the results by "The Universal Application of Fascia in all Hernias," which subject he will discuss. A critical statistical analysis of all types of hernias, their production, successful and unsuccessful treatment, and deductions will be presented by the guest speaker, Frederick W. Bancroft, New York City.

Unusual fractures always present a problem in their management; this subject will be discussed by Drury Hinton.

"Surgery of the Ambulatory Patient" is a practical question for every practitioner. Lewis Kraeer Ferguson will offer many helpful suggestions in his discussion of this subject. Edwin P. Buchanan will show that the recognition and proper management of "Benign Breast Lesions" will save many a patient from a disfiguring operation or a subsequent malignancy.

The Surgical Section will open Thursday at 1:30 p. m. with H. Ryerson Decker offering a ray of hope through radical surgery in selected cases of "Carcinoma of the Esophagus." Robert M. Entwisle will demonstrate that multiple carcinoid tumors may occur in the stomach instead of in the appendix where they are usually found. Biliary diseases and their surgical complications are always serious for the patient and fascinating for the physician. W. Wayne Babcock will evaluate the recent diagnostic, medical, and surgical procedures in these cases. To drain or not to drain has always been a baffling question to surgeons. Ford Eastman, in a paper entitled "Damage from Drains," will attempt to show that patients will often do better if drains are not

used. Bowel surgery is always major surgery with serious possibilities for the patient. Calvin B. Rentschler will offer suggestions to minimize the dangers in both emergency and elective work.

The Section on Eye, Ear, Nose, and Throat Diseases will meet Tuesday and Wednesday afternoons, Tuesday being devoted to diseases of the eye, Wednesday to the ear, nose, and throat. At 2 p. m., Tuesday, Edmund B. Spaeth will discuss

from the pathologic and diagnostic standpoint that rather incongruous condition, unilateral exophthalmos. "The Accurate Location of Foreign Bodies in the Eye-ball" is so essential for their removal with the least tissue damage to that delicate organ. Clarence J. McCullough will present the various methods of localization with illustrative case reports. "The Clinical Interpretation of Vascular Lesions in the Retina in Hypertensive Disease" will be made by the guest speaker, Henry P. Wagener, of the Mayo Clinic. A classification of types of arteriolar lesions will be suggested, based largely on modern conceptions of the local pathogenesis.

Following a recess from 3:30 to 4 p. m., during which the membership will

THE GUEST SPEAKERS

(Concluded from page 988.)

Dr. Cole's clinics have been given national recognition for the abundant research that has been produced and the thorough dermatologic training that is available. The general practitioner will find his knowledge of venereal diseases greatly increased by the timely presentation of this subject which Dr. Cole will give before the Section on Dermatology on Tuesday afternoon.

Section on Urology

Gershom J. Thompson, M.D., of Rochester, Minn., will be the guest speaker before the Section on Urology on Wednesday afternoon. His subject will be "Prostatic Resection."

Dr. Thompson received the M.D. degree at Washington University in 1925 and interned at St. Luke's Hospital, St. Louis. He entered general practice at Webster Groves, Mo., until October, 1926, when he was appointed Fellow in Surgery at the Mayo Foundation. In 1928 he was appointed first assistant in the urologic section of the Mayo Clinic. He received the degree of M.S. in urology in 1930 and practiced urology in St. Louis from April, 1930, until October, 1931, when he returned to Rochester as an associate in the urologic section. At the present time he is head of the Section on Transurethral Surgery at the Mayo Clinic and assistant professor of urology at the University of Minnesota. He is a member of his county and state medical societies, the American Medical Association, the American Urological Association, and Fellow of the American College of Surgeons. His fraternities are Phi Rho Sigma, Alpha Omega Alpha, and Sigma Xi.

Joint Meeting of Sections on Medicine and Pediatrics

Leslie Newton Gay, M.D., was born in 1892 and was graduated in 1917 from Johns Hopkins University School of Medicine, where he is now associate professor of medicine and director of the Hay Fever-Asthma Clinic. His work in the field of allergy is well known to those particularly interested in this field of work and, indeed, to many general practitioners.

His ability as a speaker and teacher is outstanding and his presentation of the "Treatment of Asthma Based on Etiologic Factors" should prove of great value to all members of the society. He will address the Joint Meeting of the Section on Medicine and the Section on Pediatrics, Thursday afternoon.

Thomas Francis, Jr., M.D., a member of the staff of the International Health Division of the Rockefeller Foundation, was born in Gas City, Ind., in 1900, and was reared in New Castle, Pa. He received a B.S. degree from Allegheny College, Meadville, Pa., in 1917, and the M.D. degree from Yale University, New Haven, Conn., in 1925.

Dr. Francis was instructor in medicine at the Yale University Medical School, 1927-28. Since then he has been at the Rockefeller Institute serving as resident physician in the Institute Hospital and later as an associate in the institute. His work includes study of erysipelas; respiratory diseases, especially pneumonia; skin reactions with type-specific polysaccharide and immunization with polysaccharide; and influenza.

Dr. Francis is a member of the Society of Immunologists, Pathologists, and Bacteriologists; the American Society for Clinical Investigation; and other organizations.

"Influenza" is the title of the address which Dr. Francis will present on Thursday afternoon before the Joint Meeting of the Section on Medicine and the Section on Pediatrics.

visit the Scientific Exhibit, Alfred Cowan and Mrs. Bernice English will discuss "The Distribution of Blindness in Pennsylvania" and the contributing factors involved. In attempting to stamp out conjunctivitis of the newborn, chemical conjunctivitis has occasionally resulted. Lewis P. Glover will describe the various silver preparations in use and offer suggestions for prevention.

Wednesday, at 2 p. m., Louis H. Clerf will discuss "Carcinoma of the Larynx—The Influence of Early Diagnosis on Treatment and End Results." The results in most cases diagnosed early are often brilliant. "Laryngeal Symptoms in Children" are often indicative of foreign bodies, as Ellen J. Patterson will show. The guest speaker, Albert Carl Furstenberg, Ann Arbor, Mich., will discuss "Acute Infections of the Mouth, Pharynx, and Cervical Region" with special reference to peritonsillar abscess, retropharyngeal abscess, and Ludwig's angina. Anatomic configurations are responsible and their understanding is essential for successful drainage and the prevention of that dreadful complication, suppurative mediastinitis. Chronic sinusitis is assuming a progressively larger rôle in medicine. Francis W. Davison will demonstrate its relation to chronic bronchitis in 50 carefully studied cases. Joseph C. Donnelly has the courage to grapple with "Allergic Rhinitis" and will wisely point out all of the medical examinations necessary before the diagnosis should be made.

There is no more distressing complication than meningitis developing as a complication of otitis media. George B. Jobson will discuss "Rhino-logic and Otologic Meningitis," its etiology, diagnosis, and treatment. Brain abscesses are always difficult as John R. Simpson will show in his presentation of cases. He wisely suggests that the help of the neurologist should always be sought. "Retropharyngeal Abscess in Children" is not infrequent. Henry Dintenfass will present the etiology, symptoms, diagnosis, and treatment. Practitioners generally do not appreciate the frequency of nasal obstruction due to dislocated quadrangular cartilage, especially in children. Samuel Cohen will close the meeting with a discussion of this subject, including anatomy, etiology, and operative correction.

The Section on Pediatrics will meet by itself Tuesday and Wednesday afternoons and jointly with the Section on Medicine, Thursday afternoon. The chairman, Joseph Stokes, Jr., will open the program on Tuesday, at 2 p. m., with an address on "Medical Education and the Practice of Pediatrics," stressing the close relationship of medical science and pediatrics. Primary carcinoma of the liver is rare at any age, particularly so in a child, age 3. Thomas W. McCreary will present the case history and gross specimen of such a case. Endocrinology is a rapidly developing branch of medicine, and little understood by the general practitioner. The Pediatric Section is exceedingly fortunate in having as its guest speaker, Roy Graham Hoskins, Boston, Mass., who will discuss "The Pres-

ent Status of Endocrinology in Its Relation to the Child." Anything which may be done to lessen the incidence of the acute infectious diseases, particularly scarlet fever and measles with their dreaded complications, should be encouraged. Aims C. McGuinness will present such a possibility in his discussion of "Lyophil Serum in the Prevention and Treatment of Scarlet Fever and of Other Infectious Diseases." Acute hemorrhagic nephritis in children is distressing because of the lifelong damage to the kidneys. Mitchell I. Rubin and Milton Rapaport, by invitation, will discuss the 3 major complications of this condition with reference to their prevention and treatment. Intestinal intoxication is a rather frequent entity in pediatric practice and in the home may become a serious problem. John P. Scott will offer suggestions for therapy based upon recent investigations. "Sudden Death in Infants and Children" is always disturbing. A clinicopathologic study of these deaths will be given by Charles R. Barr. Anatomic defects in infancy usually have an embryologic background. Hugh A. O'Hare will present the case of a patient who had both imperforate anus and a tracheo-esophageal fistula.

On Wednesday the Pediatric Section will be the guests of the Children's Hospital of Pittsburgh, Fifth Avenue at De Sota Street, at 12:45 p. m. for luncheon. At 2 p. m., the election of section officers will take place. This will be followed by a discussion of "Medical Inspection versus Medical Examination in the Public Schools," by Walter J. Larkin, a representative of the Pennsylvania School Physicians Association. The average physician little realizes the many medical conditions which can be recognized by a roentgen-ray examination of the long bones of children. These will be described by Ralph S. Bromer and illustrated by lantern slides. "Problems in Children's Posture" is the title of a comprehensive presentation by David Silver, Jennings M. King, William B. McLaughlin, and Jessie Wright, in which prenatal factors, legs, feet, shoes, and corrective alteration will be demonstrated.

The remainder of the afternoon will be devoted to a round-table discussion of several subjects and will be directed by the staff of the hospital. Members and visitors will be assigned to the round table which they choose from the following: (1) Recent Developments in Communicable Disease Control; (2) Physical Appraisal of the Preschool and School Child in Office Practice; (3) Chronic Nontuberculous Lung Infections; (4) Psychopediatrics and Endocrinology; (5) Dermatologic Problems in

Children; (6) Infant Feeding; (7) Heart Disease in Children; (8) Demonstration of Specialized Pediatric Technic.

The Section on Dermatology will meet Tuesday afternoon at 1:30 p. m. Following the election of section officers, Herman Gold will present a paper on "Anthrax," based on 12 cases infected by goat hair imported from the Orient. William D. Whitehead will show that "Finger- and Toenail Changes Associated with the Common Skin Diseases" are numerous. The etiologic factors contributing to eczema are legion. Carroll S. Wright and Herman Brown, by invitation, add another one, showing that the proper balance of uric acid and alkali reserve by corrective diet is of great value in the control of certain cases of eczema.

The guest speaker of this session, Harold Newton Cole, Cleveland, Ohio, will discuss the all-important subject, "Venereal Diseases with Particular Reference to Granuloma Inguinale and Lymphogranuloma Inguinale." Differential diagnosis and the use of specific intradermal tests will be featured.

Meyer W. Rubenstein will add to the knowledge of leukemia by presenting the cutaneous manifestations. The time-honored drug in the treatment of syphilis has been mercury. However, its use is restricted in all patients with liver or kidney damage. For this reason new salts of mercury with less organic toxic effect are constantly being sought. Norman R. Ingraham, Jr., will give his experiences with the new mercurial, hydramilon. Wassermann-fast syphilis is the despair of the syphilologist. Harry L. Baer will present his experience with ultraviolet therapy in 30 of these cases. The section will adjourn at 4:15 p. m. in order to provide a recess so that the members may visit the Scientific Exhibit.

The Section on Urology will meet Wednesday and Thursday afternoons. David L. Simon will open the session on Wednesday, at 2 p. m., with a discussion of "Renal Anomalies," which are more common than realized and are more prone to become diseased. As guest speaker, Gershon J. Thompson, Rochester, Minn., will discuss "Prostatic Resection," an intriguing subject to all who are interested in urology. Wilbur H. Haines and Silvio Miceli will present a follow-up study of prostatectomized patients to show the effect of this operation upon micturition, potency, and sterility.

Following a visit to the Scientific Exhibit from 3:30 to 4 p. m., Francis G. Harrison will discuss "Upper Urinary Tract Diseases as Complications of Prostatic Hypertrophy." These

complications often occur and the physician should, therefore, make a careful study of every patient under observation for prostatic hypertrophy. John B. Lownes will show the conservative surgical procedure in "Nephrostomy and Large Renal Calculus." The female urinary tract is subject to much infection, trauma, irritability, and atony associated with pregnancy, parturition, and advancing years. Theodore R. Fetter and Charles I. Lintgen will discuss this whole problem in "Observations on the Female Ureter and Bladder." How many physicians know what "Wilm's Tumors" are? Daniel P. Ray will offer a complete description.

The Thursday session will be opened at 1:30 p. m., by Hollister W. Lyon, who will discuss "Carcinoma of the Penis with Report of Case." Peter P. Mayock and William Baurys will present the rather rare condition, "Primary Carcinoma of the Ureter with Report of Case." David M. Davis will show that "Mild and Obscure Forms of Urinary Obstruction" along the urinary tract are of importance in infection and stone formation. Robert L. Anderson will demonstrate the important rôle of "Urology in Children." It is only recently that sufficient importance has been attached to this branch of urology. Gonorrheal arthritis is always painful to the patient and often troublesome to the physician. W. Hersey Thomas will offer a measure of relief by the use of fever therapy. "Gonorrheal Epididymitis: Incidence and Practical Consideration" will be the title of a paper by Frederick S. Schofield and Paul R. Leberman, based on a study of 8000 cases of acute gonorrhea.

In the preparation of the preview, the chairman has been impressed with the scope of the Scientific Program and Exhibit for 1936. He believes that every general practitioner should know the subject matter to be presented in order that he may offer his patients the best that is available in medical science. The committee, therefore, extends a cordial invitation to all the physicians of Pennsylvania to attend the Pittsburgh meeting.

FREDERICK B. UTLEY, *Chairman,*
Committee on Scientific Work.

PITTSBURGH UROLOGICAL ASSOCIATION BREAKFAST

The Pittsburgh Urological Association will have a breakfast at the Hotel William Penn on Thursday, Oct. 8, 1936, at 10 a. m.

All members of the State Society registering in the Urologic Section are cordially invited to attend.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit, located in the Lower Exhibition Hall of the Hotel William Penn, may be reached by express elevators which run to and from the seventeenth floor, where all meetings will be held. This hall is 2 floors below the lobby floor of the hotel, being accessible from there by steps or elevators.

Admission to the Scientific Exhibit is limited to members and guests of The Medical Society of the State of Pennsylvania who have registered for the annual meeting and who are wearing the convention button or are in possession of guest cards. The Scientific Exhibit is not open to the public.

LOWER EXHIBITION HALL

No. 101

Diet in Cancer.—This exhibit will be presented in 2 parts. Part 1 demonstrates that all living multicellular organisms are subject to cancer. Therefore, if diet is a cause of cancer, it must be some factor in the diet common to the food of all organisms. It further shows how substances in diet are broken down into their constituent elements and then rebuilt inside of cells. Cancer cells do not rebuild these constituents properly because some intracellular mechanism has been destroyed. Part 2 expresses criticism of the fact that many cancer patients are treated for cancer alone. Proper diet chosen in relation to calories, vitamins, minerals, etc.,

is of great help in maintaining the general nutrition of cancer patients, both during and between active treatments, whether surgical or radiological. Committee on Cancer Control of the Philadelphia County Medical Society; in charge of Stanley P. Reimann, Philadelphia.

No. 102

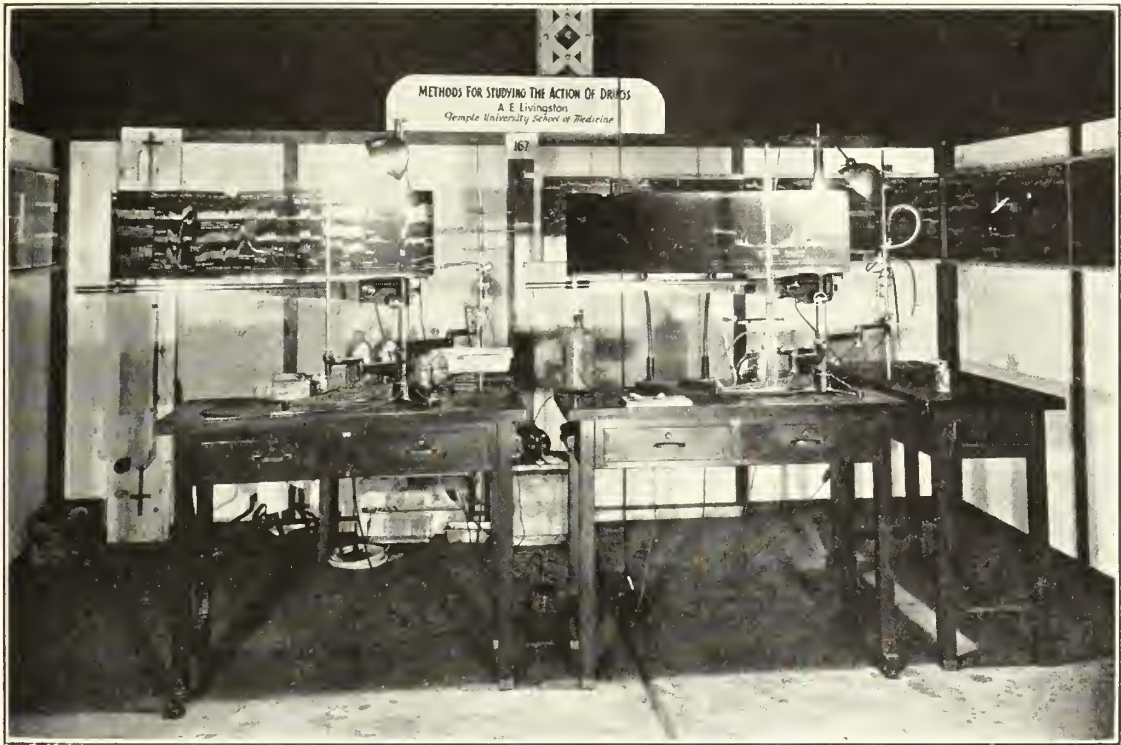
Cancer Demonstration Room.—Moulages depicting cancer. Carcinoma of the skin, the lip, and the intra-oral cavity shown in lifelike demonstrations. This collection contains over 50 models. In charge of Leo Shonfield, D.D.S., Pittsburgh Skin and Cancer Foundation.

No. 103

Cancer Diagnosis.—A pathologic exhibit demonstrating the latest type of apparatus used for frozen section work for the purpose of diagnosing tissue sections. Special emphasis will be placed on sections taken from carcinoma of the breast. These will be mounted, stained, and placed under the microscope in order to illustrate all of the steps in this pathologic procedure and to point out the factors which determine the diagnosis of carcinoma. This extremely practical exhibit will be in charge of Albert J. Bruecken, Pittsburgh, a member of the Commission on Cancer of The Medical Society of the State of Pennsylvania. The following pathologists will co-operate with him in the actual demonstrations: Margaret R. Baker, Mortimer Cohen, Robert C. Hamilton, Samuel R. Haythorn, Theodore R. Helmbold, Robert H. McClellan, Joseph W. McMeans, Howard H. Permar, Stanley P. Reimann, Elizabeth Ross, Earl Vandegrift, Ernest W. Willetts, Krikor Yardumian.



1935 Exhibit of Committee on Medical Economics



An Interesting Research Study in the 1935 Scientific Exhibit

No. 104

A. Carcinoma Patients' Demonstration Room.—Two types of carcinoma patients will be presented at alternate hours: (1) Patients with carcinoma of the breast (early and late examples) and examples of nonmalignant tumors will be demonstrated. This clinic is in charge of Samuel J. Waterworth, Clearfield, chairman of the Commission on Cancer of The Medical Society of the State of Pennsylvania; demonstrators, Edwin P. Buchanan, Horace E. Dewalt, Robert M. Entwisle, Morris A. Slocum, and James R. Watson. (2) Carcinoma of the mouth. This patient exhibit to demonstrate the various phases of carcinoma of the lip, tongue, and mouth is in charge of Harry W. Bernhardt, Rochester, member of State Society Commission on Cancer; demonstrators, Harry L. Baer, Abraham Fisher, Norman C. Oehsenhirt, Charles L. Schmitt, and Joseph M. Shelton.

B. Motion Picture Theatre.—(1) Motion picture demonstration of operations in surgical clinic, Moses Behrend, Philadelphia. Amputation of breast (Rodman and Stewart operations). Phrenicectomy, extrapleural pneumolysis, thoracoplasty, pericardiectomy. Closure of bronchial fistula. Cancer of colon (Mickulicz operation); one-stage perineal and abdominoperineal operations; 2-stage operation; carcinoma of descending colon. Rankin and Lahey operations—colectomy for ulcerative colon and multiple carcinoma of colon. Open operations for fractures of patella, coccyx, tibia, femur, head of radius. Cleft palate and harelip. Miscellaneous cases: Interesting pictures of cases that cannot be classified. Transplantation of head and shaft of fibula to humerus. Gastrectomy, gastro-enterostomy, pyloric stenosis. Bilateral hydrocele; undescended testicle. Internal operation for femoral hernia, congenital hernia, Galli operation.

Plastic operations for burns. Operation for fistula in ano, hemorrhoids, prolapse of rectum. Thyroidectomy. Inguinal, femoral, and umbilical hernia. Prolapse of uterus with perineorrhaphy. Spinal anesthesia, cholecystectomy and appendectomy. Anatomy of liver and ducts. Splenectomy—history precedes each case. Nephrectomy. Anterior and posterior colporrhaphy. Amputation, thigh and shoulder. Supravaginal hysterectomy. Fibromyoma of uterus weighing 133 pounds.

(2) Motion pictures on physical therapy presented by the Committee on Physical Therapy of The Medical Society of the State of Pennsylvania, chairman, Wilton H. Robinson, Pittsburgh. The list of motion pictures is as follows: Effects of heat and cold on circulation of blood; effects of massage on circulation of blood; occupational therapy; simple measures facilitating graduated active motion; therapeutic exercises for the shoulder joint following dislocation.

No. 105

Medicolegal Exhibit.—The coroner of Allegheny County is presenting about 80 transparencies of the various cardiac pathologies which have been found as a result of the investigation of the coroner's office. There will also be an exhibit on the identification of firearms, and other intricacies of the coroner's office will be graphically presented. William J. McGregor, Pittsburgh, coroner of Allegheny County.

No. 106

The Prophylaxis and Treatment of Spreading Peritonitis Complicating Acute Perforative Appendicitis.—Transparencies illustrating the high mortality of appendicitis, the factors responsible for this mortality, mortality of spreading peritonitis, bacteriology and experimental treatment of peritonitis with perfringens anti-

toxin" and immune serum. Demonstration of antibodies to *Clostridium welchii* in the blood of recovered patients. The immunologic aspects of spreading peritonitis. Operating before antibodies have developed; operating after antibodies have developed. Natural color photographs of spreading peritonitis in living dogs. Stuffed pigeons showing typical reactions in testing for *Clostridium welchii* toxin and antitoxin. Apparatus and wax model of arm showing method of administration of glucose by venoclysis in peritonitis. Continuous motion pictures illustrating: Studies in intestinal motility after various laxatives and in presence of peritonitis; technic of venesection and cannulization; technic of performing pigeon-testing for antibodies to *Clostridium welchii* in the patient's blood serum. John O. Bower, chairman of Commission on Appendicitis Mortality of The Medical Society of the State of Pennsylvania; John C. Burns and Harold A. Mengle, Department of Research Surgery, Temple University School of Medicine, and the Philadelphia General Hospital, Philadelphia.

No. 107

A. Hippuric Acid Elimination in Liver Function Test.—Exhibition of technic of performing the test and various charts showing the quantitative analysis of hippuric acid in urine in liver, gallbladder, cardio-renal, and other conditions as control group.

B. Clinical and Microscopic Photography in Colors and Transparencies.—Gross and microscopic photography in transparencies of miscellaneous pathologic conditions; also colored photography in the Finley process and the bichromated gelatin and 3-color separation processes. Krikor Yardumian and Philip J. Rosenthal, Department of Pathology, Montefiore Hospital, Pittsburgh.

No. 108

Air Conditioning in Health and Disease.—The exhibit includes a fever therapy apparatus which is used to raise the temperature of a patient through air conditioning. It consists of a box, 26 x 30 inches in vertical cross section and 7 feet long, in which the patient lies on a rubber mattress with head outside the enclosure. The space within the box may be conditioned to any atmospheric temperature with 100 per cent relative humidity by simple mechanical devices. A window and 2 doors are available through which may be observed the condition of the patient's body, including temperature, pulse, etc. The exhibit will include charts showing the results of 15 years' experience in studying the physiologic reactions of normal persons to various atmospheric conditions. The exhibit will also include charts showing records of several cases treated in the fever box at St. Francis Hospital. These cases will include gonorrhea and its complications in both male and female, and syphilis in its later stages. Other diseases have been treated in this apparatus, and it is probable that the results will be evaluated at this exhibit. Murray B. Ferderber and Mr. Frank C. Houghten, M. S., St. Francis Hospital, Pittsburgh; and the American Society of Heating and Ventilating Engineers, Pittsburgh.

No. 109

Ocular Conditions of Interest to the General Practitioner.—The exhibit will portray eyegrounds of interest to the internist and general practitioner. It will portray ocular findings in certain systemic diseases (hypertension, nephritis, arteriosclerosis, hyperthyroid-

ism, intracranial neoplasms). Patients will be demonstrated with the ophthalmoscope to indicate clinical phenomena. Harvey E. Thorpe, Isadore Pachtnan, Nathan S. Rubin, Montefiore Hospital, Pittsburgh.

No. 110

Hand Infections and Their Treatment.—This important every-day problem will be presented. Treatment of hand infections at various fascial levels will be emphasized and practical causes pointed out. William O'Neill Sherman and John Huber Wagner, surgeon-in-chief and surgeon of the Carnegie-Illinois Steel Company, St. Francis Hospital, Pittsburgh.

No. 111

Pittsburgh Medical Bulletin.—"Thoughts for Tomorrow."—The exhibit will consist of 10 posters depicting some recent biologic and medical discoveries with their potential uses in coming years. These will follow the technic of the fortnightly page in the *Pittsburgh Medical Bulletin*—"Thoughts for Tomorrow." Each poster will have a semihumorous cartoon illustrating the legend. Beneath each poster on a shelf will be mimeographed sheets giving more specific data regarding the illustrative cartoon. Norman R. Goldsmith, associate editor, *Pittsburgh Medical Bulletin*, Pittsburgh.

No. 112

Insulin Atrophy.—*Diabetic Arteriosclerosis.*—The exhibit will cover the subjects of insulin atrophy and diabetic arteriosclerosis. The insulin atrophy section will consist of photographs of cases of insulin atrophy, posters, and photomicrographs. The arteriosclerosis section will consist of roentgen-ray films showing mercury injections of diabetic legs, and photomicrographs of sclerotic arteries. James A. Shelly and Theodore A. Henderson, Abington Memorial Hospital, Abington, Pa.

No. 113

Allergy.—Classification, causes, sensitization tests. Demonstration of sensitization tests: (1) Skin tests—dermal, intradermal, patch; (2) mucous membrane. Exhibit of causes of hay fever. Charts showing pollen fall in western Pennsylvania. Raw products which are etiologic factors in allergy. Air filtration. Leo H. Crip, University of Pittsburgh School of Medicine, Pittsburgh.

No. 114

Office and Home Management of Peripheral Vascular Disease.—Equipment: Thermometers, iontophoresis apparatus, contrast baths, vascular board, suitable manikins, paintings of clinical conditions in feet and hands. J. West Mitchell, Sewickley.

No. 115

Pennsylvania Heart Association.—The correlation of symptoms, physical signs, and anatomic lesions in cardiac disease. Howard G. Schleiter, Andrew D'zmura, Adolph Koenig, George G. Burkley, Pittsburgh.

No. 116

Endocrinology in Childhood—Illustrative Case Presentations.—Illustrative case reports of various endocrine types encountered in childhood. Photographs and roentgen-ray studies. For comparison, measurements

and roentgen rays of normal children of same age. Case reports and photographs of children suffering from diseases often mistaken for and therefore erroneously treated as endocrine problems; for example, chondrodystrophy, Mongolian idiocy, various types of mental deficiency, and constitutional inferiority. Theodore O. Elterich, Pittsburgh.

No. 117

Muscle Training in Postural Cases, Infantile, Spastic, and Brachial Plexus Paralysis.—Patients suffering from birth injuries, spasticities, and posture defects will come for treatment during the session, which means that there will be a continuous demonstration. The day's schedule will be posted. Motion pictures of spastic cases will be shown at least twice a day, followed by a demonstration on one or more cases shown in the film. Pasteboard models demonstrating types of posture and effects and charts demonstrating effects of poor posture will be shown. Demonstration of treatment of individual cases and of class-room work as given to student nurses at West Penn Hospital will be presented. Treatment of brachial plexus tears will be demonstrated. There will be charts showing the change in muscle power in individual cases of infantile paralysis, as well as charts showing the essentials of treatment. Jennings M. King, West Penn Hospital; Lois Hartman, physiotherapist, Children's Hospital; Joseph Candia, physiotherapist, West Penn Hospital; Fern Colbert, R. N., and Patricia Beck, R. N., West Penn Hospital, Pittsburgh.

No. 118

Roentgen-Ray Examination of Gastro-intestinal Mucosal Topography.—An exhibit of prints and roentgenographic transparencies showing the increase in diagnostic information obtained by applying compression to the abdomen during roentgen-ray examination of the gastro-intestinal tract. The roentgenographic signs of lesions in the mucosa are compared by pictures made with and without compression. The method of using a simplified compression device is illustrated by a continuous film-slide projection. Morris A. Hershenson, Pittsburgh.

No. 119

Tuberculosis.—Reductions of interesting chest films—5x7 inches. C. Howard Marcy, Leon H. Hetherington, George W. Hobson, Elmer P. Sauer, Tuberculosis League Hospital, Pittsburgh.

No. 120

The Phagocytic Activity of Normal Blood Cells and Leukemic Cells in Vitro.—A series of 10 large charts with colored illustrations and diagrams showing the phagocytic activity in vitro of all the types of blood cells found circulating in normal blood as well as in all forms of leukemia, both chronic and acute, including acute hemohistioblastic forms, and so-called glandular fever (acute mononucleosis). Max M. Strumia, Bryn Mawr Hospital, Bryn Mawr.

No. 121

Mechanical Lesions of the Appendix as an Etiologic Cause of Appendicitis.—A series of charts tabulating and graphically summarizing the clinical and anatomic findings of 127 cases of appendicitis in children, emphasizing the importance of mechanical obstruction to

the lumen as an etiologic element of appendiceal colic and appendicitis. Also photographs of specimens and microphotographs to illustrate the changes. Percival Nicholson, Walter Estell Lee, and Max M. Strumia, Bryn Mawr Hospital, Bryn Mawr.

No. 122

Plastic Surgery of the Nose.—Three motion picture films showing the actual plastic operations of the nose. Time for showing all 3 is about 35 minutes. The exhibit will also include plaster casts of noses showing appearance before and after operation; photographs of patients before and after operation; full-size face masks before and after operation; and several large placards detailing the value of these operative procedures. Samuel Cohen, Philadelphia.

No. 123

Recent Obstetric Developments.—(1) The precision steroscope for the new Caldwell-Moloy morphologic classification of female pelves (Ralph E. Tafel and Paul Titus). (2) Tone and color drawings by Miss E. M. Shackelford, illustrating steps in technic of numerous obstetric operations, including application of various forceps (Kielland, Barton, Piper, and others); modern methods of episiotomy and perineorrhaphy, version and breech extraction, and the low cervical cesarean section, as well as illustrations of many interesting obstetric specimens. Unusual illuminated transparencies of steps in the Porro cesarean section shown in Japanese water colors. (3) Actual steps in the technic of the Friedman test for pregnancy (Robert H. McClellan) illustrated with color drawings (Miss E. M. Shackelford). (4) Sterility studies are presented with especial attention to tubal insufflation, fractional iodide (skioldan) injections of uterus by Hyam's technic for roentgen-ray visualization and examination; counting and differentiation of type of spermatozoa, displaying actual specimens (Paul Titus, Benjamin R. Almquest, and Robert H. McClellan). (5) Technic of human hormone assays (F. C. Messer, Oliver Research Laboratory). (6) Exhibit of new obstetric instruments (Paul Titus, Ralph E. Tafel, Robert H. McClellan, F. C. Messer, St. Margaret Memorial Hospital, Pittsburgh).

No. 124

Blood Sedimentation Test—Its Clinical Value and Application.—The exhibit is designed to describe and illustrate the fundamental characters of the blood sedimentation tests. (1) It is nonspecific and occurs in many diseases characterized by disturbed stability of the blood. A list of such diseases will be presented. (2) It has distinct value as a diagnostic lead in indicating the presence of serious disease not infrequently before the disease can be recognized by the usual clinical and laboratory methods. (3) It also has value in diagnosis in a qualitative sense by indicating the intensity of the disease in the same sense as fever or pulse rate or blood count, but more exactly. (4) It is of distinct value in prognosis and as a guide in treatment, and will reflect more accurately the real condition of the patient than our usually accepted procedures. (5) The technic is simple and will give reliable and accurate results under average conditions. It is inexpensive and is admirably suited as a routine procedure in the office of the busy physician. Jacob W. Cutler, Bayard S. Herr, F. R. Park, Henry Phipps Institute and Graduate Hospital, Philadelphia.



An Interesting Clinical Exhibit—1935

No. 125

Blood Pictures—Normal and Abnormal in Color.—A practical diagrammatic method of classification of the blood diseases with composite colored blood pictures. Colored photomicrographs of the normal and abnormal variations of the various blood cells. George J. Kastlin and Joseph Shelton, Pittsburgh Skin and Cancer Foundation, Pittsburgh.

No. 126

Diagnosis and Treatment of Undulant Fever.—This exhibit consists of charts showing the incidence of undulant fever, methods of diagnosis, symptoms, and treatment. The temperature curves of several typical and atypical cases before and after treatment will be reproduced. The intravenous injection of killed typhoid and paratyphoid bacilli was the treatment employed. The effect of this form of therapy on the course of the disease, temperature, and blood count will be shown by means of charts and graphs. There will also be demonstrated the various laboratory procedures utilized in the diagnosis of this disease. Henry F. Hunt, Carl E. Ervin, W. H. Dearing, Mary E. Knoll, M. S., Geisinger Memorial Hospital, Danville.

No. 127

Studies on Insulin, Protamine Insulin, and Crystalline Insulin.—A series of graphs, approximately 8x11 inches, of blood sugar curves in health, in obesity, in prediabetic states, in diabetes; renal glycosuria blood sugar curves in cases of rectal injections of glucose. Curves of glucose tolerance tests by the one-hour and 3-hour methods. Curves obtained following the use of regular insulin, protamine insulin, and crystalline

insulin. Joseph H. Barach, University of Pittsburgh Medical School.

No. 128

Pulmonary Embolism.—Clinical picture, etiology, prevention, treatment. Moulage casts of pulmonary artery and adjacent structures; casts in color of typical pulmonary emboli; pathologic specimens; photographs; drawings; charts and diagrams. Hugh Robertson, Jefferson Medical College, Philadelphia.

No. 129

Massive Pulmonary Embolism.—Seven cases of massive pulmonary embolism will be illustrated, each by a life-size anatomic chart and actual pathologic specimens. George H. Fetterman, Pittsburgh City Home and Hospitals, Mayview.

Nos. 130-135

The Visceral Pathology in Scarlet Fever and Related Streptococcal Infection.—The exhibit consists of a series of photomicrographs illustrating the typical changes found in the various viscera, particularly the heart, liver, kidneys, and adrenal glands of patients dying of scarlet fever or related streptococcal infections during the first 3 weeks of their illness. These lesions are seen to be an almost specific vascular and perivascular reaction characterized by a mononuclear cellular infiltration. They are believed to be the result of circulating toxins upon the vascular endothelium with subsequent diffusion into the perivascular tissues. Lawrence W. Smith, Temple University Medical School, Philadelphia.

The Hydrostatics and Hydrodynamics of the Cranio-vertebral Cavity.—By means of a working model, the

pressure and volume relationships of arteries, veins, brain, and cerebrospinal fluid will be demonstrated. A mechanical heart pumps blood from vena cava to aorta, from which it flows under arterial pressure through the arterial blood volume of the craniovertebral cavity into the venous blood volume through a capillary bed, returning through the jugular vein to the vena cava and heart. The mechanical heart imitates the normal heart in that it forces into the aorta only such volumes of blood as return to it via the veins. Manometers have been installed in communication with all important parts of the system, and the physical factors involved in the following conditions and events are demonstrated: (1) Spinal puncture and spinal drainage; (2) Queckenstedt procedure; (3) certain types of headache; (4) certain types of stupor or coma; (5) rise and fall of blood pressure; (6) encephalographic procedure; (7) space-taking mass lesions. Temple Fay and William E. Chamberlain, Temple University Medical School, Philadelphia.

Gastroscopy as an Aid in Diagnosis.—This exhibit will consist of a series of gastroscopic views in color with correlated roentgen studies and clinical data. The various types of gastroscopes and their indications will be demonstrated. Chevalier L. Jackson and William A. Swalm, Temple University Medical School, Philadelphia.

The Miniature Camera in Clinical Photography.—Several types of miniature cameras will be exhibited with samples of enlarged photographs covering the field of clinical photography. The purpose of the exhibit is to show the value of photographs in case records and in the teaching of medicine or any of its branches. It is also intended to demonstrate the applicability of the miniature camera used by either expert or novice.

The relative inexpensiveness of apparatus and supplies is revealed. Frank W. Konzelmann and Edwin S. Gault, Temple University Medical School, Philadelphia.

No. 136

Acute Intestinal Obstruction—Early Diagnosis and Treatment.—An exhibit demonstrating what constitutes adequate care for the case of acute intestinal obstruction. The early symptoms and signs that make operation imperative and life-saving, as well as the evidence necessary to make abdominal exploration the first consideration, are especially emphasized. Roentgen-ray findings of obstruction at different stages all proved by operation demonstrating the great value of such positive evidence in the early diagnosis. John W. Stinson and John F. McCullough, Pittsburgh.

No. 137

Nasal Sinuses and Mastoids Roentgenologically Considered.—The exhibit will include unusual cases diagnosed by roentgen examination. A device will be shown which has been developed by the exhibitor to meet the need of a more complete examination of the nasal sinuses and mastoids and other special regions of the head. This device can be adjusted quickly and conveniently to obtain not only all the routine or standard positions in which to roentgenograph the different parts of the head, but also many special angles for projection of the rays through the head. In addition to the device being designed for making single or flat roentgenograms it is especially useful for duplicating and making stereoscopic roentgenograms. A method will be shown for conveniently making stereoscopic roentgenograms of the mastoids so that both mastoids appear within the stereoscope for comparative



State Society's 1935 Exhibit on Periodic Health Examination



An Aisle in the 1935 Technical Exhibit

study. The demonstrator will emphasize the importance of marking the films at the time the roentgenograms are being made and will show a marking device that will enable the viewer to discover quickly any error in the marking of the film. Various roentgen-ray shadows appearing on roentgenograms will be explained. Photographs of the head in various positions in which to roentgenograph certain parts so as to obtain the maximum diagnostic information will be exhibited, together with roentgenograms made in the position shown. The diagnostic and prognostic importance of some anatomic variations that are demonstrable by roentgen examination will be expounded. Reprints of recent articles by the exhibitor on "Stereoscopic Roentgenograms of the Sphenoid Sinuses" and "Roentgen Stereoscopy" will be available for distribution at the exhibit. James W. Ferguson, Pittsburgh.

No. 138

Traveling Salon of the Biological Photographic Association.—An exhibit of medical and scientific photographs from institutions in the United States and abroad, a description of the technic used being given with each photograph. Shown under auspices of the Department of Medicine, University of Pittsburgh Medical School.

No. 139

Demonstration of Treatment of Fractures of Back and Lower Extremities. Demonstration of Vascular Diseases of the Lower Extremities.—This exhibit will cover complicated fractures of interest to practitioners as well as surgeons. It will be supplemented by motion picture, lantern slide, and radiographic demonstrations. It will be further augmented by actual demonstrations

on patients of treatment of circulatory diseases of extremities. Grover C. Weil, Harold G. Kuehner, John P. Henry, Mercy Hospital, Pittsburgh.

It is suggested that each member read carefully the foregoing descriptions of the scientific exhibits so that he may select those which interest him most. By making note of which exhibits he wants to inspect, the visiting physician can cover this feature of the convention most effectively in a minimum amount of time. In this way greater benefits will be obtained than if no plan is followed.

See the exhibits and then, after giving them some thought, choose the ones which interest you most and go back to them. You will have intelligent questions to ask, and the exhibitors will give intelligent answers. You may even have problems affecting the welfare of your patients which may be pertinent and applicable to one or more of the exhibits presented. Take up your problems with the demonstrators. They will be there solely for the purpose of helping you.

No effort has been spared to make the 1936 Scientific Exhibit one of practical rather than erudite value. Many of the newer developments in medicine will be stressed. However, those which become more valuable as their familiarity increases will not be forgotten.

THE TECHNICAL EXHIBIT

One of the most interesting features of the Eighty-sixth Annual Convention is the Technical Exhibit. It will be located in the Ball Room of the Hotel William Penn and will be open for inspection from 8:30 a. m. to 6:00 p. m. daily except Thursday, when it will be closed at 3:00 p. m.

This exhibit offers an excellent opportunity for the medical profession to become acquainted with the latest developments and most important achievements in all medical fields. Here those interested may inspect a considerable portion of the year's output of books, discuss with factory representatives both the newer and older pharmaceutical and biologic supplies, watch technically trained experts demonstrate the apparatus developed from scientific research, and become acquainted with the latest food products. The exhibit provides a liberal education in the proper armamentarium of the modern physician.

In charge of each exhibit will be a representative of the exhibiting firm, whose chief purpose is not to close sales but to acquaint physicians with the products he represents by explaining their technical advantages, demonstrating their usefulness, and answering questions about them. A leisurely visit through the Technical Exhibit is similar to a postgraduate course.

Since practically all activities of the convention will be centered on the Seventeenth Floor of the Hotel William Penn, each physician will find it convenient to visit the Technical Exhibit.

To indicate the scope of this exhibit, a list of the participating firms is arranged according to the type of product displayed. Look it over carefully. Doubtless there is something in which you are interested. Do not fail to take advantage of the opportunity afforded by the Technical Exhibit.

Chemical, Biological, and Pharmaceutical

Abbott Laboratories, N. Chicago, Ill.
 Billhuber-Knoll Corp., Jersey City, N. J.
 Corega Chemical Co., Cleveland, Ohio.
 Davies, Rose & Co., Ltd., Boston, Mass.
 Gilliland Laboratories, Marietta, Pa.
 Lederle Laboratories, New York City.
 Maltbie Chemical Co., Newark, N. J.
 Merck & Co., Inc., Rahway, N. J.
 Merrell Co., Wm. S., Cincinnati, Ohio.
 Mutual Pharmacal Co., Inc., Syracuse, N. Y.
 National Drug Co., Philadelphia, Pa.
 Sandoz Chemical Co., New York City.
 Squibb & Sons, E. R., New York City.

Winthrop Chemical Co., New York City.
 Zenner Co., Pittsburgh, Pa.

Electrical Apparatus and Instruments

Adlanco X-Ray Corp., New York City.
 Cameron Surgical Specialty Co., New York City.
 Compex Oscillator Co., New York City.
 Electro-Therapy Products Corp., Philadelphia, Pa.
 Fischer Corp., Glendale, Calif.
 Fischer Co., H. G., Chicago, Ill.
 General Electric X-Ray Corp., Chicago, Ill.
 Kelley-Koett Manufacturing Co., Covington, Ky.
 Lepel High Frequency Laboratories, New York City.
 Liebel-Flarsheim Co., Cincinnati, Ohio.
 Picker X-Ray Corp., New York City.
 Wasserott Bros. & Co., Wilkes-Barre, Pa.
 Westinghouse X-Ray Corp., Long Island City, N. Y.

Foods

Davis Co., R. B., Hoboken, N. J.
 Gerber Products Co., Fremont, Mich.
 Heinz Co., H. J., Pittsburgh, Pa.
 Horlick's Malted Milk Corp., Racine, Wis.
 Libby, McNeil & Libby, Chicago, Ill.
 Mead Johnson & Co., Evansville, Ind.
 Mellin's Food Co., Boston, Mass.
 M & R Dietetic Laboratories, Inc., Columbus, Ohio.
 S. M. A. Corp., Cleveland, Ohio.
 White Laboratories, Newark, N. J.

Medical Publications

Form Publishing Co., New York City.
 Lea & Febiger, Philadelphia, Pa.
 Lippincott Co., J. B., Philadelphia, Pa.
 Mosby Co., C. V., St. Louis, Mo.
 Saunders Co., W. B., Philadelphia, Pa.

Physicians' and Hospital Equipment

Bard-Parker Co., Inc., Danbury, Conn.
 DeVilbiss Co., Toledo, Ohio.
 Fulton Co., Robt. A., Pittsburgh, Pa.
 Meyrowitz Co., E. B., New York City.
 Middlewest Instrument Co., Chicago, Ill.
 Physicians Supply Co. of Phila., Philadelphia, Pa.
 Pilling & Sons Co., George P., Philadelphia, Pa.
 Sorensen Co., Inc., C. M., Long Island City, N. Y.
 White-Haines Optical Co., Columbus, Ohio.

Miscellaneous

Camp & Co., S. H., Jackson, Mich.
 Coca-Cola Co., Atlanta, Ga.
 Holland-Rantos Co., Inc., New York City.
 Kalak Water Co., New York City.
 McKennan Pharmacy, Pittsburgh, Pa.
 Medical Protective Company, Wheaton, Ill.
 Philip Morris Co., New York City.

EDITORIALS

LOOKING FORWARD TO THE ANNUAL MEETING

This is the last call for the 1936 meeting of The Medical Society of the State of Pennsylvania, which will be held at Pittsburgh, Oct. 5 to 8. Attendance upon the annual session of your State Society should be your outstanding obligation each year. We frequently wonder whether our members realize as fully as they should what the State Society means to them. It is difficult to understand why every member does not have an intense active interest in the State Society and its annual meetings.

The scientific program, which appeared in the August number of the JOURNAL, is unusually inviting and should be carefully read by each one anticipating attendance in order that he may select the papers and discussions that will best meet his needs. The scientific program is arranged to afford the latest data in the practice of medicine.

This issue of the JOURNAL, the Convention Number, should be of especial interest because it contains details of the program for the annual meeting. The reports of the officers, committees, etc., are published in this number of the JOURNAL. This engenders a very desirable interest and stimulates an increased activity on the part of the membership. It presents advanced information regarding matters to be considered by the House of Delegates. If the delegates will digest these reports, it will not only expedite the business of the House of Delegates but will increase the efficiency of its deliberations. Reference committees particularly should familiarize themselves with the text of these reports.

The Woman's Auxiliary has arranged a most enticing program, which should create in the women folk the urge to attend. The sessions of this group are of increasing magnitude each year.

Upon arrival at Pittsburgh, pick up your hotel reservation. Register immediately at the registration booth (which will be open daily throughout the convention from 9 a. m. to 5 p. m.) at the headquarters, the William Penn Hotel.

The Allegheny County Medical Society will be our host, and its members have been working indefatigably to prepare properly for the annual meeting. The Woman's Auxiliary to the Alle-

gheny County Medical Society has been most untiring in its efforts to prepare for the visitation of our ladies. The scenery en route is gorgeous.

SPEAK TO BE HEARD AT SOCIETY MEETINGS

We are extremely eager to secure the co-operation of our members to speak sufficiently loud to be heard by those assembled for the respective meetings.

Remember that the assemblage in a room wants to hear; this is why they attend, and all speakers should regulate their voices that those present may have no difficulty in hearing. To travel the distance many do to attend the annual meeting to listen to certain papers and not to be able to hear the speaker is disheartening. There is no excuse for poor articulation.

There are some men who speak in public in a low tone, who normally have weak voices, who do not bear in mind that they are addressing an audience, and hence, never seem to realize the necessity for raising their voices.

There is the individual who invariably looks at the floor when speaking and, to add to the difficulty of transmitting the voice, walks to and fro.

We beseech the attention of the members to this very important detail. We would urge all speakers to stand firmly on their feet, keep their heads raised, and speak sufficiently loud that the person farthest away in the audience may hear. This is imperative.

If members are unable to hear a speaker, they should have no hesitancy to arise to a point of order and request the speaker to speak more loudly. To call out "louder" from the audience is not always met with response.

Section officers should be alert in this matter, sense the situation, and request a speaker to raise his voice. It will greatly enhance the value of the meetings.

TO OUR MEMBERS AND CONTRIBUTORS

Owing to a lack of knowledge on the part of our members and contributors of the assembling

of each number of the JOURNAL, there frequently arise misunderstandings that require more or less explanatory correspondence.

The transactions of the annual session of the State Society must be published within one year from the date of the convention. This necessitates the completion of the publication of the transactions in the September number. As a result of this requirement, we are limited as to the number of voluntary contributions that can be accepted during the year, and these are all published at one time in the October number.

The editor has authority to reject any article, case report, or discussion forming part of the official transactions that he may deem unworthy of publication.

The question of publishing bibliographies has given us much concern. We wish to call particular attention to a most valuable suggestion made by Sir William Osler in his address on "Some Aspects of American Bibliography." In referring to that most stupendous undertaking, the Index Catalog of the Surgeon-General's Library, he remarked that it was not used enough by students, and cited a writer on diseases of the heart, who appended to his paper a very full bibliography; but when Volume V of the old series and Volume VI of the new series of the Index were consulted, behold "there was the literature in full on this subject and many articles which the author had overlooked. The entire bibliography might have been omitted with advantage from the paper and simply a reference made to the Index Catalog."

Among the many advantages to be secured by co-operative action on the part of medical contributors would be the valuable space gained in the pages of medical journals; and of not less importance the author would be free from the imputation of seeking a reputation for erudition on the basis of the citation of numerous articles which the reader sometimes suspects that he has never seen in the original.

Accordingly, about 1929, the Board of Trustees of our State Society adopted a resolution to the effect that bibliographic references would not be published unless there was a quotation from the reference article.

Although we call attention monthly to this ruling, yet contributions continue to be submitted with more or less extensive bibliographies, from which only occasionally does the author directly quote from the article referred to.

We respectfully seek the co-operation of contributors in the necessity for accepting this ruling on bibliography.

REPORTS OF OFFICERS, COUNCILORS, COMMITTEES, AND COMMISSIONS

In this number of the JOURNAL appear the annual reports of the officers, councilors, committees, and commissions. These should be carefully read by the personnel of the House of Delegates in particular so that they may be fully acquainted with the subject matter of each and have ample time to consider any recommendations these reports may contain before being officially discussed upon the floor of the House.

Herewith is reiterated the essentials of the reports with comment.

REPORTS OF COUNCILORS

First District.—Councilor George C. Yeager lays stress on the statement that the members of the medical profession must assume more and more responsibility as carriers to their clientele of medical opinion and experience regarding the various forms of sickness service, and must assume, more than ever, the work of directing the general public thought.

Second District.—Councilor Edgar S. Buyers refers to the important problem of "How Shall the Unemployables as Well as Some of the Employables Receive Adequate Medical Care."

The Medical Economics Committee of the Berks County Medical Society solved a problem of vital importance, namely, immunization of children who can afford to pay, but who are brought to the public health stations and given injections free of charge. This society has enthusiastically accepted the graduate seminars.

Attention is called to the report of the Committee on Public Relations of the Bucks County Society.

Chester County Society has inaugurated a plan of diphtheria immunization whereby all children are treated in the office of the family physician. This society has developed a plan of procedure for the various state and hospital clinics operating throughout the county.

The many activities of the Montgomery County Society are most laudable.

It is of interest to note that the Schuylkill County Society has published and distributed to its entire membership "The Early History of the Schuylkill County Medical Society."

Third District.—Councilor John J. Brennan states that the prenatal and child welfare activity is being carried on with much interest, that graduate instruction is being fostered by all the larger communities, and that the membership throughout the district is showing marked interest in all matters pertaining to organized medi-

cine. The newspapers of the district are publishing "Your Health."

Fourth District.—Councilor E. Roger Samuel noted an increase in membership; the employables on relief seem to have been pretty well absorbed by PWA employment projects; the newspaper health column released daily by the State Society has increased interest in various health problems; candidates for election to municipal, state, and federal offices have been contacted; graduate instruction under the State Society plan continues satisfactory.

Fifth District.—Councilor Clarence R. Phillips states that he has no answer or solution as to why the smaller county societies have a better percentage of attendance than the larger societies; the State Society educational releases have been satisfactory; some of the societies in the district are endeavoring to develop plans which will include free choice of physician and payment for services rendered on a budget plan; one county medical society has made arrangements with the county commissioners and relief board for medical service to the indigent to be paid for from county tax funds.

Sixth District.—Councilor Augustus S. Kech states that there is apparently no demand on the part of the public for any change in the present forms of sickness service.

Seventh District.—Councilor David W. Thomas states that all the county societies in the district have completed the initial examinations for the State Emergency Child Health program, and in several of the counties periodic re-examinations and correction of the defects, etc., have been made; with a few exceptions, the newspapers in the district have co-operated in publishing the State Society column, "Your Health"; 2 of the county societies have formulated plans and contacted the county poor and relief officials regarding agreements for medical service to citizens supported by tax funds.

Eighth District.—Councilor George A. Reed is concerned that the district still shows a tendency toward indifference to State Society affairs and local problems.

Ninth District.—Councilor Alexander H. Stewart considers that the activities, co-operation, and results in his district compare favorably with those in any other district.

Tenth District.—Councilor Robert L. Anderson states that the all-time outstanding event of Allegheny County Medical Society activities was the celebration of "Buchanan Day" on Jan. 21. The membership of the district is showing marked loyalty to and co-operation with the

State Society. The Emergency Child Health program is being continued in Allegheny and Westmoreland Counties. "The Beaver County Plan" is working very satisfactorily.

Eleventh District.—Councilor Laurrie D. Sargent has been disappointed to learn of the large number of members of the district who are totally indifferent to the value and the need for active participation in the affairs of county organization. He has no solution for the problem.

"Your Health" as published in their daily papers is being productive of good throughout the district.

Bedford County Society does not publish a bulletin and has no woman's auxiliary.

Secretary.—This report affords much valuable data and should be read by the members as it is the official report of the stewardship of the secretary.

Report of Chairman of the Board of Trustees.—This report includes much of the activities of the trustees, and affords matters of general interest.

In regard to the 8-hour day for nurses, the trustees adopted a motion that when more general agreement existed in the nursing organization the problem might receive more consideration by our society.

It is recommended that Perry County be changed from the sixth to the fifth councilor district.

Report of the Managing Editor.—Mr. Lester H. Perry calls attention to the fact that the principal activities of the Harrisburg office are fourfold, involving the JOURNAL, the convention, the headquarters building, and the package library service. The report stresses the accomplishments which lead to the fulfillment of this basic purpose. The total income at the Harrisburg office for the fiscal year 1935-36 is 16 per cent more than the receipts of the preceding year, which in turn were greater by 9 per cent than those for 1933-34.

REPORTS OF STANDING COMMITTEES

Radio and Public Health Legislation.—This should be carefully read by all the members as every physician is vitally interested in the activities of this committee, because each member must co-operate with this committee if anything is to be accomplished in the legislative halls at Harrisburg. The report shows the urge for the recommendation of the revival and the maintenance of a public health legislation conference in each county of the society.

Committee on Public Relations.—The committee is still convinced that the best policy to amalgamate local interests and assume leadership by the organized medical profession, which would naturally follow, is this committee's plan to inaugurate health councils in various communities throughout the state, which should unite all local agencies interested in public health problems. The House of Delegates will be asked to continue its support of this policy.

The primary purpose of "Your Health" column is to establish the health leadership of the county medical society in the various communities of each county. The report of this committee should be carefully read so that the membership may better grasp the policies it has adopted and the need for the understanding support of our members.

Committee on Medical Benevolence.—The very commendable duties of this committee should appeal to all. The fund should be rapidly increased in amount. Those of our members who can do so should provide in their wills for a bequest to this fund. Further, we should interest our lay friends who are charitably disposed to contribute to the fund or make a provision in their wills.

Committee on Necrology.—This committee reports 148 deaths.

Committee to Confer with Governmental and Private Health Agencies.—The committee recommends that the component county societies add to their roster of committees a local contact committee, comparable in its functions to the parent committee.

REPORTS OF SPECIAL COMMITTEES

Committee on Archives.—This committee reports the addition of 2 county medical society histories. Those counties that have not manifested any practical interest in the histories of their county societies should appoint a committee to further this most necessary activity.

Committee on Workmen's Compensation.—The report of this committee should be carefully read for general information on the subject.

Commission on Appendicitis Mortality.—The report of this committee should be carefully read for the general information contained.

Commission on Maternal Welfare.—The report of the commission should be read by all the members, especially those who are practicing obstetrics, for the general information which it affords, also the reference it contains to the 3 "obstetric institutes" which will be presented to the physicians of Pennsylvania during the next 3 months.

Committee on Medical Economics.—The membership is urged to read this report as it does not lend itself well to an abstract. The general information is too great and should be read in full.

Emergency Child Health Committee.—The report of this committee is unusually long and should be read in full for the informative material it contains. The chairman of the committee particularly calls attention of the members to the recommendation made in the closing paragraph of the report.

Social Security Conference Committee.—This committee was appointed to confer with the State Secretary of Health regarding ways and means of carrying out certain propositions in association with the Department of Health. This report should be read in full for your guidance.

Committee on Graduate Education.—The very satisfactory results reported by this committee warrant the plea to provide the executive machinery to carry graduate education to every component society.

PLANNING A LIFE

Most parents plan for children. Whether this is a wholly conscious or subconscious mechanism is open for discussion; possibly it is both. Girls early in life play with dolls. Boys follow more aggressive games. Parents dream as to what their children should be; hence, at birth they begin planning for such a fulfillment. Whether or not there is only one type of pattern for living a life or whether individuals can be made to fit into other patterns is a speculation. However, there are basic fundamentals not unlike in all patterns. A discussion of such fundamentals would appear to be in order. These fundamentals center around life's primary purposes—self-preservation, perpetuation of the species, and the individual's relationship to the social groups.

Before entering into a discussion of these fundamentals, inasmuch as there is a wide prevailing thought that some lives should not be allowed to fulfill their purposes (offspring of feeble-minded, the chronic mentally ill, and those morally unfit to rear children), there must be a separation of the chaff from the wheat in planning a life. There are schools of thought primarily concerning this group. The one suggests segregation, sterilization, or the denial of marriage and sterilization. The other view is that no prerogative should be taken from the mental defectives in our planning. Just how society is to be protected or the tax burden lightened or what method of control is to be followed is not

clear. Another view is that life's purposes as to procreation should not be denied, but it is society's duty to care for the deficient offspring through segregation, supervision, *etc.* These are far-reaching questions and will not be decided in our day and generation. Many states now permit legal sterilization. How effective sterilization will be in combating the situation remains speculative—as a contribution to correction, yes; as to the final answer of eliminating the mentally unfit, no. The field of eugenics gives its contribution. Possibly in the two will be found not the answer but a great amelioration of the conditions that now prevail in the present generation.

Returning to the basic fundamentals of any plan for a life, we certainly would think in terms of (1) keeping well; (2) preparation for life's work, vocational, educational, and disciplinary; (3) definite objectives and working hours to ensure the attainment of objectives in line with our potentialities; (4) definite hours for healthful relaxation and diversion; (5) definite hours for sleep, eating, and care of the physical needs of the body; (6) definite hours for meditation, reflection, spiritual and cultural satisfaction (the church, social relationship, and philosophy). Out of these come our views and relationship to our fellowmen. Time for the appropriation of these to the good of our fellowmen should be planned, the key to the entire set-up being a balanced program and arranged in such a way, however, as to avoid any ideas of restriction, but in the end the balance remains.

As the individual advances in life, there comes the urge of mating, the medium that ensures perpetuation and which is symbolized in the home or the family. Time should be allotted for these but not at the expense of the balanced pattern as a whole. During these periods, man's responsibilities are his God, his family, his job, his fellowmen, and himself. His pattern of living must be shifted accordingly. Likewise, comes the shift to meet reverses, but the fundamentals should be retained.

But what of the environment and those inherent and acquired qualities of man that in the last analysis control his destiny? The individual cannot map out this or that environment in which he shall live. Unfortunately, environment in the industrial, social, and economic world is more or less fixed. Be that as it may, man can strive to create with his fellowman the best type of environment for people to live in. Likewise, he may train himself to face reality, to face situations that arise in his environment; he may also learn to adapt and readapt himself to changing

situations, new experiences, and at the same time endeavor to retain his basic pattern of a plan of living.

The planning of a life is one thing. The actual living of a life is another. But, generally speaking, those who plan meet with the greatest success. Of course, there are lucky breaks and chances, but unless individuals are able to take advantage of such breaks or chances by thinking ahead, they avail little.

WILLIAM H. MAYER, M.D.

Dr. William H. Mayer, of Pittsburgh, died at the St. Francis Hospital, Aug. 22, from septic pneumonia, aged 49. He had maintained his office duties until within 3 days of his death.

Dr. Mayer was born in Pittsburgh, Pa., Oct. 30, 1887, the son of William L. and Anna Beckman Mayer.

His preliminary education was received in the Pittsburgh Central High School, and he was graduated from the University of Pennsylvania Medical School in 1912. He served his internship in the Mercy Hospital, Pittsburgh, and had since that time the following hospital connections: Neurologist to the Allegheny General Hospital and Passavant Hospital, and associate psychiatrist to St. Francis Hospital, all of Pittsburgh. He had for a number of years been assistant professor of neurology in the School of Medicine of the University of Pittsburgh. He was a Fellow of the American Medical Association, of the Pittsburgh Academy of Medicine, and of the American College of Physicians; and was also a member of the American Psychiatric Association and the Association for Mental and Nervous Research.

Dr. Mayer served the Allegheny County Medical Society as its secretary from 1917 to 1925, in which year he was chosen its president-elect. He also served his county society as a member of its Board of Directors and chairman of its Finance Committee, as well as in the capacity of elected delegate to the State Society for 16 years. Dr. Mayer was the eighty-fifth president of The Medical Society of the State of Pennsylvania; he was installed at the annual meeting held at Scranton in 1931. He was chosen to succeed himself as a delegate from his State Society to the House of Delegates of the American Medical Association consecutively since 1921. For several years Dr. Mayer served as chairman of a special committee created by the Board of Trustees of the American Medical Association to co-operate with the Secretary of the Treasury

and other federal government officials in the endeavor to solve the problems pertaining to medicinal alcohol.

Dr. Mayer's first marriage was to Miss Emma J. Glass, of London, Ontario, Canada, who died several years ago. His second marriage was to Miss Virginia Diehl Sutton, of Pittsburgh, to whom a daughter, Ann Virginia, was born Feb. 29, 1936. These 2 survive.

Any one familiar with the unusual service rendered in the past by Dr. Mayer to his county, state, and national medical societies, after reading this brief history of his medical organization connections, may in a measure evaluate the foundation underlying his achievements. Dr. Mayer's devotion to the best interests of the organized medical profession has been characterized by a spirit of determination at once indomitable and gracious, which is thoroughly appreciated by those closest to him in the actual administration of the various medical societies with which he was affiliated. He was long an exponent of individualism in medical practice, having been enlisted in a determined effort to reform without destruction the health projects that have crept into the endeavors of certain groups organized in behalf of social uplift.

CHARLES HARRISON FRAZIER, M.D.

Dr. Charles Harrison Frazier, of Philadelphia, died suddenly July 26 at his summer residence, North Haven, Me., where he had gone for a brief rest. He was aged 66. Dr. Frazier was born in Germantown, Philadelphia, Apr. 19, 1870, a son of William W. and Harriet Morgan Frazier.

Dr. Frazier was graduated from the University of Pennsylvania Department of Liberal Arts and Sciences in 1889, receiving the degree of A.B., and in 1892 was awarded the degree of M.D. from the medical school of the university. He served his internship at the University and Episcopal Hospitals and continued a graduate course of studies at Berlin in 1895.

He served as professor of clinical surgery in the University of Pennsylvania School of Medicine 1901-1922, was dean of the medical department from 1902 to 1910, and was made John Rhea Barton professor of surgery at the University in 1922, which was continued until the time of his death. He was also professor of neurosurgery in the Graduate School of the University of Pennsylvania.

In 1925 the University of Pennsylvania conferred upon him the honorary degree of doctor of science. In June, 1934, he was elected a trus-

tee of the University of Pennsylvania which appointment he held until the time of his death.

He was on the staff of the University Hospital, a member of his county and State medical societies, a Fellow of the American Medical Association (chairman of the Section on Surgery, 1913-1914), a Fellow of the American College of Surgeons, member of the American Neurological Association (past president), the American Philosophical Society, Fellow of the College of Physicians of Philadelphia, American Surgical Association, founder and past president of the Society of Clinical Surgery, Society of Neurological Surgery, American Neurological Association, Association for Research in Nervous and Mental Diseases, member of the Academy of Surgery, American Association for the Advancement of Science, and in 1933 was made a member of the German Academy of Natural Sciences.

He was one of the founders of the Public Charities Association of Pennsylvania in 1913, an organization devoted to handicapped persons, particularly the mentally ill, the feeble-minded, and penal cases. He served as its president from the founding until the time of his death. In this regard Dr. Frazier perpetuated the traditions of his family. His grandfather was the first president of the State Board of Public Charities in 1867.

In the early days of his career Dr. Frazier devoted himself to general surgery, but he subsequently limited his surgical endeavors to neurosurgery in which field he was a pioneer worker. He was honored in foreign lands by being made a Fellow of the British Neurological Society, an honorary member of the Deutsche Akademie der Naturforscher, and a corresponding member of the Academie National de Chirurgie.

During the World War Dr. Frazier organized a unit for brain surgery for foreign service. He was consultant in neurosurgery to the Surgeon General of the Medical Corps of the United States Army, and in 1920 represented the Surgeon General as a member of the Interallied Surgical Conference in Paris.

He was an ardent supporter of medical social service. Several times he was under consideration for appointment to public office, which offers he had steadfastly refused. He was an extensive contributor to the surgical literature and was the author of a treatise, "Surgery of the Spine and Spinal Cord."

By force of his own genius, indomitable and untiring energy, he invaded a comparatively recently explored field of surgical work, devised

certain procedures, and invented instruments to meet new requirements. He had new problems to solve and difficulties to overcome, but he had also results to achieve and he achieved them.

He was married to Miss Mary Spring Gardiner, of Northeast Harbor, Me., Aug. 19, 1901, who died several years ago. Dr. Frazier is survived by 3 sons, one of whom, William Doane Frazier, M.D., is on the staff of the University Hospital, a daughter, 2 brothers, and 2 sisters.

THOMAS BEAVER HOLLOWAY, M.D.

Dr. Thomas Beaver Holloway, Philadelphia ophthalmologist, died at his home in Merion, Pa., August 18, aged 64.

Dr. Holloway was born in Danville, Pa., Mar. 24, 1872, the son of William Kerling and Ruth Ann (Yeager) Holloway. He received the B.S. degree from Lafayette College in 1894 and the M. S. degree in 1897.

He was graduated from the University of Pennsylvania Medical School in 1897, and in 1926 was awarded the D.Sc. degree.

In 1902 he was made an assistant in the eye dispensary of the University Hospital and in 1905 was appointed instructor in ophthalmology in the University of Pennsylvania Medical School. A year later he was appointed on the staff of the Orthopedic Hospital and Infirmary for Nervous Diseases, which appointment he discontinued in 1920, accepting a reappointment in 1922.

Upon the termination of service of the distinguished Dr. George E. de Schweinitz as professor of ophthalmology in the University of Pennsylvania Medical School, Dr. Holloway was advanced to professor of ophthalmology and ophthalmic surgeon to the University Hospital; he was also professor of ophthalmology in the Graduate School of Medicine of the University of Pennsylvania, and formerly vice dean of ophthalmology.

He also served as ophthalmologist to the neurologic department of the Philadelphia General Hospital, the Maternity Hospital, the Wills Eye Hospital, and the Institution for the Instruction of the Blind, Overbrook, Pa.

Dr. Holloway was past assistant surgeon U. S. N. R. F. He was a member of the board of directors of the National Society for the Prevention of Blindness. In 1935 he was elected president of Lafayette College Alumni Association.

He was a member of his county and state medical societies; a Fellow of the A. M. A. (a

member of the House of Delegates in 1918, and chairman of the Section on Ophthalmology, 1929-1930); the American Ophthalmological Society (a past president, and from 1918 to 1925 was secretary-treasurer, and at one time edited the society's transactions); a past president of the Section on Ophthalmology of the Pan-American Medical Association; the American Academy of Ophthalmology and Otolaryngology; the American Board of Ophthalmology; College of Physicians of Philadelphia; Philadelphia Neurological Society; Philadelphia Pathological Society; Philadelphia Pediatric Society; Ophthalmological Society of the United Kingdom; and the Societe Francaise d'ophtalmologie.

He was a frequent contributor to the medical literature, and in 1918 was co-author with Dr. George E. de Schweinitz in writing the book, *Pulsating Exophthalmos*.

His fraternities were Chi Phi, Theta Nu Epsilon, and Alpha Mu Pi Omega.

On June 4, 1902, Dr. Holloway was married to Miss Cordelia G. Wooley, of Danville, Pa., who died in 1930; and a year later he was married to Miss Florence Laird, who with a son, Thomas B. Holloway, Jr., survives.

MONTOUR COUNTY POSTGRADUATE ASSEMBLY

The Fourth Monthly Postgraduate Assembly, held under the auspices of the Montour County Medical Society, was conducted at the Geisinger Memorial Hospital, Danville, June 5, 1936. Dr. Reid Nebinger, chairman, presided. The program consisted of a symposium on diseases of the eye, ear, nose, and throat. An operative clinic from 8 to 10:30 a. m. was held by Dr. Harold L. Foss, surgeon-in-chief, Geisinger Memorial Hospital.

At the morning session the following papers were read: "Esophageal Disease," Dr. Francis W. Davison, department of otolaryngology, Geisinger Memorial Hospital; "Pharyngeal and Parapharyngeal Infections," Dr. John R. Simpson, associate professor of otolaryngology, University of Pittsburgh Medical School; "Nonmagnetic Intra-ocular Foreign Bodies," Dr. George H. Cross, of Chester, associate professor of ophthalmology, Graduate School of Medicine, University of Pennsylvania; "Preoperative Problems," Dr. Frank C. Hammond, professor of gynecology, Temple University Medical School, Philadelphia.

There was a demonstration of pathologic specimens in the laboratory from 10 a. m. to 4 p. m., by Dr. Henry F. Hunt, pathologist, Geisinger Memorial Hospital.

Luncheon was served at 1 p. m.

At the afternoon session starting at 2 p. m., there was an address by Dr. Alexander H. Colwell, Pittsburgh, president of The Medical Society of the State of Pennsylvania, followed by papers on "Silent Mastoiditis" by Dr. John R. Simpson, Pittsburgh, and "Industrial Ophthalmology" by Dr. George H. Cross, Chester.

MEDICAL MOTION PICTURES

The Committee on Medical Motion Pictures of the American College of Surgeons desires to review medical and surgical films. Many pictures have been received, and as they are reviewed a card catalogue is being compiled for the purpose of recording detailed data concerning medical and surgical films of high quality. This digest will enable the college to supply information regarding films which are available on a given subject, where they may be obtained, and whether or not they are satisfactory for the purpose desired.

Films received at the college are reviewed by a committee consisting of recognized authorities on the subject matter portrayed and the associate directors of the college. If a film is satisfactory to the reviewing committee from the standpoint of professional technic, general teaching value, and photographic quality, it is approved, and the author of the film is authorized to insert a legend which reads, "Passed by the Committee on Medical Motion Pictures of the American College of Surgeons."

Further information regarding medical motion picture films and a list of the films which have been approved by the college may be found on pages 54 to 59 of the 1936 *Blue Book* of the college. Additional data will be furnished on request.

The college recently produced a film entitled "That Man May Live," which portrays progress in the medical care of man and animals, and emphasizes the debt of man to research conducted on animals and the necessity for its continuance.

Another film which is distributed by the college is entitled "Good Hospital Care." It gives a brief outline of the growth and development of hospital standardization throughout the United States and Canada, followed by a complete demonstration of the procedure in an approved hospital in arriving at the diagnosis and rendering the best possible care to the patient.

The purpose of these 2 films is to carry authentic information to the public. There is no charge for the use of these films other than carrying charges and a small service charge.

THE ANNUAL CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

The Twenty-Sixth Annual Clinical Congress of the American College of Surgeons will be held in Philadelphia, Oct. 19 to 23, 1936. The headquarters will be at the Bellevue-Stratford Hotel, Broad and Walnut Streets. A program of surgical clinics and demonstrations will be provided. There will be no operative clinics and demonstrations in the hospitals during the morning of Monday, Oct. 19. This feature of the program will not begin until Monday afternoon, Oct. 19, at 2 o'clock. This permits of the Fellows devoting Monday morning, Oct. 19, to registration. An up-to-date program of the congress will be published from day to day during the time the congress is in session. The committee is planning to develop many special features in the clinical program.

A series of clinical demonstrations will be given by visiting ophthalmologists and otolaryngologists to be presented each forenoon at the headquarters hotel.

The programs for the 5 evening scientific sessions to be held in Irvine Hall, 34th and Spruce Streets, are being prepared. Dr. Donald C. Balfour will be the retiring president and Dr. Eugene H. Pool, New York, will be installed as the new president.

At the annual convocation of the college on Friday evening, Oct. 23, the 1936 class of initiates will be received into fellowship.

Special features of the program for this year's congress include: (1) A conference on fractures under the auspices of the Committee on Fractures; (2) a symposium on cancer arranged by the Committee on the Treatment of Malignant Diseases; (3) a conference on industrial medicine and traumatic surgery under the auspices of the Committee on Industrial Medicine and Traumatic Surgery.

A community health meeting will be held in the Municipal Auditorium, 34th Street below Spruce Street, on Wednesday evening, Oct. 21.

Admittance to all clinics and demonstrations will be controlled by means of special clinic tickets, which plan provides an efficient means for the distribution of the visiting surgeons among the several clinics and insures against overcrowding, as the number of tickets issued for any clinic will be limited to the capacity of the room in which that clinic will be given.

A registration fee of \$5 is required of each surgeon attending the annual Clinical Congress, such fees providing the funds with which to meet the expenses of the meeting. To each surgeon registering in advance a formal receipt for the registration fee is issued, which receipt is to be exchanged for a general admission card upon his registration at headquarters. This card, which is nontransferable, must be presented in order to secure clinic tickets and admission to the evening meetings.

COMMENTS AND EXCERPTS

Effect of Tobacco and Alcohol on the Eyes.—

As a rule, neither tobacco nor alcohol directly affect the eyes, unless they have first attacked the general health, it is pointed out by Dr. Emanuel Krinsky, of Brooklyn, N. Y., answering some of the questions which are most frequently asked by patients, in a recent issue of *The Sight-Saving Review*, quarterly journal of the National Society for the Prevention of Blindness (Summer, 1936).

"And yet," says Dr. Krinsky, "every eye specialist in every book on eye diseases gives prominent mention to blindness of varying degrees of severity from the prolonged and excessive use of either tobacco or alcohol in certain susceptible persons. It is extremely important to recognize blindness from tobacco or alcohol because immediate and complete abstinence will often restore vision, unless the case has progressed too far. Wood alcohol blindness is permanent and cannot be cured."

The warning that a black eye may be more serious than funny is made by Dr. Krinsky as follows: "Among children—and sometimes among our alcoholic brethren—a black eye is regarded with honor, in the same sense that German students honor a scar on the cheek as evidence of duellistic prowess. If such an outward discoloration represented the whole story, we might have reason to laugh it away. But the inexperienced can see only skin-deep. It may be that the large majority of these cases can well survive the ordeal, even without having to go to a doctor. But that a certain number of these black eyes also show, on more careful examination, either a fracture of the skull or a hemorrhage into the eyeball with almost sudden blindness, is not generally known. It would seem reasonable, therefore, to submit all these eye injuries to medical examination, to avoid any possibility of permanent harm."

Regarding the danger of eyeglasses breaking and causing an injury to the eyes, he says: "However possible such an accident might seem, strangely enough, it very rarely occurs. Many busy eye specialists have never observed such a misfortune. And the reason is not difficult to understand. Those who wear glasses instinctively value their eyes more than those who do not, and the slightest shock or fear will automatically bring a sudden closure of the lids with concomitant protection to the eyes. For those who are not reassured, it is a comfort to know that lenses may now be obtained which are made of nonshatterable glass. This being the case, it is quite needless for a mother to deny her young child the safe glasses."

"More glasses are being worn now than in the past," Dr. Krimsky explains, "not because eyes are more defective—for they are not—but because the modern human has applied himself to occupations requiring close vision, unlike the pursuits of his forebears who lived on the soil where close use of the eyes was seldom called into play. While eyes should be re-examined about once a year for glasses, and oftener in cases where eyes change more rapidly, it does not necessarily follow that lenses must be changed. For, while in some persons annual or biennial changes of glasses may be required, in others the same lenses may serve faithfully for 10 or 15 years."

Head Injuries More Dangerous at Age 40 and Over.—The dangerous forties hold a peril unsuspected by most persons in those years, it appears from a report of Dr. George W. Swift, of Seattle.

The danger Dr. Swift pictured is that following injuries to brain and spinal cord. Persons age 40 or older are less likely to recover from such injuries than those in the younger age groups, Dr. Swift found from study of mortality figures.

Advances in surgical practice have reduced the mortality following external head injuries from 60 per cent to 20 per cent in 10 years, Dr. Swift said. He cited cases from King County Hospital, Seattle, showing that the mortality from head injuries was less than 10 per cent for those under age 15, about 13 per cent for those from age 16 to age 40, and more than 24 per cent for those from age 40 to age 60. The mortality is also high for persons over age 60, but this is due to the general condition of the body at these ages rather than to the specific injury.

Each year about 125,000 injuries involving the head and spine occur in the United States. The number is increasing year by year because of the increased speed of transportation and mass production in industry.

In treating head injuries of men and women over age 40, Dr. Swift urged physicians to pay special attention to regulation of the pressure of the fluid in the brain and spinal cord.—*Science News Letter*, Nov. 9, 1935.

Remove Moles to Avoid Cancer.—Brown or reddish moles on the skin should be removed before they give signs of trouble in order surely to prevent subsequent cancer. This advice appears in a report by Dr. Dean Howard Affleck, of the surgical pathological laboratory of the Johns Hopkins Hospital and University, Baltimore (*American Journal of Cancer*, May).

Not all moles develop into cancer. In the hundreds of cases reviewed by Dr. Affleck no cancers developed in hairy moles. However, there is no way of distinguishing in advance between moles that will turn into cancer and those that will not. Those moles located

in areas subject to injury and irritation are more prone to malignant change.

Once the process has developed to the point where the patient notices a change in the mole—enlargement or bleeding—it is almost always too late for treatment to succeed, Dr. Affleck finds. The only hope for the present, he concludes, seems to lie in removal of moles before they give trouble, particularly those that are subject to constant irritation.—*Science News Letter*, July 4, 1936).

Tiny Movie Camera Films Vocal Cords in Action.—A motion picture camera so small and compact that it can be pushed into the larynx, to take films of the vocal cords in action, has been invented by 2 Viennese scientists, Dr. Kamillo Wiethe, a physician, and Dr. Franz Gerhard Back, an engineer. It is expected to be useful in at least 3 ways: To study the mechanics of the voice, particularly in famous singers; to investigate the physiology of the production of the various vowel sounds; and as an aid in the diagnosis of throat diseases, particularly those with a nervous involvement.

The new camera is an addition to an already existing series of miniature photographic apparatus designed for obtaining pictures of various internal cavities. One camera, for taking pictures of the inside of the stomach in the diagnosis of gastric ulcer, cancer, and other ailments, is swallowed by the patient. It carries its own tiny light bulb with it. Once the exposure is made, the surgeon pulls the camera up again, and develops the film.—*Science News Letter*, June 20, 1936.

Diabetes Treatment Improved by New Insulin Compound.—The advantages of protamine insulin over ordinary insulin in the treatment of certain cases of diabetes were proclaimed by one of the co-discoverers of insulin, Prof. C. H. Best of the University of Toronto, at the meeting of the Canadian Medical Association, at Vancouver.

The new kind of insulin was developed by Danish scientists. It was not intended to supplant ordinary insulin in cases of diabetes which can be satisfactorily controlled by insulin alone, but was found a valuable adjunct to insulin in treating cases of severe diabetes. Protamine insulin is relatively insoluble and tends to be absorbed slowly and over a longer period of time than ordinary insulin. Consequently its blood sugar lowering effect lasts longer—twice as long, in fact.

"The work of the Danish group on protamine insulin has been abundantly confirmed," Dr. Best said. "Various groups of clinicians in Boston, Toronto, London, and Rochester, Minn., have found that the duration of insulin action is much extended when insulin is combined under appropriate conditions with protamine."

Dr. Best and his associate, Dr. Robert Kerr, found that dogs having no insulin-producing pancreas tissue could be kept free from symptoms of diabetes by one injection of protamine insulin daily. At least 2 injections of regular insulin are needed to accomplish this result. The fluctuations observed in the amount of sugar in the blood when regular insulin is used are avoided with protamine insulin.

The use of protamine or some even more satisfactory agent will make it possible to maintain certain diabetic patients in a much more normal condition.—*Science News Letter*, July 4, 1936.

MEDICAL ECONOMICS

Writing of Youth, its education and attitude in regard to state medicine, the editors of the *Sedgwick*

County Medical Bulletin state that: "For centuries statesmen and educators have realized that the best place to influence public opinion and to spread an idea is among the youth. It seems rather significant, therefore, that those groups which have been most active in proposing socialized medicine should now be working in the schools of the country. Efforts to build sentiment for state medicine will continue, and if the youth, who are to decide our problems tomorrow, are to have a rational outlook upon the medical aspect of these problems, it is imperative that physicians take the time and the effort to give them this point of view. The physician through the very nature of his work and through his contact with the family group should be able to obtain a sympathetic hearing on these things which are so vital to medical progress. Some serious and conscientious work individually among our patients, and as a group in our schools, will in the future bring big dividends to us in a more enlightened and sympathetic citizenry."—*N. Y. State J. M.*, June, 1936.

Mr. J. Weston Walch, the man, it will be remembered, who compiled the *Handbook on State Medicine*, used by so many of the 100,000 high school students who debated the topic this past winter, says that: "The case against state medicine is strong enough, if only the medical profession generally would bring it to the attention of the general public! But the public is not simply going to take the doctor's word for it that socialization is bad. The average patient respects the physician's advice on medical matters. He has never been given any reason to believe the doctor is also an expert on finance and administration. It will not do for physicians and their organizations merely to continue to pass resolutions—the public must be continually reminded of the real facts and dangers of public encroachment on private medicine."—From *Medical Economics* of May, 1936.—*N. Y. State J. M.*, June, 1936.

Periodic Health Examinations.—At the meeting of the South Dakota State Medical Association held last May at Sioux Falls, S. D., the Committee on Medical Economics included in its report the following reference to periodic health examinations.

This is not clinical medicine in its generally accepted sense but preventive medicine of the highest type. It is a method of estimating the remaining physical assets of the individual rather than a study and interpretation of the relation of obvious signs and symptoms to already existing disease. This distinction is fundamental and should ever be borne in mind.

Some county medical societies now provide their members with printed form letters to be signed and sent to patients in order to acquaint them with the value of the examination and to urge them to arrange for it. It is just as ethical for physicians to recommend the periodic health examination to their patients as it is to urge vaccinations for smallpox, protection against diphtheria, typhoid fever, etc.

Fees for periodic health examinations should not be fixed but should be regulated to meet the ability of the patient to pay. A definite method of follow-up is essential to the success of the periodic health examination, since it serves in a measure to force the indifferent and neglectful to put into operation the advice which has been given. More attention should be paid to the psychic and mental aspects of the patient than is now the rule. The practice of preventive medicine through periodic health examinations is a powerful though silent gesture opposed to the present misguided

efforts for the socialization of medicine.—*The Journal Lancet*, July, 1936.

Hospitals and Compensation Cases.—Hospitals are entitled to and should receive the per diem cost of care for compensation cases, whether the patients are federal, state, county, or city employees coming under the compensation laws. This policy should obtain as well for all patients who are cared for under the provisions of compensation insurance companies, fraternal associations, or private commercial organizations.

More and more compensation boards, many insurance companies, and other organizations are recognizing the justice of the claims for adequate reimbursement for the services rendered patients for whom they are responsible. It should be a stated policy in every state and province.

The liberal attitude which many such boards and organizations have taken toward the hospitals has been accompanied by commendable results. Patients have been better satisfied, they have been returned to their labors in less time, and the costs of their hospitalization have been in most instances materially reduced.

Considered from any viewpoint, the policy of paying the costs of the patient's care, instead of forcing the hospitals to serve the patient at less than cost, is to the advantage of the patient, the public, and the hospital. The loss the hospital sustains in giving its service to compensation cases at less than cost, and for which service the patient has paid in part, amounts to a considerable sum each year, and makes a serious inroad on the earnings of the institution. In some way this loss must be made up, either through philanthropic contribution which is unfair or through reduction in wages of employees, and in reduced purchases of needed supplies, which is unwise.

In those states and communities where hospitals have diligently explained this difficulty to the proper authorities, this evil has been in a large part corrected. If the hospitals in other states and localities, where less than cost is paid for the care of compensation cases, would urge their claims for reimbursement based upon the costs of service rendered, they would receive favorable consideration in a majority of instances.

It should not prove difficult for our state associations to work out an equitable agreement between their member hospitals and the compensation boards and other responsible organizations.—Editorial, *Hospitals*, July, 1936.

MEDICOLEGAL NOTES

Results of Surgeon's Treatment of Similar Cases Not Admissible.—In malpractice cases the rule is laid down that evidence as to the results of the treatment by the defendant of other similar cases is not relevant to the issues and is inadmissible. *Oskison vs. Bagby*, Oklahoma Supreme Court, 46 P. (2d.) 331. In this case, an action against surgeons for negligence in administering a general instead of a local anesthetic knowing the condition of the patient's heart, it was held that testimony that one of the defendants performed an operation upon the witness similar to that performed upon the patient, using a local instead of a general anesthetic, was incompetent.

It was held the plaintiff could not complain because a medical expert was permitted to answer a hypothetical question over the objection of the plaintiff where several other medical experts were asked and answered

substantially the same question without objection by the plaintiff.—*Medical Record*, Mar. 4, 1936.

Failure to Call Medical Testimony.—While a person being treated by a physician is not under any legal duty to call the physician to testify in a personal injury action as to the extent of his injuries, and the opposing parties cannot avail themselves of the use of such physician as a witness, because of the privilege statute, the Mississippi Supreme Court holds, *Beard vs. Williams*, 161 So. 750, that there may be indulged as an inference of fact, that, where no physician is called and many are available, and the extent of the injury would depend largely upon the expert testimony of a physician, the presumption that the injured party would have called some physician had the injuries been serious. The fact that the party lived where there were many physicians and claimed to have suffered injury, and still called no physician, nor had any treatment except having her arm bandaged would, the court said, raise the presumption that such testimony, if produced, would be against the claim of such party.—*Medical Record*, Mar. 18, 1936.

Care in Keeping Track of Sponges.—The fact that a surgeon adopted and used the recognized and customary method of keeping count of the sponges used during an operation will not, the Oklahoma Supreme Court holds, *Aderhold vs. Stewart*, 46 P. (2d.) 341, afford a complete shield from liability if in fact a sponge was left in the patient's body. The real test is whether he and the nurses acting under his authority exercised ordinary care in keeping track of the sponges and seeing to it that they were all removed before the incision was closed.

Whether a surgeon who used about 40 sponges in an appendicitis operation did leave a sponge in the patient's body and if so whether this constituted a failure to exercise ordinary care in the operation was held a question for the jury.

The California District Court of Appeal held, *Ales vs. Ryan*, 47 P. (2d.) 771, that a surgeon who performed an operation for the removal of gallstones at the request of the medical director of a county hospital would not be liable for negligence of an intern and nurses assisting him in leaving a sponge in the patient's abdomen on the doctrine of respondeat superior, since the relation of master and servant did not exist between surgeon and hospital employees.—*Medical Record*, Mar. 18, 1936.

Statutory Requirement of Malpractice Notice.—A Wisconsin statute, St. 1933, 330.19 (5), requires that no action for damages for personal injury shall be maintained unless within 2 years after the happening of the event causing the damage notice in writing, or the complaint in an action, is served on the party complained against. The notice must state the time and place where the damage occurred, a brief description of the injuries, the manner in which they were received, and the grounds of claim.

The Wisconsin Supreme Court holds, *Voss vs. Tittel*, 262 N. W. 579, that the statute applies to malpractice actions. It must be complied with even by minors. It is not, properly speaking, a statute of limitation. A notice which failed to state any of the essential requirements of the statute would not be sufficient. The service of a summons, affidavit, and notice of examination of the adverse party is not compliance with the statute.—*Medical Record*, Feb. 5, 1936.

Employment of Optometrists by Corporations.—The New Jersey Court of Chancery, *Jaekle vs. L. Bamberger & Co.*, 181 Att. 181, holds that a corporation whose employees, registered optometrists, examine eyes for fees which are paid to the corporation is not practicing optometry within the meaning of New Jersey P. L. 1914, p. 448, as amended C. S. Supp. 127—90 et seq., requiring a certificate of registration to practice optometry.

Section 1 of the act, the court said, expressly includes as practicing optometry a person who practices "either on his own behalf or as an employee" of another by the employment of "any means for the measurement of the powers of vision or the adaptation of lenses or prisms for the aid thereof," but not one who, through the agency of an employee, measures the powers of vision. Section 22 imposes a penalty on an individual or a company who employs to practice optometry a person not authorized under the statute. But a company which employs for this purpose a person who is authorized to practice optometry is not subject to the penalty.—*Medical Record*, Feb. 5, 1936.

Powers of Board of Health.—The Kentucky Court of Appeals held, *Triplett vs. State Board of Health*, 257 Ky. 848, 79 S. W. (2d.) 226, that after the effective date of the act of 1928 creating the State Board of Chiropractic Examiners the State Board of Health was without authority to revoke a license to practice chiropractic though the license had been granted by it. But the act would not affect the board's right to revoke a license to practice physiotherapy if that should be a drugless or limited school of healing other than chiropractic.—*Medical Record*, Feb. 5, 1936.

HOSPITAL ACTIVITIES

The Passing of the Institutional Nurse.—For several months past hospitals in many sections of the country have found it difficult to secure a needed number of competent registered nurses for floor and supervisory duty. The reduction in the number of training schools, the lengthening of training courses, the decrease in the number of graduates from a peak of 24,000 annually to 18,500 at present, and the reduction in salaries, together with the greatly increased employment of nurses in positions remotely connected with the bedside care of the patient are the contributing factors to the situation that is becoming increasingly difficult for hospitals.

In the past, as well as for the future, hospitals will be the only institutions in which nurses can receive their training. Whether such training is apprentice training, as much of it must be, or academic, as some of it will be, the hospital remains the laboratory and school for the nurse.

The purpose of the hospitals in training nurses is primarily for the care of the sick either in the hospital or the home. Ninety-five per cent of the cost of such training comes from the revenues of the hospitals, a very large portion of which is provided by the patient who pays for his hospital care. With the lengthening program for the education of the nurse, together with the added instructional facilities to educate and prepare the nurse for specialized fields, the hospitals are finding it increasingly difficult to operate their training schools. Many are employing graduate nurses for supervisory services and, because they cannot secure graduates for floor duty and other services, are adding maids to do

the menial part of the work and glorifying them by calling them nurse aides.

In the past one of the main compensations the hospital received from operating its training school was the assurance of having a constant supply of its own graduates to staff its nursing service. In recent years this compensation seems to be denied, for out of the 18,500 nurses who are graduated each year less than one-fourth of that number enter institutional work.

The hospitals have been and still are the largest employers of graduate nurses. In the depression period 60,000 nurses were constantly employed in our institutions. In normal times this number is increased to 70,000.

There is approximately a constant of 160,000 graduate nurses available for employment. Five years ago 5000 of this number were employed as public welfare nurses; today 20,000 are so employed, and, if reports are correct, 50,000 are needed. The question immediately presents itself, "Just how much is the responsibility of the hospital to train the public welfare nurse in her particular specialty?" Twenty thousand more graduate nurses are employed in physicians' offices, 20,000 in industrial plants and commercial houses, 4000 as nurse anesthetists, and probably 6000 more in activities not listed above, a total (including the 60,000 employed by hospitals) of 110,000, leaving but 50,000 nurses to care for the sick in homes throughout the country.

The maid in the hospital who is intelligent and who becomes the nurses' aide will, after a year or two, begin to seek employment in the homes of the sick as a practical nurse, and many will be employed. One hundred thousand practical nurses are being so employed at present. The training of nurse aides will inevitably increase the number of practical nurses, who will compete for employment with the graduate nurse.

Hospitals want nurses trained properly. They want the intelligent student in training and the competent graduate to serve their patients. They will go just as far in developing the program for the education of the nurse as their financial resources will permit. They must have well-trained, qualified graduates for their nursing service. It is very doubtful whether it is the function of the hospital, certainly it is not the responsibility, to educate the nurse for service in highly specialized fields of nursing.—Editorial, *Hospitals*, June, 1936.

How Can the Superintendent of a Hospital Which Does Not Have an Organized Staff Prevent Incapable Doctors from Doing Surgical Operations?—Theoretically no one but a surgeon is capable of passing on the qualifications of another surgeon, no matter how incapable he may be. Legally, the board of trustees has the right to say what doctors shall and what doctors shall not practice in the hospital and to prescribe rules and regulations for the conduct of the medical staff. Any bad results due to the incapability of a surgeon therefore become a moral and, by implication, a legal responsibility of the board of trustees.

The only protection that the board and its members have from the consequences of their failure to regulate the practice of the medical staff is that the hospital is organized not for profit or is conducted in the exercise of a proper governmental function.

For the superintendent, no matter how sound her judgment of the qualifications of the would-be surgeon, to attempt to discriminate would be a very questionable

and probably indefensible procedure. She would at once find the medical profession solidly aligned against her.

The proper, and probably the only recourse, is for the board of trustees to require that the staff be formally organized, that practice in the hospitals be limited to members of the staff who have been regularly appointed to the staff by the board, and that the members of the staff be permitted to do only such types of practice as they are authorized to do by the board. In appointing members of the staff it is customary for the board to depend somewhat on a medical advisory board of the staff for recommendations, but this does not operate to relieve the board of their legal responsibility to control the selection of members of the staff or the limits which may properly be put upon the type of work they are permitted to do.—*Hospitals*, July, 1936.

INDUSTRIAL MEDICINE

Prevention of Dust Disease Hazards in Industry.—Announcement is made of the appointment of an advisory committee on the control of silica dust in rock drilling. This committee is to make a comprehensive study of dust collecting and eradicating devices and the rules and regulations for the prevention of dust disease hazards in industry in New York State. Findings and recommendations of this advisory committee will be presented to the industrial boards of the State Department of Labor which will take action upon them relative to their being incorporated in the industrial code. Among the medical representatives on this committee are Dr. Leroy U. Gardner, director of the Saranac Laboratory for Study of Tuberculosis, Saranac Lake, New York; Dr. A. J. Lanza, assistant medical director of the Metropolitan Life Insurance Company; Dr. Wendell J. Stainsby, assistant professor of medicine at Cornell University Medical School. Other members will be appointed later to represent Rochester Medical School and the United States Public Health Service. The first meeting of the committee was held on July 30.—*N. Y. State J. M.*, Aug. 5, 1936.

PHYSICAL THERAPY

The Work of the Council on Physical Therapy.—In the issue of the *Archives of Physical Therapy, X-Ray and Radium*, April, 1936, Howard A. Carter, secretary of the council, gave a brief report on the work of the Council on Physical Therapy.

The council was established in 1925 but did not begin to function until 1926; it is therefore celebrating its tenth anniversary. Before this time physical therapy was generally misunderstood and looked upon with skepticism by the majority of physicians. Its successful employment in the rehabilitation of wounded soldiers during the World War brought its value forcibly to the attention of the profession. While many critical articles were published concerning physical therapy, the most active popularization of it 10 years ago was accomplished by representatives of manufacturers through direct contact with the physicians. Machine therapy was stressed at the expense of other measures, such as the application of heat, massage, and exercise, and many physicians came to believe that the mere possession of a diathermy apparatus or ultraviolet lamp qualified them to practice physical therapy. The profession did not have the opportunity of learning that true physical therapy consists chiefly of intelligent application of heat, massage, and exercise. The council has published

a handbook of physical therapy which has been revised and is now in its second edition.

The educational activities sponsored by the council fall into 2 divisions—premedical and graduate. It is gratifying to learn that physical therapy is taught in all class-A medical schools. The council believes that physical therapy should not be made a specialty in medicine. Extension instruction in physical therapy for the general practitioner is ardently encouraged by the council. Graduate courses are now available. Emphasis is placed on the instruction sponsored by medical societies. Training courses for physical therapy technicians have been considered by the council and suggested curricula adopted. Since then, the Council on Medical Education and Hospitals has undertaken investigation of technicians' schools. Minimum standards for the acceptance of ultraviolet lamps, diathermy apparatus, *etc.*, have been adopted. A list of definitions and nomenclature has been adopted. The council has considered 356 pieces of apparatus, of which 191 were accepted, 22 rejected, and the remainder are still under consideration.

A yearly meeting of the council is held in the headquarters of the A. M. A., but the major portion of the business of the council is conducted by means of the fortnightly bulletin. In this bulletin the reports of investigators of apparatus are recorded and advertising matter reviewed, all of which requires several hours of study for the members of the council.

The Council on Physical Therapy consists of 12 men: One internist; 2 physiologists; 1 pathologist; 1 physicist; 1 radiologist; 1 dermatologist; 2 orthopedic surgeons; 1 general surgeon; and 2 physical therapists. The present membership of the council is as follows: Drs. W. W. Coblentz, Washington, D. C.; John S. Coulter, Chicago, Ill.; A. U. Desjardins, Rochester, Minn.; F. J. Gaenslen, Milwaukee, Wis.; W. E. Garrey, Nashville, Tenn.; H. C. Karsner, Cleveland, Ohio; F. H. Krusen, Rochester, Minn.; G. M. McKee, New York, N. Y.; H. E. Mock, Chicago, Ill.; R. B. Osgood, Boston, Mass.; R. H. Pemberton, Philadelphia, Pa.; and H. B. Williams, New York, N. Y. Dr. Morris Fishbein and Dr. Olin West, of Chicago, are *ex-officio* members. The members of the council receive no compensation, and the profession owes much to them because of the large amount of work involved to which they give much time and untiring effort.

Fellowship in Physical Therapy at Stanford University.—On Dec. 8, 1935, the Council on Physical Therapy of the American Medical Association approved a residency in physical therapy at the Stanford University Hospital, under the direction of Dr. H. R. Langnecker. This is the first residency in physical therapy to be approved, and thus the council recognizes a new classification for graduate residency training for physicians. It is hoped that this action will stimulate similar steps to establish residencies in other institutions.

Postponement of First International Conference on Fever Therapy.—The First International Conference on Fever Therapy, originally scheduled for the end of September, 1936, has been postponed because of numerous requests to permit more time for the preparation of material. The new dates set for this conference are Mar. 30 to Apr. 2, 1937. The sessions will be held at the College of Physicians and Surgeons, Columbia University, New York City.

The advances in the treatment of gonorrhea, syphilis, and other diseases by pyretotherapy are of great social

significance. Invitations on behalf of the conference will be issued by the State Department of the United States to ministries of public health of other countries. The Medical Departments of the Army, the Navy, and the Public Health Service of the U. S. A. will be represented, as will also the New York City Departments of Health and Hospitals.

A tour has been arranged to take place immediately following the conference so that physicians may observe the technic employed in fever therapy in some of the hospitals in the eastern section of the United States.

Among the institutions to be visited are the Strong Memorial Hospital of the University of Rochester, New York; the Henry Ford Hospital, Detroit; the Mayo Clinic, Rochester, Minn.; the Kettering Institute for Medical Research at the Miami Valley Hospital, Dayton; and Northwestern University Medical School, Chicago.

PUBLIC HEALTH

Our Public Health Activities.—Mr. J. Louis Neff, Executive Secretary, The Medical Society of the County of Nassau, Mincola, N. Y., discusses the rather extensive public health activities of their society.

He said, "Our first venture into the field of public health activity came with the institution of the diphtheria campaign in 1923. We have seen the morbidity rates drop since that time from 158 cases per hundred thousand population in 1923 to 5.7 cases per hundred thousand population in 1934. The most spectacular drop occurred in 1929, when the society began to succeed in its program of eliminating the clinics which were devoting their attention largely to school children and concentrating on the infant in the office of the family physician. The case rate in 1928 was 82 per hundred thousand, and by 1930 it had dropped to 29.

"We do not believe that this gratifying reduction in morbidity is due to an accident. The New York City figures are considerably higher and, with the constant exposure of our children to the children of New York City, if our children were not protected it seems impossible that our figures would be much lower than theirs.

"Another very interesting experiment in public health work will be concluded when the county hospital opens, and has taught us a great deal about the possibilities of medical participation in health activity.

"The Tumor Clinic established Mar. 1, 1933, was based on the idea that such an organization could be operated without interfering with the traditional relationship of patient and physician, and that it was possible to make it of as much value to the medical profession as to the patients treated. For that reason no patient has been admitted to the clinic except upon the written request of a physician. We have always maintained the attitude that the clinic is merely the agent of the family physician, who is kept advised from time to time of the progress of the patient. To further emphasize the fact that this was a doctors' clinic, we have held weekly conferences presided over by a specialist in neoplastic diseases.

"At these conferences, to which are invited all the medical men in the community, we have presented for discussion new cases for diagnosis and treatment, as well as interesting follow-up cases.

"Under this scheme every member of the society will be expected to set aside one or more office periods a week, separate and apart from office hours, at which time he will see at a reduced fee, or for no fee at all, patients who ordinarily would go to clinics or dispen-

saries. These charity public health hours will be advertised to the public health nurses and social workers of the county, and an attempt will be made to secure their co-operation in assisting us in our efforts to prevent unnecessary abuses by those not entitled to charity care. We have in progress at the present time 3 experiments on the basis of this idea, all of them so successful that we are ready to go ahead on a county-wide basis. If our larger experiment proves to be equally successful you may be sure that this group will hear about it. If it proves a failure you may be sure that we shall be equally frank in recording our failure and attempting an honest explanation for it."—*Medical Times*, May, 1936.

History of Psychiatry.—The American Psychiatric Association, Committee on Public Education, submitted a release, May 5, of which the following is an abstract:

Dr. Clarence O. Cheney, retiring president of the American Psychiatric Association, in his presidential address reviews the history of psychiatry for the past 25 years, condemns politics in institutions for mentally ill, and views with concern those who practice "psychoanalysis" without adequate preliminary training or to the exclusion of other psychiatric interests.

He said: "I have been able to imagine no more demoralizing influence to psychiatric hospitals than to have appointments made or persons removed from service because of politics, and my sympathy is with those who have been less fortunate and who have been coerced into making such appointments or removals. We do not wish to seem too harsh but at the same time we say with a strong conviction that if there is no other way for politicians to keep politics out of psychiatric hospitals, then we can only wish for them that they or their own families, visited by mental illness, would be placed in charge of those untrained, uninformed persons who have come to such a position of authority through political means. Then perhaps they would see the light and know that decent care of the mentally ill who have no votes and cannot speak for themselves is one of the prime functions of government, requiring experience and training no less than decency in those responsible for that care and that whoever has no realization of such principles is unfit to represent even the lowliest in the community."

In a review of the history of psychoanalysis, the essayist said that those "who have carried on through these years in psychiatry have appreciated the contributions of Freud to psychopathology and the understanding of symptoms and reactions. It has been a pleasure to work with those who seemed to have been influenced in their balance by their previous sound psychiatric training, but we have viewed with some concern those who without such basic training have seized upon psychoanalysis as something that apparently for personal reasons has appealed strongly to them to the exclusion of other psychiatric interests, sometimes apparently driven by the desire to aggrandize their own personalities by being different from the psychiatrist and at times seeming to out-Herod Herod."

In Dr. Cheney's opinion, there is an ever-increasing need of well-trained psychiatrists for hospital, clinic, and community positions. He thinks that this need can be filled only by proper and desirable medical education in psychiatry, and increased opportunities for good training in mental hospitals.

In the future there will be a closer working relationship between the general hospital and the psychiatrist and, "as the psychiatric viewpoint and training pervades medicine and the general hospitals, there will be an increased development of psychiatric care in the general

hospitals and, therefore, there will tend to be a decentralization from state hospital care to local general hospitals. This may be one solution of the increased burden of state budgets. Furthermore, as physicians become better versed in the treatment of psychiatric problems in general practice, there may be a decreasing tendency to send psychiatric patients immediately to state hospitals and more of an inclination to care for them in their homes, under private or clinic medical supervision, public health nursing, and social service care."

The psychiatry of the future will be more and more an extra-institutional activity. The membership of the association was made up entirely of superintendents of hospitals 25 years ago, but during the past few years there has been an increasing membership made up of those who are practicing outside of institutions, which is an evidence that psychiatry has become and is becoming more and more concerned with extra-institutional treatment.

The commonly accepted belief, held for many years, that the stress and strain of modern life was a cause of mental illness, has not been proven by facts. The gradual increase in population of mental hospitals is due to an increasing familiarity with mental hospital care and its possibilities, changes in economic conditions, and increase of urban over rural populations, but such an increased admission rate does not mean a corresponding increase in the actual incidence of mental disorder.

Ban on Desomorphine Urged.—*The New York Times*, May 21, states that efforts to find a nonhabit-forming substitute for morphine have resulted in the drug desomorphine which has "habit-forming properties even in excess of morphine or heroin," Stuart J. Fuller of the United States State Department told the League advisory opium committee at Geneva, May 21, 1936.

He explained that some thought desomorphine would be a satisfactory substitute to introduce into medical practice until American clinical experiments proved this a wolf disguised as a lamb.

They showed further, he said, that solubility makes it exceptionally adapted to illicit traffic while its influence on the respiratory centers makes it unsatisfactory for surgical use. The National Research Council, therefore, strongly urged prohibition of its manufacture, sale, or use in the United States and its importation already has been forbidden.

Mr. Fuller suggested the committee recommend similar action to all governments and also prohibition of its manufacture. The committee agreed to take the first step in this direction by arranging for American data to be submitted to the League's health committee and the office of International D'Hygiene Publique. They are empowered by the 1925 convention to advise the League Council of new drugs coming under its provisions.

The *New York Times* further states that a report of the United States Government on babies born to narcotic addicts aroused lively discussion in the League of Nations opium advisory committee on May 22, 1936.

Delegates of Great Britain, Belgium, Switzerland, Canada, and China participated in the discussion, in which new cases were cited of infants who at birth exhibited withdrawal symptoms that could be relieved only by the administration of a narcotic. The American report attributes this to the absorption of a narcotic by the mother during the prenatal period.

Committee members expressed the hope of obtaining further accounts of these cases. The chairman, Dr. Cholzko of Poland, stressed the importance of this development.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

PREPARED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Published through the co-operation of the Pennsylvania Tuberculosis Society and The Medical Society of the State of Pennsylvania

WHEN should a lung compressed by artificial pneumothorax be allowed to expand? Dr. Dundee of Cornell University Medical College discusses the factors to be considered in making the decision in an article published in *The British Journal of Tuberculosis*. Quotations and abstracts of the article follow.

WHEN SHOULD REFILLS BE STOPPED?

Relapses after the completion of pneumothorax treatment are much more dangerous than was the original lesion before treatment commenced because only a very small percentage of cases can get effective pneumothorax in a succeeding attempt, due to the new pleural adhesions formed after the lung re-expands.

The longer the treatment has lasted the fewer are the relapses after re-expansion. Dufault and Laroche found the cure was maintained in 46.2 per cent of cases successfully collapsed for less than 3 years, whereas in patients successfully collapsed for more than 3 years the cure was maintained in 84.6 per cent.

In carrying out pneumothorax treatment, the author attempts to follow a definite routine. After the degree of collapse has been obtained that is required to obliterate all excavation and that is considered necessary for a satisfactory splinting of the whole lesion, and as soon as symptoms of activity have disappeared, a very slow and gradual re-expansion of the lung is allowed. If one is dealing with a case having infiltration and excavation in one upper third, and if an 80 per cent collapse must be made of this upper third before it is satisfactory, it may be found necessary to maintain this degree of collapse for a period of one year. At the end of the second year a gradual re-expansion may find a collapse of 50 per cent. It is during the latter part of the third year and during the fourth year, when re-expansion of the same upper third now finds only a collapse of 10 to 20 per cent before refill, that special care is necessary. It is while the treatment is at this stage that several factors have to be weighed.

Extent of Original Lesion

The extent and nature of the original lesion is probably the most important factor in making

the decision as to when we should stop treatment. The smaller the original lesion, the more confidence we can have regarding expansion. Where there has been a large area of excavation originally, it is usually found that a considerable period has been taken up in obtaining a complete collapse, and a further long period has followed before the sputum has remained negative for tubercle bacilli. A period of 3 years with negative sputum has now probably brought the treatment into the fifth year. Cases like this may have had so much original lung destruction that a phrenicectomy or one or more stages of thoracoplasty may be necessary to complete the obliteration of the pleural cavity. Patients in this group who have continued to have intermittent positive sputa ought to have their treatment continued indefinitely. Some of these cases may have been negative 3 years, but still show little, if any, signs of re-expansion. If these latter cases refuse the surgery necessary to close the pleural space, it might be a supererogation to continue refills except at very long intervals—that is, if the mediastinum is fixed. However, if the mediastinum is not fixed, a shorter refill interval should be necessary to keep it in position.

Roentgen Rays During Re-expansion

The most important change to look for roentgenographically in lung re-expansion is a reappearance of excavation, for such an occurrence warrants an immediate reversal of treatment, with closure of the cavity. Thickening of the pleura often obscures a considerable amount of lung detail. Usually, a radiograph of a 90 per cent re-expanded lung in the fourth year of treatment reveals numerous small calcified deposits with several striations and bands where originally the lesion was located. Lesions which

are shown by a roentgen-ray serial to have undergone little resolution, to contain little or no calcium, and to have made little or no attempt at stellar formation or fibrosis, and yet have no perifocal exudate, undoubtedly contain tubercle bacilli. If these lesions have not healed under pneumothorax, they will not do so after re-expansion, and they may go on to central caseation, followed by liquefaction and excavation, if collapse is not maintained.

Fluid as a Complication

When the development of a serous effusion occurs, a determined effort must be made immediately to prevent it from interfering with the desired degree of collapse. By performing frequent aspirations and providing the necessary air replacements, this untoward result may be averted.

The younger the patient, the more inclined is the author to prolong pneumothorax treatment. He has not yet resorted to re-expansion in the case of a patient in his teens, and considers that it is rarely justified. Between ages 15 and 30 relapses following re-expansion are more common than later.

Occupation—Economic Status

Pneumothorax patients whose occupations require considerable physical exertion should change to easier jobs. The unfortunate number who have to return to hard manual labor ought to have pneumothorax treatment continued considerably longer than other patients, and a larger proportion of this group than of any other should have pneumothorax continued indefinitely.

Poverty with its by-products of insanitary surroundings, poor food, and lack of fresh air is unfavorable to the rapid healing of tuberculous lesions. Patients struggling with difficult economic situations ought to have the pneumothorax continued longer than the average.

Prevention of Spread

The more contacts there are, the more careful we have to be about terminating the treatment. A mother in the lower class, with a large family of children, ought to have her pneumothorax continued longer than otherwise, because of the havoc that may be caused if relapse occurs.

Pregnancy

Where there has been a great deal of original lung destruction, pregnancy is not advised.

Where the involvement has been somewhat less, and the economic and home conditions are satisfactory, pregnancy may be considered safe, provided pneumothorax is continued for at least one year after full term, provided pneumothorax has been satisfactory, and sputum has been negative for 3 years. In cases where the original lesion was moderate in extent, the patient is advised to choose between having the baby during the fourth year of pneumothorax treatment, following a satisfactory collapse and negative sputum, and continuing the treatment for another year, or allowing re-expansion during the fourth year and then waiting for another 3 years before becoming pregnant.

A Final Period of Trial

When it has been decided that the time for stopping the treatment has arrived, the following procedure is adhered to: The partially re-expanded lung is allowed to re-expand further, so that before refill there is a collapse of only about 10 per cent at the deepest part of the pneumothorax. The collapse is maintained at this level for from 4 to 6 months. It may be found necessary during these months to shorten the intervals between and to give smaller amounts of air, in order to insure a collapse of not more than 20 per cent after refill. Thus, the site of the original lesion is in a largely re-expanded state all through the refill cycle. During this period the patient is instructed to give the lung a real trial by rehearsing any extra work or exercise that is contemplated for the following 5 years. The patient ought at least to be leading what is considered, for him, a normal life. If there has been no change roentgenographically following this period, and if the sputum has remained negative for tubercle bacilli, the refills are stopped and the pleura space is allowed to obliterate.

Final Sputum Test

Examination of tubercle bacilli by the direct smear method and even by the concentrated sputum examination have been found wanting as a means of determining whether or not the pneumothorax patient is bacillus-free. The guinea-pig inoculation test is far superior although it is an expensive procedure. The author believes that the community would be repaid many times if it equipped the laboratory of each pneumothorax clinic with the facilities for this test.

When Should Refills Be Stopped? by John Chichester Dundee, M.D., B.C.H., *British Jour. of Tuberc.*, Apr., 1936.



THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

OFFICIAL TRANSACTIONS

Eighty-sixth Annual Session

CALL TO THE 1936 SESSION

The first meeting of the House of Delegates of The Medical Society of the State of Pennsylvania will be called to order in the Cardinal Room, Hotel William Penn, Pittsburgh, on Monday, Oct. 5, 1936, at 3 p. m.

Included among officers and others to be elected at this annual session will be:

1. A trustee and councilor for the second district to serve for 5 years, to succeed Dr. Edgar S. Buyers, of Norristown; and a trustee and councilor for the eighth district to serve for 5 years, to succeed Dr. George A. Reed, of Erie; also a trustee and councilor for the eleventh district to serve for 5 years, to succeed Dr. Laurrie D. Sargent, of Washington. They are eligible for re-election, none having "served 2 full consecutive terms."

2. Five delegates to the A. M. A. to serve for 1937-1938; also 1 for 1937 to complete the unexpired term of Dr. William H. Mayer, deceased; 11 alternates-designate to serve for 1937-1938; and 11 alternates-at-large to serve for 1937.

In addition to the transaction of the usual business the House of Delegates will consider the following proposed amendments:

1. Amendment to Section 4 of Chapter IX of the by-laws, proposed by the late Dr. William H. Mayer, of Pittsburgh:

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relation to each other and to the public, *and to this end each member shall conduct himself so as not to defeat or tend to defeat the purposes for which the society is organized and is operating.*

2. Amendment to Section 1 of Chapter III of the by-laws, proposed by the Board of Trustees, involving the constituency of 2 councilor districts, as set forth in the following italicized words:

COUNCILOR DISTRICTS. The State of Pennsylvania shall be divided into 11 councilor districts, and each district shall be entitled to 1 councilor. The councilor districts shall be composed of the following counties:

Fifth Councilor District—Adams, Cumberland, Dauphin, Franklin, Fulton, Lancaster, Lebanon, and York counties. *Add Perry.*

Sixth Councilor District—Blair, Center, Clearfield, Huntingdon, Juniata, Mifflin, and Perry counties. *Detach Perry.*

The following resolutions from the Chester County Medical Society, adopted June 16, 1936, have also been received:

1. WHEREAS, There has been contention and a serious division of opinion as to the manner in which health service is and has been given to students in state-owned and state-aided institutions; therefore be it

Resolved, That the plan set up by our county society, and now in operation in the West Chester State Teachers' College, be made the policy that shall be practiced in all of our state-owned and state-aided educational institutions. This plan has the endorsement of our State Society.

2. WHEREAS, There is very great and serious controversy over the matter of all kinds and classes of clinics that have been set up in various places by hospitals, industrialists, and others throughout the state; and

WHEREAS, These clinics have conflicted with the patient-physician relationship; therefore be it

Resolved, That no patient be admitted to any clinic, state, private, or otherwise, without first receiving a card from a physician stating that he is entitled, because of his financial condition, to such clinic care.

3. WHEREAS, Many insurance companies operating throughout the state of Pennsylvania have selected certain physicians in each community to care for the medical treatment of compensation cases with which said companies may be concerned, and furthermore have instructed employers to send any injured employees to said specified physicians; and

WHEREAS, Certain physicians who are members of The Medical Society of the State of Pennsylvania are paid salaries in return for medical services rendered to injured employees by companies liable for said injuries; and

WHEREAS, The Medical Society of the State of Pennsylvania has been committed to the principle that any sick or injured has the right to select his own physician; therefore be it

Resolved, That the House of Delegates of The Medical Society of the State of Pennsylvania, now assembled, definitely and specifically define "contract practice" within the limits of "reasonable competition," and definitely state whether physicians employed by insurance companies in the capacity as outlined above are guilty of violation of the code of ethics of The Medical Society of the State of Pennsylvania and the American Medical Association.

The following recommendation of the Medical Economics Committee of the Dauphin County Medical Society, adopted by that society on Apr. 7, 1936, has been received:

We recommend that The Medical Society of the State of Pennsylvania consider seriously giving its support to the establishment of a uniform schedule of fees for compensation cases.

COMMITTEES OF THE 1936 HOUSE OF DELEGATES

COMMITTEE ON CREDENTIALS

J. Newton Hunsberger, Norristown, *Chairman*.
Miriam Warner, Philadelphia.
John Foster, New Castle.

REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND STANDING COMMITTEES

C. Irvin Stiteler, Chester, *Chairman*.
Charles H. Henninger, Pittsburgh.
Charles C. Ross, Clarion.

REFERENCE COMMITTEE ON SCIENTIFIC BUSINESS

Ford M. Summerville, Oil City, *Chairman*.
Edward W. Beach, Philadelphia.
Edwin A. Nicodemus, Harrisburg.

REFERENCE COMMITTEE ON NEW BUSINESS

Frederick M. Jacob, Pittsburgh, *Chairman*.
William T. Davis, Scranton.
Charles F. Nassau, Philadelphia.

COMMITTEE ON PLACE OF MEETING

T. Lamar Williams, Mt. Carmel, *Chairman*.
Lewis T. Buckman, Wilkes-Barre.
William F. Krick, Reading.

MEMBERS OF THE 1936 HOUSE OF DELEGATES*

The president of each component county society, or in his absence the secretary, is a member of the House of Delegates.

ADAMS COUNTY

Roy W. Gifford, 111 Baltimore St., Gettysburg, *President*.
Bruce N. Wolff, 103 W. Middle St., Gettysburg, *Secretary*.
Bruce N. Wolff, 103 W. Middle St., Gettysburg.
Byron C. Jones, Bendersville.
Raymond F. Oyler, Biglerville.

ALLEGHENY COUNTY (PITTSBURGH)

Sidney A. Chalfant, 7048 Jenkins Arcade, *President*.
George R. Harris, Jenkins Arcade, *Secretary*.
Richard J. Behan, 6079 Jenkins Arcade.
William Anderson, 1338 Middle St., Sharpsburg.
Frank R. Braden, 1616 State St., Coraopolis.
Henry J. Benz, 809 Grandview Ave.
George S. Bubbs, R. 2, Coraopolis.
Edwin P. Buchanan, Mercy Hospital.
Frank C. Blessing, Jenkins Arcade.
William J. Connelly, 111 E. Main St., Carnegie.
Thomas L. Cottom, Woodville.
John W. Frey, 3701 Forbes St.
Kenneth M. Day, 121 University Place.
Guy D. Engle, 221 Penn Ave., Wilkensburg.
Zoe Allison Johnston, Jenkins Bldg.
James K. Everhart, 3710 Fifth Ave.
Ralph D. Goodwin, Box 564, East Pittsburgh.
Gomer S. Llewellyn, Mayview.
James C. Hawkins, 848 Fifth Ave., Coraopolis.
C. Leonard Hobaugh, Renton.
Curtis C. Mechling, 121 University Place.
William W. Hodgson, Box 382, Glassport.
Clarence H. Ingram, East End Trust Bldg.
Grover C. Weil, Schenley Apartments.
John M. Johnston, 4715 Fifth Ave.
J. Clarence Kelly, 219 Sixth St., McKeesport.
Chauncey L. Palmer, 303 Diamond Bank Bldg.
Frederick C. Koenig, 426 North Ave., Millvale.
Joseph A. Lafferty, 604 Chartiers Ave., McKees Rocks.
John W. Shirer, Jenkins Arcade.
Herbert M. Long, 6200 Penn Ave.
James A. Martin, 107 Overlook Drive, Mt. Lebanon.
Charles H. Henninger, Jenkins Arcade.
Ray P. Moyer, 1021 Portland St.
John Priestes, Jenkins Bldg.
Frederick M. Jacob, Jenkins Arcade.
John C. Reed, 39 N. Duquesne Ave., Duquesne.
Charles K. Shanor, 333 Beaver St., Sewickley.
John F. McCullough, Box 49, R. D. 2, Sharpsburg.
James W. Speelman, 500 Brookline Blvd.
John W. Stinson, Jenkins Arcade.
Herbert S. Arthur, 637 Walnut St., McKeesport.
Lloyd L. Thompson, 305 E. Eighth Ave., Homestead.
Hunter H. Turner, Clark Building.

ARMSTRONG COUNTY

Ivan N. Boyer, Kittanning, *President*.
J. B. F. Wyant, Kittanning, *Secretary*.
John A. Jamack, Yatesboro.
Howard C. Heilman, Elderton.
Laird F. Kroh, Boarts Bldg., Kittanning.

BEAVER COUNTY

Thomas W. McCreary, Monaca, *President*.
Boyd B. Snodgrass, Rochester, *Secretary*.
Fred B. Wilson, Beaver.
John D. Stevenson, 377 Third St., Beaver.
Philip F. Martsoff, New Brighton.

BEDFORD COUNTY

Walter F. Enfield, Bedford, *President*.
Samuel W. Miller, Jr., Alum Bank, *Secretary*.

BERKS COUNTY (READING)

Ralph L. Reber, 147 N. Fourth St., *President*.
Clair G. Spangler, Reading Hospital, *Secretary*.
Frank P. Lytle, Birdsboro.
Solon L. Rhode, 238 N. Sixth St.
Henry D. Kunkel, 810 N. Third St.
William F. Krick, 340 N. Fifth St.
Leo R. Gorman, 522 N. Tenth St.
Richard G. Argens, Boyertown.

* The offset names are the alternates, and where street address only is given, the name of the city follows the name of the county.

BLAIR COUNTY (ALTOONA)

Harold F. Moffitt, 1115 Twelfth Ave., *President*.
Edward F. Williams, 1217 Thirteenth Ave., *Secretary*.
Joseph D. Findley, 1123 Thirteenth Ave.
Lewis P. Glover, 1200 Fourteenth Ave.
Carey C. Bradin, Tyrone.
Frank Keagy, 401 Fourth Ave.

BRADFORD COUNTY

Carl M. Bradford, Canton, *President*.
Stanley D. Conklin, Sayre, *Secretary*.
Alpheus E. Dann, Canton.
Howard C. Down, Towanda.
Rodney L. Stedje, Sayre.

BUCKS COUNTY

Harvey D. Webb, 930 Radcliffe St., Bristol, *President*.
J. Fred Wagner, 435 Radcliffe St., Bristol, *Secretary*.
Clairmont A. Kressley, Sellersville.
Linford B. Roberts, Wycombe.
James P. Lawler, Bristol.

BUTLER COUNTY

Ephraim E. Campbell, Butler Savings and Trust Bldg.,
Butler, *President*.
Ralph M. Christie, Conoquenessing, *Secretary*.
J. Clinton Atwell, 156 N. Main St., Butler.
W. Le Roy Eisler, 330 N. Main St., Butler.
Dean B. Shannon, Butler Co. Bank Bldg., Butler.

CAMBRIA COUNTY (JOHNSTOWN)

W. Frederick Mayer, 228 Market St., *President*.
Harold M. Griffith, Johnstown Trust Bldg., *Secretary*.
Edward Pardoe, 531 Locust St.
Leo W. Hornick, 415 Locust St.
Robert J. Sagerson, 340 Lincoln St.
John W. Barr, U. S. Bank Bldg.
Walter C. Raymond, 528 Franklin St.
Horace B. Anderson, U. S. Bank Bldg.

CARBON COUNTY

Ira E. Freyman, Weatherly, *President*.
John L. Bond, Lehighton, *Secretary*.
Clinton J. Kistler, Lehighton.
Jacob A. Trexler, Lehighton.
Stanley F. Druckenmiller, Lansford.

CENTER COUNTY

Paul M. Corman, Bellefonte, *President*.
Richard H. Hoffman, Bellefonte, *Secretary*.
Peter H. Dale, State College.
John V. Foster, State College.
Joseph A. Parrish, Bellefonte.

CHESTER COUNTY

Charles J. Brower, Spring City, *President*.
Joseph Scattergood, Sr., West Chester, *Secretary*.
John A. Farrell, West Chester.
Irving M. Waggoner, West Chester.
Henry S. Barker, West Chester.
Joseph Scattergood, Jr., West Chester.
Robert C. Hughes, Paoli.
Horace F. Darlington, West Chester.

CLARION COUNTY

Theodore R. Koenig, Knox, *President*.
Charles C. Ross, Clarion, *Secretary*.
Charles C. Ross, Clarion.
Ray B. Erickson, Sligo.
Charles V. Hepler, New Bethlehem.

CLEARFIELD COUNTY (CLEARFIELD)

James E. Ginter, Deposit Bank Bldg., DuBois, *President*.
J. Paul Frantz, 213 N. Second St., *Secretary*.

Ward O. Wilson, 210 N. Second St.
Lester Luxenberg, 18 N. Second St., Philipsburg.
George W. Gann, 49 E. Long Ave., DuBois.

CLINTON COUNTY

Allen B. Painter, Mill Hall, *President*.
David W. Thomas, Lock Haven, *Secretary*.
Francis P. Dwyer, Renovo.
William J. Shoemaker, Lock Haven.
Charles L. Fulmer, Renovo.

COLUMBIA COUNTY

J. Stacey John, Bloomsburg, *President*.
Charles B. Yost, Bloomsburg, *Secretary*.
Heister V. Hower, Berwick.
William G. Berryhill, Orangeville.
Edgar A. Marquand, Berwick.

CRAWFORD COUNTY

V. G. Hawkey, Meadville, *President*.
Luther J. King, Meadville, *Secretary*.
Herman H. Walker, Mechanicsville.
Edgar J. Werle, Meadville.

CUMBERLAND COUNTY

Creedin S. Fickel, Carlisle, *President*.
Richard R. Spahr, Mechanicsburg, *Secretary*.
Newton W. Hershner, Mechanicsburg.
Calvin R. Rickenbaugh, Carlisle.

DAUPHIN COUNTY (HARRISBURG)

Park A. Deckard, 814 N. Second St., *President*.
John A. Daugherty, 226 State St., *Secretary*.
John F. Culp, 224 Pine St.
Harvey F. Smith, 130 State St.
Ralph E. Pilgram, 3400 Derry St.
Edwin A. Nicodemus, 1437 Derry St.
Edgar S. Everhart, Lemoyne.
John R. Plank, 231 N. Front St., Steelton.
George L. Lavery, 226 State St.
Hewett C. Myers, 198 S. Second St., Steelton.
Howard E. Milliken, 2012 N. Third St.

DELAWARE COUNTY

John J. Sweeney, 7701 West Chester Pike, Highland
Park, *President*.
John B. Klopp, 1023 Edgemont Ave., Chester, *Secretary*.
C. Irvin Stiteler, Fifth and Welsh Sts.
Mary McD. Shick, Elwyn Training School, Elwyn.
Ralph E. Bell, 2nd and Jackson Sts., Media.
Albin R. Rozploch, 318 Highland Ave.
George L. Armitage, 400 E. Thirteenth St.
Herman Gold, 314 E. Ninth St.

ELK COUNTY

Joseph E. Madara, St. Marys, *President*.
Samuel T. McCabe, Johnsonburg, *Secretary*.
Samuel G. Logan, Ridgway.
John C. McAllister, Ridgway.

ERIE COUNTY (ERIE)

Clarence H. LeFever, 805 W. 26th St., *President*.
Norbert D. Gannon, 354 W. Ninth St., *Secretary*.
Elmer Hess, 501 Commerce Bldg.
James D. Stark, 800 E. Sixth St.
J. Harrison Tate, 3123 Peach St.
Elmer G. Shelley, 56 W. Main St., North East.
Clayton W. Fortune, 716 Sassafras St.
Kenneth S. Treiber, 2124 Sassafras St.

FAYETTE COUNTY (UNIONTOWN)

Lewis N. Reichard, Brownsville, *President*.
C. Franklin Smith, 47 S. Gallatin Ave., *Secretary*.
Harry J. Bell, Dawson.
E. Harry Rebok, Keisterville.
Herbert Lund, Uniontown.

John D. Sturgeon, Jr., 22 N. Gallatin Ave.
L. Dale Johnson, S. N. Bank Bldg., Connellsville.
Ralph P. Beatty, Fayette Title & Trust Bldg.

FRANKLIN COUNTY

Samuel G. Coons, Dry Run, *President*.
Ambrose W. Thrush, 41 Lincoln Way W., Chambersburg, *Secretary*.
Frank N. Emmert, 5 N. Second St., Chambersburg.
Frank J. Corbett, Fayetteville.
Benjamin H. Long, Chambersburg.

GREENE COUNTY

Donald R. Jacobs, Waynesburg, *President*.
Frank D. Hazlett, Waynesburg, *Secretary*.
Frank D. Hazlett, Waynesburg.
Vinton P. King, Waynesburg.
William B. Clendenning, Waynesburg.

HUNTINGDON COUNTY (HUNTINGDON)

Walter Orthner, 813 Mifflin St., *President*.
John M. Keichline, Jr., 302 Eighth St., *Secretary*.
Cloy G. Brumbaugh, 805 Mifflin St.
John M. Keichline, Jr., 302 Eighth St.
William T. Hunt, 514 Penn St.

INDIANA COUNTY

Emerson M. Bushnell, Black Lick, *President*.
Alexander H. Stewart, Indiana, *Secretary*.
James G. Gemmell, Iselin.
Milton M. Auslander, Ernest.
Wallace E. Hopkins, Marion Center.

JEFFERSON COUNTY

Arthur R. McNeil, Brookville, *President*.
William A. Hill, Reynoldsville, *Secretary*.
Frank A. Lorenzo, Punxsutawney.
William L. Brohm, Timblin.
John A. Tushim, Punxsutawney.

JUNIATA COUNTY

William H. Banks, Mifflintown, *President*.
Brady F. Long, Mifflin, *Secretary*.
William H. Banks, Mifflintown.
Brady F. Long, Mifflin.
Benjamin H. Ritter, McCoysville.

LACKAWANNA COUNTY (SCRANTON)

Jacob J. Lonsdorf, Jr., 440 Birch St., *President*.
Charles E. Thomson, Jr., 345 Wyoming Ave., *Secretary*.
Leonard G. Redding, Scranton Life Bldg.
Charles Falkowsky, Jr., Medical Arts Bldg.
Stanley W. Boland, Archbald.
James D. Lewis, 204 W. Market St.
John E. Manley, 1414 Pittston Ave.
Arthur E. Davis, Dime Bank Bldg.
William T. Davis, Medical Arts Bldg.
Martin T. O'Malley, 206 Connell Bldg.
Albert J. Winebrake, Medical Arts Bldg.

LANCASTER COUNTY (LANCASTER)

John Herr, Landisville, *President*.
Charles P. Stahr, 139 E. Walnut St., *Secretary*.
James Z. Appel, 305 N. Duke St.
Jacob E. Hostetter, Gap, R. D. 1.
Dale E. Cary, 204 E. King St.
Samuel M. Hauck, 314 N. Duke St.
John H. Esbenshade, 445 N. Duke St.
Henry B. Davis, Lancaster General Hospital.

LAWRENCE COUNTY (NEW CASTLE)

John O. Woods, 17 E. North St., *President*.
William A. Womer, 134 N. Mill St., *Secretary*.
John Foster, 36 Mercer St.
Samuel W. Perry, 227 North St.
James L. Popp, 112 N. Mercer St.

LEBANON COUNTY

Richard C. Wenner, Lebanon, *President*.
J. DeWitt Kerr, Lebanon, *Secretary*.
J. DeWitt Kerr, Lebanon.
W. Horace Means, 4 S. Fourth St., Lebanon.

LEHIGH COUNTY (ALLENTOWN)

Charles R. Fox, 1919 Washington Ave., Northampton, *President*.
J. Treichler Butz, 626 Linden St., *Secretary*.
Thomas L. Smyth, 111 N. Eighth St.
John H. Hennemuth, Emaus.
Henry E. Guth, Orefield.
Robert L. Schaeffer, 32 N. Eighth St.
Ralph H. Henry, 102 N. Tenth St.
Maurice W. Miller, 120 N. Eighth St.

LUZERNE COUNTY (WILKES-BARRE)

Vivian P. Edwards, 27 Hillside Ave., Edwardsville (Kingston P. O.), *President*.
Irving O. Thomas, 425 N. Washington St., *Secretary*.
Lewis T. Buckman, 83 S. Franklin St.
Manfred H. Kudlich, 65 N. Laurel St., Hazleton.
John R. Dyson, 22 N. Church St., Hazleton.
Albert R. Feinberg, 219 S. Franklin St.
Michael J. Murphy, 8 Curtis St., Pittston.
Thomas F. Flemming, 1240 Wyoming Ave., Exeter.
Thomas R. Gagion, 23 Broad St., Pittston.
H. Gordon Guyler, 37 Mallory Pl.
Francis T. O'Donnell, 345 N. Main St.
Charles L. Shafer, 219 College Ave., Kingston.
A. Burton Smith, 394 Wyoming Ave., Wyoming.
Almon C. Hazlett, 418 Wyoming Ave., Wyoming.

LYCOMING COUNTY (WILLIAMSPORT)

Galen D. Castlebury, 217 E. Third St., *President*.
Walter S. Brenholtz, 151 E. Third St., *Secretary*.
Wilbur E. Turner, Montgomery.
Harold L. Tonkin, 221 E. Third St.
Randall B. Hayes, 1225 Allegheny St., Jersey Shore.
Irvin T. Gilmore, Picture Rocks.
Frederic C. Lechner, Montoursville.
Stuart B. Gibson, 416 Pine St.

McKEAN COUNTY

Ralph E. Hockenberry, Smethport, *President*.
Robert D. Donaldson, Kane, *Secretary*.
Francis DeCaria, Bradford.
Guy S. Vogan, Kane.
Carl L. Danielson, Kane.

MERCER COUNTY

Carl H. Bailey, Sharon, *President*.
Jonathan B. Perrine, Grove City, *Secretary*.
William W. Richardson, Mercer.
Patrick E. Biggins, Sharpsville.
John M. Jamison, Grove City.

MIFFLIN COUNTY

Charles J. Stambaugh, Reedsville, *President*.
James A. C. Clarkson, Lewistown, *Secretary*.
Henry E. Miller, Belleville.
Joseph S. Brown, Lewistown.
Alfred E. James, Beaver Springs.

MONROE COUNTY

Claus G. Jordan, Stroudsburg, *President*.
Harold B. Flagler, Stroudsburg, *Secretary*.
Walter L. Angle, East Stroudsburg.
Marshall R. Metzgar, Stroudsburg.
David H. Keller, Stroudsburg.

MONTGOMERY COUNTY

Walter J. Stein, Ardmore, *President*.
Edgar S. Buyers, 1533 DeKalb St., Norristown, *Secretary*.

Joseph E. Beideman, Norristown.
 Albert R. Garner, Norristown.
 Walter E. Fine, Ambler.
 J. Newton Hunsberger, Norristown.
 Elwood S. Myers, 1955 W. Main St., Jeffersonville.
 George L. Hoffman, Norristown.
 Elwood T. Quinn, Jenkintown.
 J. Elmer Gotwals, Phoenixville.
 J. Quincy Thomas, Conshohocken.

MONTOUR COUNTY (DANVILLE)

Francis W. Davison, Geisinger Hospital, *President*.
 Sydney J. Hawley, Geisinger Hospital, *Secretary*.
 Carl E. Ervin, Geisinger Hospital.
 Benjamin Schneider, 226 Mill St.
 Roy E. Nicodemus, 128 Mill St.

NORTHAMPTON COUNTY

William J. Happel, Nazareth, *President*.
 Frederick O. Zillesen, 256 Bushkill St., Easton, *Secretary*.
 Frank J. Conahan, 114 W. Fourth St., Bethlehem.
 Harvey O. Rohrbach, 540 N. New St., Bethlehem.
 Delbert K. Santee, 12 W. Fourth St., Bethlehem.
 Arno R. Zack, 216 E. Broad St., Bethlehem.
 W. Gilbert Tillman, 1803 Washington St., Easton.
 James A. Betts, 1440 Washington St., Easton.

NORTHUMBERLAND COUNTY

Henry F. Ulrich, Box 143, Middleburg, *President*.
 Mark K. Gass, 910 Market St., Sunbury, *Secretary*.
 George W. Reese, Shamokin.
 Henry T. Simmonds, 48 N. Market St., Shamokin.
 Russell W. Johnston, Selinsgrove.

PERRY COUNTY

Morris J. Gerber, Duncannon, *President*.
 J. Edward Book, Newport, *Secretary*.
 J. Edward Book, Newport.
 Lenus A. Carl, Newport.
 Robert R. Stoner, New Bloomfield.

PHILADELPHIA COUNTY (PHILADELPHIA)

Francis Ashley Faught, 255 S. 17th St., *President*.
 Henry G. Munson, 21st & Spruce Sts., *Secretary*.
 Seth A. Brumm, Medical Arts Bldg.
 John H. Remig, 4734 Osage Ave.
 Joseph A. Daly, 115 E. Lehigh Ave.
 Thomas R. Currie, 512 W. Lehigh Ave.
 Paul B. Cassidy, 2037 Pine St.
 Charles A. Heiken, 5300 Cedar Ave.
 John T. Farrell, Jr., 1301 Spruce St.
 Joseph W. Post, 1930 Chestnut St.
 Stephen E. Tracy, 1930 Chestnut St.
 Ruth Hartley Weaver, 1433 Spruce St.
 William T. Johnson, 2008 Walnut St.
 Wilmer Krusen, 17 Bailey Road, Lansdowne.
 Joseph T. Cadden, 5259 Whitaker St.
 John W. Klopp, 618 W. Lehigh Ave.
 Archibald L. McKinley, 3702 N. Broad St.
 David J. Boon, 1532 N. Fifteenth St.
 I. P. Strittmatter, 999 N. Sixth St.
 Leonard C. Hamblock, 2230 S. Broad St.
 Basil R. Beltran, 2109 Locust St.
 William N. Bradley, 1725 Pine St.
 Elsie Rau Treichler-Reedy, 3101 Midvale Ave.
 Paul J. Pontius, 1831 Chestnut St.
 George F. Enoch, 8037 Frankford Ave.
 James H. Mendel, Professional Bldg., Gtn.
 Frederick S. Baldi, 412 W. School House Lane, Gtn.
 Samuel A. Loewenberg, 1905 Spruce St.
 Joseph W. Post, 1930 Chestnut St.
 Edward W. Beach, 4400 Walnut St.
 Linnaeus E. Marter, 1631 Race St.
 Louis H. Cleri, 1530 Locust St.
 Herbert T. Kelly, 1900 Spruce St.
 Donald Macfarlan, 1805 Chestnut St.
 Andrew Callahan, Jr., 1829 S. Broad St.

Myer Solis-Cohen, 2110 Spruce St.
 Alex. H. Davisson, Rush Hosp., 33d & Lancaster Ave.
 Harry W. Goos, 2033 E. Dauphin St.
 Walter S. Cornell, 21st St. & Parkway.
 James A. Babbitt, 1912 Spruce St.
 Walter L. Cariss, 2043 Walnut St.
 Francis F. Borzell, 4940 Penn St., Fkfd.
 Ralph Getelman, 2011 Chestnut St.
 George E. Johnson, 5341 Chester Ave.
 George P. Müller, 1930 Spruce St.
 Eldridge L. Eliason, 326 S. 19th St.
 Chevalier L. Jackson, 3432 N. Broad St.
 Ross V. Patterson, 2126 Spruce St.
 Edward L. Bortz, 2021 Girard Ave.
 Clifford B. Lull, 1731 Pine St.
 William E. Farke, 1534 N. 15th St.
 L. Waller Deichler, 1930 Chestnut St.
 Pascal F. Lucchesi, 1838 S. Broad St.
 John W. Bransfield, 2101 Spruce St.
 C. Howard Moore, 1726 Spruce St.
 Nathan Blumberg, 1922 Spruce St.
 James H. Mendel, Professional Bldg., Gtn.
 Jacob Gershon-Cohen, 255 S. 17th St.
 Harold F. Robertson, 327 S. 17th St.
 William F. Moore, 255 S. 16th St.
 Edwin B. Miller, 259 S. 19th St.
 Charles F. Nassau, 1710 Locust St.
 Richard W. Larer, 1407 E. Columbia Ave.
 Douglas Macfarlan, 1805 Chestnut St.
 Miriam Warner, 21 W. School House Lane.
 Frieda Baumann, 1930 Chestnut St.

POTTER COUNTY

Robert K. McConeghy, Coudersport, *President*.
 Ross H. Jones, Coudersport, *Secretary*.

SCHUYLKILL COUNTY

Guy A. Robinhold, Ashland Hospital, Ashland, *President*.
 Arthur B. Fleming, Tamaqua, *Secretary*.
 Christian Grubler, Shenandoah.
 Peter J. Kapo, Mahanoy City.
 William A. Schmidt, Shenandoah.
 T. Lamar Williams, Mt. Carmel.
 J. Stratton Carpenter, Pottsville.
 Charles V. Hogan, Pottsville.

SOMERSET COUNTY

Frank E. Sass, Boswell, *President*.
 Bradley H. Hoke, Meyersdale, *Secretary*.
 Charles I. Shaffer, Ralphton.
 Clinton T. Saylor, Rockwood.

SUSQUEHANNA COUNTY

Raymond C. Davis, Susquehanna, *President*.
 Edward R. Gardner, Montrose, *Secretary*.
 Park M. Horton, New Milford.
 Charles J. Haines, Hallstead.
 Robert B. Mackey, Montrose.

TIOGA COUNTY

Foster H. Kennedy, Wellsboro, *President*.
 Solomon P. Hakes, Tioga, *Secretary*.
 Harry W. Howland, Gaines.
 Harry B. Knapp, Box 446, Wellsboro.
 John H. Doane, Mansfield.

VENANGO COUNTY

Chester A. Nordstrom, Franklin, *President*.
 Harry H. Lamb, Oil City, *Secretary*.
 Ford M. Summerville, Odd Fellows Temple, Oil City.
 Elmer L. Dickey, Oil City.
 Franklin P. Phillips, Box 150, Franklin.

WARREN COUNTY

J. Theodore Valone, Warren, *President*.
 A. Follmer Yerg, Warren, *Secretary*.

William M. Cashman, 304 Third Ave., Warren.
Lawrence E. Schneider, State Hospital, Warren.
A. Follmer Yerg, 318 Liberty St., Warren.

WASHINGTON COUNTY (WASHINGTON)

John R. Maxwell, 2 W. Wylie Ave., *President*.
Albert E. Thompson, Washington Trust Bldg.,
Secretary.
Milton F. Manning, Beallsville.
George W. Ramsey, 425 Burton Ave.
Raymen G. Emery, 625 Washington Trust Bldg.
James H. Corwin, Washington.
Charles F. Linn, Monongahela.
Charles L. Harsha, Canonsburg.

WAYNE-PIKE COUNTY

Hugh Stevenson, III, Waymart, *President*.
Clifford H. Mack, South Canaan, *Secretary*.
Robert G. Barkley, Milford.
William T. McConville, Honesdale.
Harry L. Masters, White Mills.

WESTMORELAND COUNTY

William H. Robinson, Mt. Pleasant, *President*.
Frank J. Pyle, Scottsdale, *Secretary*.
Thomas St. Clair, Latrobe.
Gervaise F. Nealon, Latrobe.
James H. Fiscus, Cope Bldg., Greensburg.
William H. Taylor, Irwin.
Irwin J. Ober, Greensburg.
R. E. Lee McCormick, Irwin.

WYOMING COUNTY

Van C. Decker, Nicholson, *President*.
Arthur B. Davenport, Tunkhannock, *Secretary*.
William W. Lazarus, Tunkhannock.
Lorne T. MacDougall, Tunkhannock.

YORK COUNTY (YORK)

Clyde L. Seitz, Glen Rock, *President*.
H. Malcolm Read, 141 E. Market St., *Secretary*.
Clarence W. Frey, Dallastown.
H. Malcolm Read, 141 E. Market St.
August J. Podboy, 803 S. George St.
Pius A. Noll, 117 S. George St.
Eli Eichelberger, 301 S. George St.
George E. Lentz, 211 S. George St.

REPORT OF OFFICERS

REPORT OF THE SECRETARY

To the President and House of Delegates:

The total paid membership of our society on Aug. 17, 1936, was 8134, a net increase of 116 over the same date last year, in spite of a loss during the past 12 months of 207 members—by death, 149 members; by removal, 46 members; and by resignation, 12 members.

MEMBERSHIP

The following is the component society distribution for 1935 and 1936 respectively: Adams, 24, 26; Allegheny, 1299, 1301; Armstrong, 48, 47; Beaver, 89, 95; Bedford, 15, 16; Berks, 171, 172; Blair, 98, 103; Bradford, 39, 41; Bucks, 60, 77; Butler, 49, 54; Cambria, 174, 179; Carbon, 32, 31; Center, 24, 25; Chester, 103, 106; Clarion, 29, 27; Clearfield, 63, 63; Clinton, 23, 23; Columbia, 33, 34; Crawford, 56, 60; Cumberland, 36, 40; Dauphin, 209, 213; Delaware, 159, 180; Elk, 23, 23; Erie, 158, 161; Fayette, 109, 112; Franklin, 62, 65; Greene, 26, 22; Huntingdon, 29, 32; Indiana, 44, 50; Jefferson, 48, 48; Juniata, 5, 5; Lackawanna, 258, 261; Lancaster, 172, 172; Lawrence, 73, 72; Lebanon, 33, 37; Lehigh, 147, 148; Luzerne, 319, 323; Lycoming,

115, 117; McKean, 48, 48; Mercer, 72, 77; Mifflin, 27, 28; Monroe, 26, 24; Montgomery, 185, 205; Montour, 40, 38; Northampton, 137, 136; Northumberland, 81, 76; Perry, 8, 13; Philadelphia, 2095, 2088; Potter, 13, 11; Schuylkill, 158, 166; Somerset, 40, 42; Susquehanna, 15, 14; Tioga, 26, 25; Venango, 56, 52; Warren, 45, 44; Washington, 128, 140; Wayne-Pike, 22, 24; Westmoreland, 163, 167; Wyoming, 14, 14; York, 138, 145.

A study of the above figures will show that 39 component societies have increased their membership; 13 have sustained a loss; and in 8 there has been no change.

MEDICAL DEFENSE

Approved applications for defense against suits (summons served) for alleged malpractice since the last report total 6, numbering from 285 to 290 inclusive; and the expenditures from our medical defense fund totaled \$1532.38.

CASE No. 285.—Summons served Oct. 5, 1935. Fracture of right humerus, ulna, and radius; injury to musculospiral nerve. Claims improper treatment.

CASE No. 286.—Summons served Nov. 30, 1935. Mother holding child for roentgen-ray picture received spark from tube of roentgen-ray machine; claims shock and burns.

CASE No. 287.—Summons served Mar. 13, 1936. Case diagnosed as measles. Patient died. Death claimed due to injection of serum containing arsenic.

CASE No. 288.—Summons served Mar. 30, 1936. Fracture of ulna. Roentgen-ray examination. Claims failure to diagnose dislocated radius and fractured ulna at elbow.

CASE No. 289.—Summons served June 2, 1936. Submucous resection of nasal septum.

CASE No. 290.—Summons served July 3, 1936. Nephroptosis, gastrovisceroptosis, inguinal hernia. Operation for first 2 conditions. Herniotomy postponed. Plaintiff alleges lack of consent.

The following cases have been closed during the past year:

CASE No. 221.—Alleged trespass (removal of pelvic organs without consent). Attorney reported Dec. 7, 1934, that since case was 3 years old it would not likely be pressed. However, it was reopened in 1935 but dismissed for want of prosecution. Defendant had no commercial insurance.

CASE No. 237.—Plaintiff alleged postpartum neglect. Non pros entered. Defendant had no commercial insurance.

CASE No. 253.—Alleged loss of right eye following puncture (needling) to relieve tension in case of malignant myopia. Case withdrawn by attorney in 1934 due to failure to find witnesses against defendant. At trial, Jan., 1936, jury unable to agree. On May 20, 1936, court granted motion for judgment on whole record and, if no appeal, case will be considered concluded. Defendant had no commercial insurance.

CASE No. 270.—Hypodermic needle broken off in left arm, later removed under fluoroscope, resulting in alleged burn. Case reported as dropped since defendant has heard nothing of it. Had no commercial insurance.

CASE No. 276.—Plaintiff claimed malunion in Pott's fracture; did not appear at trial, which resulted in nonsuit. Defendant had no commercial insurance.

CASE No. 277.—Negligence claimed in incomplete abortion. Judge entered judgment of nonsuit.

PROPER AUTHORIZATION

This year's experience again emphasizes the constant need for practicing physicians to obtain *specific consent* to apply the corrective measures which may become obvious only in the course of diagnostic or therapeutic procedures. There is apparently little protection in the ordinary *release form* used in hospitals.

Experience in this and other states demonstrates the ever present threat of the entering of suits for malpractice against physicians performing operations, giving treatments, conducting necropsies, or even making physical examinations without specific, properly witnessed authorization that will "hold good" in court.

RESPONSE TO DISASTER

On account of the destructive forces of the St. Patrick's Day flood we were unable to occupy our offices in the Jenkins Arcade from Mar. 17 to Mar. 31. On Mar. 20 temporary offices were opened and communication by mail established with representative officers of the component societies. By these, as well as by prior communications by radio and by wire with the state and Federal health authorities, the American Red Cross, and state and county medical society officers, there was reflected in numerous and widespread instances throughout the state public confidence in and dependence upon voluntary assistance from individual physicians and their county and state organizations in the presence of sudden and extensive disaster.

OUTSTANDING PROGRESS

Our greatest organizational achievement of the year, it is believed, has not been in our usual basic endeavors to extend knowledge in medical progress to our 8250 members, but in our attempts to impart information upon which public opinion may be developed regarding the future forms of sickness service.

It is firmly believed that, regardless of the motive back of the decision that in 1935-1936 the subject for debate in hundreds of colleges and high schools throughout the United States should be "The Socialization of the Practice of Medicine," the result of the numerous debates has been an informed public opinion which now leans heavily in favor of the private forms of medical practice.

This is due to the painstaking compilation of facts regarding governmental forms of sickness service in Europe, and the careful garnering of authoritative opinion as to the likely effects of inaugurating such forms in this country.

The Bureau of Economics of the American Medical Association and the committees of our own and other state medical societies have labored conscientiously in these educational endeavors, and the material brought forth in pamphlet form has been freely distributed. Our own society, in response to requests, has furnished packages for debate coaches or participating students in 225 Pennsylvania colleges and high schools as well as to many libraries in this and other states.

A spokesman for the Debaters' Information Bureau of Portland, Maine, stated that the merits of the material presented against state medicine, in the opinion of many debating coaches, heavily overbalanced the other side. Such instructors in their personal opinions were said to be most concerned over the political and bureaucratic interference that would follow socialization, and over the almost unbearable cost which would have to be met by some form of increased taxation.

This experience has led many wise physicians to the conclusion that an informed public may solve intelli-

gently the social phases of this particular problem, and that the organized medical profession must as a group of good citizens continue to initiate movements to keep their fellow citizens fully informed on all health topics except those intrinsically medical.

THE ANNUAL AUDIT

As per Section 7 of Chapter V of the By-laws, the Board of Trustees arranges annually for the audit of "the accounts of the secretary and the officers of the JOURNAL." Completed too late for publication with other reports in the September JOURNAL, the auditor's report each year is mentioned in the report made by the Board of Trustees to the House of Delegates at its Wednesday meeting and is available at the annual session or subsequently through the secretary.

FINANCIAL STATEMENT

GENERAL FUND

Balance on hand Sept. 1, 1935 \$16,012.08

RECEIPTS

Dues (\$7.50) less allotments (\$1.10)	
8288 members (45 half year), including 154 for 1935	\$52,905.45
JOURNAL	9,899.27
Cancer blanks, health exam. blanks, Roster	23.75
Annual session	6,300.00
Rent (12 mos.) from tenants, 230 State St.	1,080.00
Sale used mimeograph	65.00
Rebate burglary insurance	43.93
Transferred from Medical Defense Fund in payment of Vouchers Nos. 164, 223, 270, 302, 309, 310	1,532.38
Transferred from Medical Benevolence Fund in payment of Vouchers Nos. 52, 101, 160, 168, 243, 305, 343, 431	9,101.34
Transferred from Endowment Fund in payment of Vouchers Nos. 46, 89, 104, 123, 148, 163, 191, 233, 257, 293, 326, 369, 395, 422, and misc. (12 mos. library upkeep)	1,239.37
library furnishings and equipment ..	2,982.93
Miscellaneous	3.78
	\$85,177.20
	\$101,189.28

DISBURSEMENTS

Publishing JOURNAL and Official Transactions (includes editor's salary and 65 per cent salaries Harrisburg office assistants)	\$26,256.34
Salaries (inclusive of 35 per cent salaries Harrisburg office assistants) ..	12,315.00
Transfer of funds (items 8 and 9 under receipts)	10,633.72
Committees, exclusive of Scientific Work	11,770.86
Annual session	6,818.92
Reimbursement petty cash funds	2,020.21
Travel expenses	1,660.18
Annual secretaries' conference	1,000.00
Printing: 1935 Roster, triplicate receipt books, letter to membership ...	886.89
Postage	875.00
Councilor district and commission meetings	798.89
Stationery and supplies	699.47
Rent, secretary's office and Com. Public Relations	677.40
230 State St., taxes, repairs	545.91
Furniture and fixtures	298.50
Annual audit of accounts	250.00
Peoples-Pittsburgh Trust Co., service charge	69.18
Premium on officers' bonds, compensation insurance	55.49
Telegrams	50.42
Penna. Chamber of Commerce, dues ..	25.00
Floral memorial	25.00
A. M. A. Directory	12.00
Miscellaneous	8.92
	\$77,753.30

Balance on hand Sept. 1, 1936 \$23,435.98

GENERAL FUND—SPECIAL ACCOUNT

Balance on hand Sept. 1, 1935	\$15.81
No receipts, no disbursements	
Balance on hand Sept. 1, 1936	\$15.81

* For explanation of difference of \$2,000.90 between these figures and treasurer's report see Vouchers Nos. 197 and 198.

MEDICAL DEFENSE FUND

Balance on hand Sept. 1, 1935 \$11,994.60

RECEIPTS

Per capita assessments	\$826.80
Interest on investments	1,867.50
Interest on deposits	360.15
Liberty Loan bonds called Oct. 15, 1935	6,000.00
N. Y. C. Eq. Trust bonds called Oct. 15, 1935	1,000.00
Penna. R. R. bonds called May 1, 1936	6,300.00
	<u>\$16,354.45</u>

\$28,349.05

DISBURSEMENTS

Transferred to General Fund in payment of Vouchers Nos. 164, 223, 270, 302, 309, 310 \$1,532.38

Balance on hand Sept. 1, 1936 \$26,816.67

MEDICAL BENEVOLENCE FUND

Balance on hand Sept. 1, 1935 \$46,000.07

RECEIPTS

Per capita assessments	\$8,266.50
Interest on investments	3,384.40
Interest on deposits	1,218.72
Liberty Loan bonds called Oct. 15, 1935	2,000.00
Chesapeake & Ohio Corp. bonds called May 15, 1936	1,255.29
Penna. R. R. bonds called May 1, 1936	1,050.00
Contributions—Drs. Moses Behrend, John B. Carrell (\$107); Woman's Auxiliary to The Medical Society of the State of Pennsylvania; woman's auxiliaries to following county medical societies: Allegheny, Berks, Blair, Bucks, Butler, Cambria, Center, Clarion, Clinton, Dauphin, Delaware, Elk-Cameron, Erie, Fayette, Franklin, Indiana, Lackawanna, Lawrence, Lebanon, Lehigh, Luzerne, Lycoming, Mercer, Montgomery, Montour, Northampton, Philadelphia, Potter, Schuylkill, Somerset, Tioga, Warren, Washington, Westmoreland, Wyoming, York (\$3,109.94)	3,216.94
	<u>\$20,391.85</u>

\$66,391.92

DISBURSEMENTS

Transferred to General Fund in payment of Vouchers Nos. 52, 101, 160, 168, 243, 305, 343, 431 \$9,101.34

Transferred direct to treasurer of Benevolence Fund 500.00

\$9,601.34

Balance on hand Sept. 1, 1936 \$56,790.58

ENDOWMENT FUND

Balance on hand Sept. 1, 1935 \$7,513.88

RECEIPTS

Interest on investments	\$1,751.85
Interest on deposits	154.92
Liberty Loan bonds called Oct. 15, 1935	5,000.00
Penna. R. R. bonds called May 1, 1935	1,050.00
	<u>\$7,956.77</u>

\$15,470.65

DISBURSEMENTS

Transferred to General Fund, in payment of Vouchers Nos. 46, 89, 104, 123, 148, 163, 191, 233, 257, 293, 326, 369, 395, 422, and misc. (12 mos. library upkeep) \$1,239.37

For reimbursement, from fund earnings, for library equipment, as authorized by 1935 House of Delegates 2,982.93 |

\$4,222.30

Balance on hand Sept. 1, 1936 \$11,248.35

DISBURSEMENTS—1935-1936

Voucher No.

1. F. C. Hammond, editor, travel exp.	\$252.26
2. Max H. Weinberg, travel exp., Com. Med. Ec.	31.86
3. W. S. Brenholtz, travel exp., Com. Med. Ec., Vouchers Nos. 3, 215, 337	51.75
4. Walter F. Donaldson, secy., travel exp., Vouchers Nos. 4, 114, 169, 213, 239, 269, 300, 314, 360, 405	521.20
5. C. L. Palmer, exp., Chr. Conference Com. & Com. Pub. Hlth. Legis., Vouchers Nos. 5, 97, 132, 170, 199, 244, 246, 286, 317, 357, 406	3,025.59
6. H. W. Salus, travel exp., Com. Pub. Hlth. Legis.	18.00

Voucher No.

7. Grant L. Bell, auditor's services & ledger, Vouchers Nos. 7, 414	\$258.58
8. Jas. F. McCoy, legislative letter service, Vouchers Nos. 8, 98, 108, 162, 207, 241, 273, 298, 316, 381	325.00
9. Schuylkill County Medical Society, deficit postgrad. seminar	17.23
10. Alex. H. Stewart, travel exp., trustee & counselor, Vouchers Nos. 10, 183, 208, 354	88.38
11. U. S. Post office, stamps, Vouchers Nos. 11, 77, 105, 171, 228, 274, 299, 322, 376, 388	875.00
12. American Surety Co., premium officers' bonds	31.25
13. Horner, Doyle & Wright, mimeo. paper, printing, staty. and post cards, supplies, etc., Vouchers Nos. 13, 72, 111, 141, 185, 224, 249, 285, 307, 361, 413	862.27
14. American Medical Assn., manuals, directory, maps, Quarterly Cum. Index Med., Vouchers Nos. 14, 112, 163, 359	138.75
15. Brownagle's Orchestra, for president's reception	110.00
16. Mae Yeaton, asst. at registration	16.00
17. Virginia Fasberg, asst. at registration	16.00
18. Evelyn Miller, asst. at registration	16.00
19. Penn-Harris Hotel, refreshments, president's reception, committee meeting exp., Vouchers Nos. 19, 67	240.00
20. F. E. Dillan, reporting gen. & spec. sections, Vouchers Nos. 20, 32	180.05
21. Jenkins Arcade Bldg., office rent, Vouchers Nos. 21, 71, 94, 117, 142, 196, 225, 262, 287, 319, 374, 389	677.40
22. E. V. McCollum, travel exp., guest speaker ..	12.70
23. E. D. Osborne, travel exp., guest speaker ...	35.00
24. T. W. Todd, travel exp., guest speaker	47.20
25. F. F. Tisdall, travel exp., guest speaker	62.69
26. A. E. Crow, exp. acct., trustee & counselor ...	28.00
27. Ida L. Little, exp. at annual session	42.73
28. A. B. Dick Co., stencils & mimeo. supplies, Vouchers Nos. 28, 78, 106, 139, 176, 221, 248, 280, 306, 352, 403, 412	218.95
29. A. G. Trimble, buttons & badges	102.00
30. Appel & Weber, gavel, retiring president	20.00
31. Jas. C. Muir, cancer control film, projector etc.	277.55
32. T. O. Elterich, travel exp., Com. Sci. Work ..	47.32
33. Ruth Fox, reporting Derm. & Urol. Sections ..	112.75
34. T. R. Helmbold, travel exp., regional cancer meet.	30.35
35. Commonwealth of Pennsylvania, rental, Farm Show Bldg.	947.00
36. Otto Plack, erection tech. & sci. booths	1,958.38
37. Mae Yeaton, 2 weeks' services	62.50
38. F. M. Highberger, architects' plans, Vouchers Nos. 39, 344	115.50
39. L. H. Perry, reimbursement for money paid ushers, watchmen, etc., at 1935 session ..	147.25
40. F. C. Hammond, editor, salary, Vouchers Nos. 41, 84, 119, 144, 187, 229, 253, 289, 321, 366, 391, 415	3,600.00
41. Walter F. Donaldson, secretary, salary, Vouchers Nos. 42, 85, 118, 143, 186, 227, 252, 288, 320, 365, 390, 416	6,000.00
42. L. H. Perry, business mgr., salary, Vouchers Nos. 43, 86, 120, 145, 188, 230, 254, 290, 323, 367, 392, 419	4,000.00
43. Hyacinth Willners, salary, Vouchers Nos. 44, 87, 121, 146, 189, 231, 255, 291, 324, 375, 393, 420	1,500.00
44. Marian Foberg, salary, Vouchers Nos. 45, 88, 122, 147, 190, 232, 256, 292, 325, 368, 394, 421	1,200.00
45. Mary E. Taylor, librarian, salary, Vouchers Nos. 46, 89, 123, 148, 191, 233, 257, 293, 326, 369, 395, 422	1,020.00
46. Ida L. Little, salary, Vouchers Nos. 47, 90, 124, 149, 192, 234, 259, 294, 329, 370, 397, 423	2,400.00
47. Fern Lee, salary, Vouchers Nos. 48, 91, 125, 150, 193, 235, 260, 295, 330, 371, 398, 424 ..	1,120.00
48. Thelma Dege, salary, Vouchers Nos. 49, 92, 126, 151, 194, 236, 261, 296, 331, 372, 399, 425	1,040.00
49. Roy Jansen, salary, Vouchers Nos. 50, 93, 127, 152, 195, 237, 258, 297, 332, 373, 396, 426	3,600.00
50. F. F. Borzell, exp. acct., Com. Med. Ec., Vouchers Nos. 51, 79, 113, 157, 202, 245, 342	337.54
51. Edw. B. Heckel, treas., int. on Benevolence Fund & contributions, Vouchers Nos. 52, 101 ..	1,835.22
52. Evangelical Press, printing, pub. & mailing JOURNAL, Vouchers Nos. 53, 83, 140, 174, 272, 304, 345, 386, 427, 428	17,978.58
53. L. H. Perry, reimburse petty cash fund, Vouchers Nos. 54, 156, 172, 275, 312, 430 ..	1,516.43
54. Walter F. Donaldson, secy., reimburse petty cash fund, Vouchers Nos. 55, 173, 276, 429 ..	503.78
55. Jas. W. White, travel exp., guest speaker ...	14.53
56. J. I. Pomeroy, 1936 trip, ret. books	237.60
57. D. P. McCune, travel exp., Com. Sci. Work ..	56.32
58. H. M. Marvin, travel exp., guest speaker	37.05
59. A. W. Proetz, travel exp., guest speaker	100.49
60. Mary E. Reik, reporting Surg. Sec.	143.80
61. Walter E. Dandy, travel exp., guest speaker ..	4.00

<i>Voucher No.</i>		<i>Voucher No.</i>	
63. Allen O. Whipple, travel exp., guest speaker..	\$16.23	212. F. O. Zillesen, travel exp., Com. Med. Ec. ..	\$14.98
64. Irene H. Snyder, reporting House of Delegates & Med. Sect.	280.25	214. E. W. Bixby, travel exp., Com. Grad. Edu. & Sci. Prog., Vouchers Nos. 214, 340	45.00
65. Jas. A. Miller, travel exp., guest speaker ...	21.73	216. Wm. H. Schmitt, travel exp., Com. Phys. Therapy	10.00
66. Henry G. Munson, asst. secy., exp. at annual session	34.60	217. F. B. Utley, travel exp., chr., Sci. Prog. Com., Vouchers Nos. 217, 411	75.22
68. Francis A. Faught, exp. periodic hltb. ex. in Sci. Ex.	20.50	218. C. N. Haynes, travel exp., Com. Sci. Prog., Vouchers Nos. 218, 358	47.61
69. Howard E. Milliken, treas., reimburse. for exp. public meeting, entertainment, etc. ...	505.50	219. W. K. McBride, treasurer, taxes 230 State St., Vouchers Nos. 219, 348, 364	488.91
70. Ralph Pemberton, exp. arthritis ex. in Sci. Ex.	50.00	220. E. S. Buyers, trustee & councilor, travel exp., Vouchers Nos. 220, 380	118.74
73. S. R. Lingle, rental, plants for auditorium at annual session	15.00	222. Roy Jansen, travel exp., publicity rep., Vouchers Nos. 222, 277, 382	166.55
74. R. M. Tyson, travel exp., Sci. Work Com. ...	3.00	223. Evans, Bayard & Frick, services in med. def. case No. 221	101.50
75. J. Horace McFarland, photographing exhibits	36.50	240. Donald Guthrie, travel exp., Com. Grad. Education	35.89
76. Hazel Carbaugh, reporting Sec. Pediatrics ...	35.00	247. Jas. B. Mason, travel exp., Com. Med. Ec. ...	16.00
80. Royal Typewriter Co., typewriter JOURNAL office	110.00	250. J. A. Daugherty, travel exp., Com. Soc. Aspects of Sickness Service	9.61
81. Dauphin Elec. Co., 400 watt lamp	3.00	251. C. W. Hunt, travel exp., Com. Soc. Aspects of Sickness Service	9.26
82. Allen Graham, travel exp., guest speaker ...	36.12	264. L. D. Sargent, trustee & councilor, travel exp., Vouchers Nos. 264, 409	265.43
95. L. H. Perry, exp. acct., 1936 session	28.92	265. Wm. E. Robertson, travel exp., Med. Adv. Com., Vouchers Nos. 265, 281	32.08
96. Herre Bros., thermostat, 230 State St.	57.00	266. H. T. Price, travel exp., Med. Adv. Com. ...	7.10
99. Max Thorek, travel exp., guest speaker	65.60	267. L. M. Hoffman, travel exp., Com. Appendicitis Mort., Vouchers Nos. 267, 346	14.52
100. Wm. H. Mayer, travel exp., Com. Pub. Rel., Vouchers Nos. 100, 205, 318	129.18	270. Evans, Bayard & Frick, services med. def. case No. 253	628.25
102. Walter F. Donaldson, for cash payment expenses annual secretaries' conference & members Co. Socy. Coms. on Med. Ec.	1,000.00	271. Penn-Alto Hotel, exp. meeting, Com. Soc. Aspects of Sickness Service	32.60
103. Western Union Tel. Co., telegrams, Vouchers Nos. 103, 155, 204, 242, 263, 278, 333, 350, 404	50.42	279. Harnies & Salisbury, prem., work. comp. ins., Vouchers Nos. 279, 362	24.24
104. Remington Rand Co., filing boxes, library ..	40.00	282. Geo. W. Hawk, travel exp., Com. Cancer ...	35.45
107. Williams, Brown, Earl, rental motion picture machines	220.00	283. Chas. H. Smith, travel exp., Medical Adv. Com.	12.90
109. T. R. Gagion, travel exp., Com. Pub. Health Legis.	19.00	284. Temple Press, pamphlets for Cancer Com. ...	47.40
110. Walter Dick, exp., 8th & 9th councilor dist. meet.	66.00	302. O'Malley, Hill, Harris & Harris, services med. def. case No. 276	377.38
115. R. B. Evans, salary, legal counsel, Vouchers Nos. 115, 238, 328, 418	300.00	304. Evangelical Press, printing Roster, official programs, flood relief letter to membership, etc., Vouchers Nos. 53, 304, 427	1,233.71
116. J. B. Lowman, salary, treasurer, Vouchers Nos. 116, 226, 327, 417	150.00	308. Courier Press, printing floor plans, etc.	66.00
128. G. E. Pfahler, travel exp., Cancer Com.	15.01	309. M. A. Holding, services med. def. case No. 270	25.25
129. S. P. Reimann, travel exp., Cancer Com. ...	6.00	310. Evans, Bayard & Frick, services med. def. case No. 237	150.00
130. Chas. F. Geschichter, guest speaker, tumor clinic	12.00	311. Geo. A. Reed, trustee & councilor, exp. acct.	106.50
131. Damon B. Pfeiffer, travel exp., Cancer Com.	6.50	315. Harvey F. Smith, vice pres., travel exp. ...	25.91
133. Alex. H. Colwell, president, travel exp., Vouchers Nos. 133, 201, 268, 335, 432	324.46	334. Jas. H. Corwin, travel exp., Com. Med. Economics	34.95
134. Webster's New International Dictionary, JOURNAL office	31.50	339. F. J. Bishop, travel exp., Com. Med. Economics	20.35
135. Jas. S. Taylor, travel exp., Maternal Mort. Com., Vouchers Nos. 135, 341	214.42	347. W. Burrill Odenatt, travel exp., Med. Adv. Com.	20.05
136. A. S. Kech, trustee & councilor, exp. acct. ...	39.59	349. Underwood Elliott Fisher Co., typewriter, secy.'s office	92.00
137. C. R. Phillips, trustee & councilor, exp. acct., Vouchers Nos. 137, 384	45.22	353. Geo. H. Cross, travel exp., Sci. Prog. & Work. Comp. committees	38.50
138. J. J. Brennan, trustee & councilor, exp. acct., Vouchers Nos. 138, 351	90.97	355. Calvin M. Smyth, Jr., travel exp., Com. Work. Comp.	21.30
153. Jas. D. Stark, exp., Com. Pub. Health Legis.	46.75	356. L. K. Ferguson, travel exp., Com. Work. Comp.	7.30
154. Randolph McClements Co., floral memorial...	25.00	358. Geo. R. Harris, travel exp., Com. Medical Ec.	27.45
158. John A. Sharkey, exp., Com. Med. Economics	7.50	363. Remington Rand Co., overhauling typewriter	17.50
159. Edw. L. Bortz, exp., Com. Med. Economics	24.35	377. Jos. T. Beardwood, travel exp., Sci. Prog. Com.	15.00
160. Ross V. Patterson, treas., int. on Benev. Fund & contributions, Vouchers Nos. 160, 168, 243, 305, 343, 431	7,266.12	378. Warren S. Reese, travel exp., Sci. Prog. Com.	18.00
161. D. W. Thomas, trustee & councilor, travel exp., Vouchers Nos. 161, 379	207.87	385. F. C. Grant, travel exp., guest speaker	10.00
164. Wm. A. Challener, services, med. def. case No. 277	250.00	387. E. Roger Samuel, trustee & councilor, travel exp.	80.10
165. Geo. B. Strickland, exp., Maternal Wel. Com.	32.50	400. J. J. Gillespie, framing testimonials	9.87
166. W. C. Raymond, exp., Maternal Wel. Com.	13.96	401. Geo. L. Lavery, travel exp., Medical Adv. Com.	155.08
167. Peoples-Pittsburgh Trust Co., service charge, Vouchers Nos. 167, 383	69.18	402. Geo. C. Yeager, trustee & councilor, travel exp.	139.03
175. Paul B. Steele, travel exp., Conference Com., Vouchers Nos. 175, 338	60.00	407. Harvey F. Smith, exp., regional cancer meet.	50.00
177. W. H. Robinson, travel exp., Com. Phys. Therapy	20.36	408. R. W. Scott, travel exp., guest speaker	14.00
178. Jos. Scattergood, travel exp., Com. Phys. Therapy	9.00	410. R. C. Rosenberger, travel exp., guest speaker	20.00
179. Maxwell Lick, pres.-elect, travel exp., Vouchers Nos. 179, 313	107.61	Miscellaneous	.34
180. Mirror Pub. Co., maternal welfare circulars ..	7.75	Total	\$79,754.20
181. Penna. Chamber of Commerce, annual dues ..	25.00		
182. R. C. Kern, travel exp., Com. Grad. Education, Vouchers Nos. 182, 336	34.50		
184. L. H. Perry, reimbursement Pub. Health Legis. Com. exp.	11.00		
197. Medical Defense Fund, allotment from dues 1819 members (allotments not made at time dues were deposited)	181.90		
198. Medical Benevolence Fund, allotment from dues 1819 members (allotments not made at time dues were deposited)	1,819.00		
200. Jas. M. Armstrong, survey forms, Maternal Wel. Com.	58.50		
203. Lester Hollander, exp., chr., Sci. Ex. Com., Vouchers Nos. 203, 303	44.00		
206. M. M. Auslander, travel exp., Com. Maternal Wel.	12.00		
209. Paul Dodds, travel exp., Com. Mat. Wel. ...	18.70		
210. Jos. P. Repogle, travel exp., Com. Appendicitis Mort., Sci. Work	19.47		
211. L. G. Beinhauer, travel exp., Com. Sci. Wk., Vouchers Nos. 211, 301	49.82		

A CORRELATED SERVICE

We have continued, from the secretary's office, the issuance of "letter bulletins" periodically for a number of the component societies; also, as usual, all of the stenographic and bulletin work of the Public Health Legislation, Public Relations, Scientific Work, and Scientific Exhibit committee chairmen, as well as in part for several other committees.

It is the desire of the Board of Trustees that such service shall be continued and extended in the interests of economy and correlation, as well as relieving as much

as possible the burden on the time and the office facilities of State Society committee chairmen.

The secretary, in closing, wishes to register his deep appreciation of the co-operative and responsive assistance of national, state, and component society representatives—officers, committeemen, editors; and to express the desire that the members of the House of Delegates will attribute to all such the great credit so definitely due them for our society's progress toward the attainment of its high purposes.

Respectfully submitted,

WALTER F. DONALDSON, *Secretary*.

REPORT OF THE TREASURER

Sept. 1, 1935, to Sept. 1, 1936

GENERAL FUND

SPECIAL ACCOUNT

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	\$15.73	
Adjustment of government tax on checks, 1935	.08	
		\$15.81

DISBURSEMENTS

None		
Balance on hand Sept. 1, 1936		\$15.81

CHECKING ACCOUNT

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	\$16,012.08	
Receipts during year	87,178.10	
		\$103,190.18

DISBURSEMENTS

By Cash—Paid Vouchers Nos. 1 to 432, inclusive	\$79,754.20	
Balance on hand Sept. 1, 1936		\$23,435.98

SPECIAL FUNDS

MEDICAL BENEVOLENCE FUND

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	\$46,000.07	
Investment bonds matured	4,305.29	
Other receipts during year	16,086.56	
		\$66,391.92

DISBURSEMENTS

By Cash—Withdrawn for benefits	\$9,601.34	
Balance on hand Sept. 1, 1936		\$56,790.58

MEDICAL DEFENSE FUND

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	\$11,994.60	
Investment bonds matured	13,300.00	
Other receipts during year	3,054.45	
		\$28,349.05

DISBURSEMENTS

By Cash—Withdrawn for defense	\$1,532.38	
Balance on hand Sept. 1, 1936		\$26,816.67

ENDOWMENT FUND

RECEIPTS

To Cash—Balance on hand at beginning of fiscal year	\$7,513.88	
Investment bonds matured	6,050.00	
Other receipts during year	1,906.77	
		\$15,470.65

DISBURSEMENTS

By Cash—For upkeep of library	\$4,222.30	
Balance on hand Sept. 1, 1936		\$11,248.35

CASH BALANCES AND INVESTMENTS

CASH BALANCES

Total cash balances Sept. 1, 1935	\$81,536.36	
Total receipts during year	131,881.25	
		\$213,417.61
Total disbursements		95,110.22
Total cash balance Sept. 1, 1936		\$118,307.39

INVESTMENTS

MEDICAL BENEVOLENCE FUND

U. S. Treasury Bonds, 3½%, due 1949, Serial No. 8109K	\$5,000.00
U. S. Treasury Bonds, 4%, due 1954, No. H00011518	5,000.00
U. S. Treasury Bonds, 3¼%, due 1944-46, Nos. 8278J-8279K-8280L	15,000.00
U. S. Treasury Bonds, 3¼%, due 1944-46, No. 41947H	1,000.00
U. S. Treasury Bonds, 2½%, due 1955, Nos. 158204D-158205E-158206F	3,000.00
U. S. Treasury Bonds, 3¼%, due 1944-46, Nos. 161642B-161643C-161644D	3,000.00
Illinois Central R. R. Co., 4¾%, 1966, Nos. 28011-12-1592-3-4	3,500.00
American Telephone & Telegraph, 5½%, 1943, Nos. 81983-59558-28598-28599-28600	5,000.00
Chicago, Milwaukee & St. Paul R. R., 5%, 1935, Nos. 6178-6179-6180	3,000.00
Baltimore & Ohio R. R. Co., 5%, due 2000, Nos. 27406-7-8-9-10	5,000.00
Buffalo, Rochester & Pittsburgh R. R., 4½%, 1957, Nos. 15588-26637-14977	3,000.00
Wabash Railway Co., 5%, 1976, Nos. 6852-6853	2,000.00
Canadian National Railways, 4½%, 1957, Nos. 62992-62993	2,000.00
Chesapeake Corporation, 5%, 1947, Nos. 40706-40707-40709	3,000.00
Carolina, Clinchfield & Ohio Ry., 6%, 1952, Nos. M6035-7231-3787-6001-6002	5,000.00
Ontario Power Co. of Niagara Falls, 5%, 1943, Nos. 05361-2-3-4-09755	5,000.00
Minnesota Power & Light, 1st Ref., 4½%, 1978, Nos. 11566-7-8-9-11570	5,000.00
Western Union Telegraph Co., 5%, 1960, Nos. 9627-8-9-30-31	5,000.00
Corporate Stock City of N. Y., 4%, 1959, Nos. 582-583-2082	3,000.00
Total	\$81,500.00

MEDICAL DEFENSE FUND

U. S. Treasury Bonds, 3¼% 1944-46, No. 8281A	\$5,000.00
U. S. Treasury Bonds, 3¼%, 1944-46, Nos. 41948J-41949K	2,000.00
U. S. Treasury Bonds, 2½%, 1955, No. 158914D	1,000.00
Illinois Central R. R. Co., 4¾%, 1966, No. 1595	500.00
American Telephone & Telegraph Co., 5%, 1946, Nos. 55087-8-9-55090-1-2-3-4, 56792-3	10,000.00
Buffalo, Rochester & Pittsburgh R. R., 4½%, 1957, Nos. 16369-16370	2,000.00
Canadian National Railways, 4½%, 1957, No. 62994	1,000.00
Chesapeake Corporation, 5%, 1947, No. 40705	1,000.00
New York Central Equipment, 4½%, 1935-37, No. 15351	1,000.00
Lehigh Valley R. R. Co., 5%, 2003, Nos. 84178-9-80-81	4,000.00
Western Pacific Railroad Co., 5%, 1946, Nos. 8204-5044-5045-10347-18971	5,000.00
Chicago Union Station, 5%, 1944, No. 6729	1,000.00
Corporate Stock City of N. Y., 4%, 1959, Nos. 569-70-71	3,000.00
Total	\$36,500.00

ENDOWMENT FUND

U. S. Treasury Bonds, 3¼%, 1944-46, No. 41950L	\$1,000.00
U. S. Treasury Bonds, 2½%, 1955, Nos. 279933C-279934D-279935E-279936F-279937H-114457H-114458J	7,000.00
American Telephone & Telegraph Co., 5%, 1960, No. M24901	1,000.00
Canadian National Railways, 4½%, 1957, Nos. 62995-6	2,000.00
Chicago & Northwestern Ry., 4¾%, 1987, Nos. 132938-134029-137409	3,000.00
Great Northern Railway, 4½%, 1976, Nos. 3894-3895	2,000.00
Great Northern Railway, 4½%, 1977, Nos. 12439-12440-12441-12442-13516	5,000.00
North American Edison, 5½%, 1963, Nos. 17926-7-8-9-17930	5,000.00
Niagara Falls Power Co., 6%, 1950, Nos. 4382-7118-7465	3,000.00
Chicago Union Station, 5%, 1944, Nos. 589-590-622-2871-2872-4395	6,000.00
Mobile & Ohio R. R., Ref. & Imp., 4½%, 1977, Nos. 3152-3153-3154-3155	4,000.00
Corporate Stock City of N. Y., 4%, 1959, Nos. 572-573-574-575	4,000.00
Total	\$43,000.00

Total investment for	
Medical Benevolence Fund	\$81,500.00
Medical Defense Fund	36,500.00
Endowment Fund	43,000.00
Total Investments	\$161,000.00
Total Cash balances	118,307.39
Total cash balances and investments	\$279,307.39

In addition to the above the society holds title to the property at 230 State Street, Harrisburg, occupied by the offices of the PENNSYLVANIA MEDICAL JOURNAL.

Respectfully submitted,

JOHN B. LOWMAN, *Treasurer.*

REPORT OF CHAIRMAN OF BOARD OF TRUSTEES

To the President and House of Delegates:

At the organization meeting of the Board of Trustees, held in Harrisburg, Oct. 2, 1935, after adjournment *sine die* of the House of Delegates, the following were duly nominated and elected to serve for one year: Chairman, Dr. Edgar S. Buyers; clerk, Dr. Augustus S. Kech; editor of the JOURNAL, Dr. Frank C. Hammond; legal counselor, R. B. Evans, Esq.; manager of sessions and exhibits, Mr. Lester H. Perry.

The chairman then presented the following newly elected members of the board: Drs. John J. Brennan, Scranton, elected by the House of Delegates to represent the Third Councilor District; Laurie D. Sargent, Washington, elected to represent the Eleventh Councilor District, filling the unexpired term of one year of Dr. Arthur E. Crow, resigned; and Alexander H. Stewart, re-elected to represent the Ninth Councilor District.

The chairman announced the following committee appointments for the year, each committee to choose its own chairman: *Executive*, Drs. Augustus S. Kech, George A. Reed, E. Roger Samuel; *Finance*, Robert L. Anderson, Alexander H. Stewart, John J. Brennan; *Publication*, George C. Yeager, David W. Thomas, Laurie D. Sargent; *Library*, Clarence R. Phillips, Walter F. Donaldson, Frank C. Hammond, Augustus S. Kech; *Benevolence*, Howard C. Frontz, Edward B. Heckel, Walter F. Donaldson, Clarence R. Phillips.

President Colwell then submitted, and the board approved, his appointments to the following standing committees; Public Relations (3 members to serve 3 years each) and Public Health Legislation.

Dr. Anderson, chairman of the Finance Committee, presented the budget for the ensuing year, based upon estimated receipts for the year, with disbursements based on planned as well as previous expenditures. After some discussion and changes the budget was unanimously approved.

Past presidents Harry W. Albertson and Arthur C. Morgan, President Alexander H. Colwell, and President-elect Maxwell Lick were presented, all making brief but stimulating remarks.

REFERRED BY THE 1935 HOUSE OF DELEGATES

The request from the Pennsylvania Nurses Association for approval of their state-wide movement for an 8-hour day for nurses, which had been presented to the House of Delegates and referred by that body to the Board of Trustees for study, was upon motion referred to a committee of 3 for investigation and report at the December meeting.

The chairman appointed Drs. Anderson (chairman),

Sargent, and Kech members of this committee. This committee, after analyzing the replies to questionnaires sent throughout the state, reported unanimously that, while there was a trend toward the adoption of 8-hour duty for nurses, there was no evidence of state-wide agreement among the practicing members of the State Nurses Association. The committee advised that when more general agreement existed in the nursing organization the problem might receive more consideration by our society.

The report with its recommendation was adopted and is herewith submitted to the 1936 House of Delegates.

The subject of redistricting the state into new councilor districts, which had been referred back to the Board of Trustees by the 1935

COMPOSITION OF House of Delegates for continued study, was freely discussed. It was unanimously agreed that the subject should be brought before each councilor commission meeting and the resulting suggestions be reported to the board. Dr. Samuel was continued by the board as trustee and councilor in charge of the study, and at the May meeting reported but one proposed change brought to his attention, namely, Perry County from the sixth to the fifth councilor district.

Chairman C. L. Palmer of the State Society Committee on Public Health Legislation, in attendance upon each meeting of the board, reported from time to time regarding problems coming before the 1936 special session of the Legislature, as well as progress being made in the preparation of legislation designed for introduction into the 1937 Legislature to create a merit or civil service system for the professional trained personnel in the state health and welfare departments.

Other activities of this committee were reported in the March PENNSYLVANIA MEDICAL JOURNAL. They have also been the subject of frequent bulletins addressed to the officers and certain committee chairmen of all the component societies, and are elaborated upon in the committee's report, which is published in the September issue of the JOURNAL and in the Official Handbook.

Reports were received regularly by the board from the late William H. Mayer, chairman of the Committee on Public Relations, and the various recommendations were approved, with full support of the proposal that the committee's publicity agent visit county society officers and attend meetings in the interest of (1) the extension of the "Your Health" column service to additional newspapers and (2) the rendering of assistance in the development of health councils in certain county centers.

Dr. Francis F. Borzell, chairman of the State Society Committee on Medical Economics, in attendance upon various meetings of the board throughout the year, brought to our attention for consideration a number of problems confronting his committee. He received the approval of the board for the holding of a meeting in Harrisburg, Dec. 10, to be attended by representative members from interested component societies, for the purpose of clarifying confusion and lack of comprehension as to the functions of county committees on medical economics.

At another time the board approved Chairman Borzell's recommendation for the addition of 2 members to the personnel of his committee.

The activities of this important committee were further discussed on pages 446-448 of the March, 1936, PENNSYLVANIA MEDICAL JOURNAL, and are reviewed in the committee's report, which is published in the September issue of the JOURNAL and in the Official Handbook.

Chairman George L. Laverty appeared in behalf of the Medical Advisory Committee to the SERB at each meeting of the board, keeping its members in touch with the changing conditions as well as apprising them of the possible future of emergency medical relief.

At the December meeting of the board a motion was unanimously adopted, with instructions to the secretary of the society that it be forwarded to both federal and state relief authorities, i. e.,

"That provision of minimal adequate sickness service to the indigent is the economic liability of society at large (taxpayers) and the professional responsibility of the county medical societies has long been the contention of the organized medical profession in Pennsylvania, and that the Board of Trustees of The Medical Society of the State of Pennsylvania (8250 members) immediately requests the federal and state relief authorities to abandon emergency medical relief service in the counties of Pennsylvania only as and when it is justified by stabilized re-employment of all employables and by humane service to unemployables."

Dr. Laverty also reported on the conference which he, together with Secretary Donaldson, participated in, in Washington, D. C., with Surgeon General Cumming, regarding the U. S. public health survey of chronic diseases in certain Pennsylvania communities. The officers and appropriate committee chairmen of all component societies were apprised of the nature and the scope of this proposed survey through the office of the State Society secretary. The subject was also discussed in the June, 1936, PENNSYLVANIA MEDICAL JOURNAL, page 729, and is reviewed in Chairman Laverty's report, which is published in the September issue of the JOURNAL and in the Official Handbook.

As a result of evidences of increased activity in various component societies, a new committee of the Board of Trustees was created last December, known as the Committee on the Social Aspects of Sickness Service. Its duties were, in the interim between regular meetings of the board, to confer, if necessary, with representatives of standing committees of the State Society or others engaged in the study of forms of medical service for the benefit of (1) the indigent, (2) those on emergency relief, (3) those seeking to pay on a budget system, and (4) those seeking to provide in advance for so-called catastrophic illness.

The personnel of this committee as appointed by the chairman of the board was published in the March, 1936, PENNSYLVANIA MEDICAL JOURNAL, page 445. Meetings were held in Altoona, Mar. 29, and in Philadelphia, Apr. 22, same being commented upon in the July JOURNAL, page 822.

Probably the most interesting outcome of this committee's activities may be summarized in the following proposal made by our board to the Board of Governors of the Dauphin County Medical Society, in response to their request that the State Society advance \$2000, "a

sum equal to that contributed by the Dauphin County Medical Society," and agreed to by our Board of Trustees on the basis of the following points:

That (1) the funds thus advanced are to be in the form of a loan, without interest, made to the Dauphin County Medical Society; (2) said funds are to be used by the Board of Governors of the Dauphin County Medical Society solely for the purpose of developing, before 1937, a co-ordinating community health service feature of the Physicians and Dentists Business Bureau of Dauphin County, Inc.; (3) the proper representatives of The Medical Society of the State of Pennsylvania are to be recognized as conferees in the development of the health service plan; and (4) the services of the employees of the bureau are to be made available at times for consulting service to other components of the State Medical Society.

At the December meeting of the board Secretary Donaldson commented upon the current report of the finance committee. He drew attention to the rapidly growing expenses of many State Society activities and committees, which have considerably reduced the average balances in the general fund formerly in the bank at this time of the year, advising that the board keep this in mind when considering newly proposed activities, lest we be confronted with the necessity of increasing the annual dues. The secretary suggested that increased membership throughout the state and support of PENNSYLVANIA MEDICAL JOURNAL advertisers would assist in keeping the funds in a healthy condition.

Chairman Yeager of the Publication Committee drew attention to the practice of free or "throw away" journals, with wide circulation and much unethical advertising, which indulge in the publication of articles "lifted from ethical journals." Suggestions were made for curbing this pernicious practice.

The board took action, advising component societies to maintain the individual style of their several periodic county society bulletins as now published rather than accept the standardized articles of interest to physicians and the national advertising offered by foreign publishers.

Chairman Phillips of the Library Committee reported at the May meeting of the board that the package library had accumulated and carefully indexed a total of 15,000 valuable reprints; also that comments upon the value of the service were constantly being received in increasing numbers from the members of the society throughout the state requesting the service by mail.

The subject of cash contributions to the Cancer Commission was thoroughly discussed by the board. The proposal for the acceptance of "outside" contributions to the work of this commission was approved for this year only, the money to be accepted and expended by the commission and reported to the 1936 House of Delegates, continuance of the plan to be subject to appropriate amendment to the by-laws. (The commission did not find it necessary to seek or accept such aid.)

The practice of a very few component county societies in approving controversial subjects, without conference with the proper State Society officers, was discussed. A motion prevailed that component societies, before approving controversial subjects presented from "outside sources," should seek consultation with State So-

ciety officers, the House of Delegates, or the Board of Trustees.

In reviewing the secretary's report presented at the May meeting of the board, it was noted that certain county society bulletins had bitterly criticized departmental heads at Harrisburg. This action was condemned by the board, inasmuch as it distinctly embarrasses committee chairmen in their consultations with the several state departments and with the state legislative conference. The following resolution, which was unanimously adopted, was ordered transmitted to all component societies:

WHEREAS, Prolonged and arduous endeavors have been made by the duly elected and regularly appointed representatives of The Medical Society of the State of Pennsylvania, as well as by many other hundreds of our 8250 members, to establish, in the minds of the interested public, a sense of comfort and confidence in the participation of our membership in the planning and administration of public health procedures throughout the state, and

WHEREAS, The printing in the official publications of certain of the component county medical societies of derogatory comments, specifically directed at the managements of duly constituted state departments, such as health, welfare, emergency relief, and law enforcement, fails to bring about the correction of actions or procedures complained of, and

WHEREAS, Publicized criticisms of such a nature tend to provoke reactions in the minds of the public inimical to our avowed and exalted purpose to "enlighten and direct public opinion in regard to the problems of public health and hygiene," and

WHEREAS, Because it is further believed, in the face of the current agitation for the regimentation of practitioners of the healing art, to be unwise on the part of component societies to publish widely hostile criticisms of the heads of state departments; therefore, be it

Resolved, That the Board of Trustees of The Medical Society of the State of Pennsylvania request the officers of all component societies to restrict the publication of said harsh criticisms of state department personnel and policies until their complaints can be placed before appropriate committees or the Board of Trustees or the House of Delegates of the State Medical Society, looking toward conference with state departmental directors regarding explanation of actions or policies the subject of complaint in county society bulletins.

Director Clement W. Hunt, of the Dauphin County Physicians and Dentists Bureau, was presented at the May meeting, and explained the revised plan of Dauphin County in attempting to meet the recommendation of the Board of Trustees' Committee on the Social Aspects of Sickness Service to develop in Dauphin County a community experiment to deliver medical service to all social groups.

Suggestive of the interest of the problems involved and the scope of the responsibilities imposed upon the members of the Board of Trustees, we briefly recount the following additional subjects presented for discussion at all meetings of the board: Problems incidental to the character of advertisements accepted for the JOURNAL; management of the society's building; applications for medical defense against suits for alleged malpractice; councilor commission and councilor district meetings; visits from the Secretary of Health of Pennsylvania and the Director of Emergency Medical Relief of the SERB, who, together with the Secretary of the Department of Welfare, are invited to attend all meetings of the board.

Chairman Samuel McC. Hamill, of the important State Emergency Child Health Committee, was present at the February meeting of the board and reported on the work of the various emergency child health committees throughout the state. (See April, 1936, PENNSYLVANIA MEDICAL JOURNAL.) He also presented and discussed the future financial set-up of his committee, since SERB funds previously granted would soon be exhausted. An offer of financial assistance from the American Child Health Association having been made to Dr. Hamill, he was authorized to accept and, through the state committee, to administer the funds received from the association. A unanimous vote of praise and confidence was given to Dr. Hamill for his excellent service rendered in the name of The Medical Society of the State of Pennsylvania.

Chairman Donald Guthrie of the Graduate Education Committee also made a progress report with recommendations at the same meeting of the board.

CONCLUSION

The undersigned, in closing, wishes to emphasize the responsibility now at hand and imposed upon the experienced committees of the various county medical societies, such as advisory committee to the CERB, emergency child health, public relations, and medical economics, of planning for the provision of adequate medical care for the indigent and the unemployed.

Can this responsibility be better expressed in words than it was in President Colwell's letter of July 14, 1936 (see page 914, August PENNSYLVANIA MEDICAL JOURNAL), addressed to county society officers and committee chairmen, from which the concluding paragraphs are quoted, as follows:

"You have recently been addressed by our Board of Trustees relative to a possible process of decentralization from state to county control of existing forms of emergency relief, and the necessity for county medical society leadership in the local sickness service phases to be developed during the process.

"In the meantime, the people of Pennsylvania must remain confident of the continuation of medical service rendered with that joy of service which has in the past distinguished the practitioners of medicine, on the basis of what they give to society rather than on what they receive in return, but given with the hope that our profession will eventually be freed from all political domination, restrictive social control, and unreasonable economic outlook."

The members of the board appreciate the splendid co-operation of the editor and the various committee chairmen who have been present at each of its meetings and have offered from time to time many excellent suggestions for our guidance.

Respectfully submitted,

EDGAR S. BUYERS, *Chairman*.

REPORT OF THE EDITOR

To the Board of Trustees:

The JOURNAL terminates Volume 39, with this, the September number.

The editor, in his report for 1935, gave a rather extensive outline of the subject matter published each month in the JOURNAL in order that the members would have an informative cross section of the valuable material that comes to their desks regularly every month. With the closing of another year, the many problems of organized medicine are looming up in greater propor-

tions, and the members who have kept pace with the ever changing phases of affairs will sense the need for the increasing financial demands being made on the State Society.

It is necessary for the JOURNAL to accept advertisements as a source of revenue. Many of the advertisers complain that our membership shows little or no interest in their advertisements, as manifested by the fact that they ignore the advertisers' request to write for pamphlets, samples, *etc.* When writing to an advertiser kindly refer to having seen the advertisement in the PENNSYLVANIA MEDICAL JOURNAL.

The editor is keenly appreciative of the continued cooperation and support of the trustees and councilors who so graciously respond to every request, and to the Publication Committee for their manifestations of confidence, trust, and reliance.

J. Allen Jackson, of Danville, chairman of the Committee on Mental Hygiene, continues to contribute his greatly appreciated editorials.

Manuscript should be received in the JOURNAL office by the tenth day of the month to appear in the issue of the following month.

Grateful appreciation is extended to that valiant group, the county society reporters. The county society reports constitute one of the most valuable departments of the JOURNAL. These reports are not only of value for immediate reading but constitute a wonderfully compiled monthly released graduate course of up-to-the-minute clinical instruction and, when filed, provide permanent records of inestimable value to the historian.

Appreciation is also expressed to Secretary Walter F. Donaldson for the many courtesies extended.

Mr. Lester H. Perry continues efficiently his various duties, and Mrs. Hyacinth Willners and Miss Marian Foberg continue with appreciated efficiency.

Respectfully submitted,

FRANK C. HAMMOND, *Editor.*

REPORT OF THE MANAGING EDITOR

To the Board of Trustees:

The principal activities of the Harrisburg office are fourfold, involving the JOURNAL, the convention, the headquarters building, and the package library service. Scientific, professional, and organizational advancement is the primary purpose of all of these activities. It is logical, therefore, that the report of the managing editor stress those accomplishments which lead to the fulfillment of this basic purpose.

It is true, however, that the business aspects of these various activities are also important; consequently, this report includes not only an exposition of aims and accomplishments but also a summary of the financial record.

During the official year 1935-36 a total income of \$17,305.38 was received at the Harrisburg office. This represents an increase of \$2397.81 (16 per cent) over the receipts of the preceding year, which were in turn greater by \$1292.30 (9 per cent) than those of 1933-34. Additional revenue from JOURNAL advertising and technical exhibit space is responsible for the increases of the past 2 years, as indicated in Table I.

THE JOURNAL

The JOURNAL probably constitutes its own best report. Nothing which can be included here will indicate the value of the JOURNAL or the nature of the problems incident to its publication so well as a thoughtful consideration of the finished product.

TABLE I

RECEIPTS OF HARRISBURG OFFICE

<i>Item</i>	1933-34	1934-35	1935-36
JOURNAL advertising ..	\$6867.58	\$7311.67	\$9277.43
Annual session	5145.00	6172.50	6300.00
Rent	900.00	812.60	1080.00
JOURNAL subscriptions.	202.58	223.15	230.40
Miscellaneous	500.11	387.65	417.55
Total	\$13,615.27	\$14,907.57	\$17,305.38

On several occasions in the past the incumbent in the position of managing editor has outlined the functions of the JOURNAL, the multitudinous duties of the staff, and the extent of the problems involved. Since there has been but little modification in the character of these functions and duties and problems, suffice it at this time to add that they have all been amplified by virtue of the growth of the JOURNAL—both in circulation and in content. A brief analysis of these data since the time of the change from the *Atlantic Medical Journal* back to the PENNSYLVANIA MEDICAL JOURNAL appears in Table II.

TABLE II

CIRCULATION AND CONTENT OF THE JOURNAL

<i>Year</i>	<i>Total Circulation</i>	<i>Number of Pages (excl. of advertising)</i>
1929	8154	945
1930	8213	922
1931	8198	948
1932	8276	944
1933	8255	1016
1934	8583	1134
1935	8742	1088
1936	8800	1102

The advertising revenue of the JOURNAL is not as high as it was in the halcyon days of the predepression era, but it has shown a decided increase since 1933-34 as indicated in Table III.

TABLE III

INCOME FROM JOURNAL ADVERTISING

<i>Year</i>	<i>Advertising Revenue</i>	<i>Increase over Previous Year</i>	<i>Percentage of Increase</i>
1933-34	\$6867.58	.....	.....
1934-35	7311.67	\$444.09	6%
1935-36	9277.43	1965.76	27%

The increase in advertising revenue is due entirely to increased volume; in other words, the rates have not been raised. In passing it should be noted that the maintenance of high ethical standards with regard to the acceptance of advertising results in a restriction of our advertising potentialities. Nevertheless, I am convinced that our policy is sound.

Advertising rates have remained unchanged since 1924. During the past year a great deal of consideration has been given to the possibility of increasing them. Although there is justification for an increase, I have made no specific recommendation, principally because of the tenor of the times. An increase in rates which is not based upon mature deliberation may do more harm than good.

The PENNSYLVANIA MEDICAL JOURNAL has never been considered a money-making enterprise and probably never will be so regarded. The current financial

statement, as a matter of fact, indicates a loss in the publication of the JOURNAL; but this is due largely to the fact that the JOURNAL is not formally credited with any subscription income for the copies furnished to our membership. The apparent loss in publishing the JOURNAL, as indicated by the financial report of the society, appears in Table IV.

TABLE IV

APPARENT FINANCIAL LOSS IN PUBLISHING JOURNAL (No Credit for Membership Subscriptions)	
Total cost of publishing JOURNAL (including salaries)	\$26,256.34
Total receipts from JOURNAL	9,899.27
Apparent loss	\$16,357.07

That this loss is apparent rather than real is indicated by Table V, which shows a profit of \$8044.93 for the JOURNAL if the account is credited with the full subscription income for copies furnished to our membership.

TABLE V

FINANCIAL PROFIT IN PUBLISHING JOURNAL (Full Credit for Membership Subscriptions)	
<i>Receipts</i>	
Advertising, nonmember subscriptions, etc.	\$9,899.27
Credit for 8134 membership subscriptions	24,402.00
Total Income	\$34,301.27
<i>Disbursements</i>	
Total cost of publishing JOURNAL (including salaries)	26,256.34
Profit	\$8,044.93

THE CONVENTION

Like the JOURNAL, the annual convention is probably its own best report. Suffice it, therefore, to record that the 1936 convention, which is publicized in the August and September issues of the JOURNAL, bids fair to equal or eclipse the high standard of previous performances.

In another way is the convention like the JOURNAL. It never has been, and probably never will be, considered a money-making venture. Nevertheless, it is a natural desideratum that this activity be self-sustaining. Consequently, it is gratifying to report that the convention income in 1935 came closer to covering the expenditures than in any other comparable year.

A perusal of convention publicity during the past 2 decades discloses the fact that the extent of our convention activities has varied but little—with one notable exception, the Scientific Exhibit. Prior to 1928 there was practically no Scientific Exhibit, and in that year the number of separate exhibits totalled but 10. They gradually increased to 28 in 1933, skyrocketed to the peak of 110 in 1934, receded to 62 in 1935, and will be even less this year. At present, quality is being emphasized.

Since the Scientific Exhibit is not only a very valuable but also a relatively expensive undertaking, it is essential in making yearly comparisons of convention expenses to limit the data to those years following 1928. An analysis of the expense, the income, and the net cost of all annual sessions since that year appears in Table VI.

TABLE VI
CONVENTION FINANCES

1928 TO 1935			
Year	Expense	Income	Net Cost
1928	\$6814.13	\$5692.25	\$1121.88
1929	6972.89	5117.00	1855.89
1930	7419.51	3936.50	3483.01
1931	6468.27	4464.00	2004.27
1932	5684.36	4275.00	1409.36
1933	6944.09	4980.00	1964.09
1934	8717.13	5365.00	3352.13
7-year total	\$49,020.38	\$33,829.75	\$15,190.63
7-year average ...	\$7002.91	\$4832.82	\$2170.09
1935	6818.92	6285.00	533.92

(NOTE: The expense item is that which appears in the official records and includes for each year a relatively small percentage of advance expenditure for the convention of the following year, said expenditure being made before the close of the books on Sept. 1. The income item, however, is that which applies specifically to the convention of the year listed; therefore, it differs somewhat from the official records, which indicate the income received from Sept. 1 to Aug. 31.)

The following facts will be noted from the foregoing table:

1. The total expense of the 1935 convention was \$183.99 less than the average expense from 1928 to 1934 inclusive. (This decrease in expenditure was accomplished notwithstanding the fact that the 62 scientific exhibits in 1935 represented an increase of more than 100 per cent in the extent of this activity as compared with the previous 7 years, the number of exhibits for that period averaging less than 30.)

2. The income of the 1935 convention was the highest ever recorded, exceeding by \$1452.18 (30 per cent) the average income for the preceding 7 years.

3. The net cost of the 1935 convention was only 25 per cent of the average net cost during the period from 1928 to 1934.

It is my aim to make the 1936 convention self-sustaining, and there is every reason to believe that this goal will be accomplished. A quotation on booth construction of \$10 per unit has been secured from the Hotel William Penn as compared with a charge of \$18.50 in 1932. The expenses of the Committee on Scientific Work, the cost of bringing guest speakers to the meetings, the expenditures for entertainment, etc., will probably average about the same as for previous recent years, thus making the total convention expense \$7000 or less. At this writing—a month before the convention opens—the value of technical exhibit space already reserved totals \$6900, which exceeds last year's record-breaking figure by \$615.

THE PROPERTY

There is nothing of unusual significance to report in connection with the headquarters building. Several minor repairs have been made during the year. The same tenants continue to occupy the apartments, and rent is being received promptly.

The March floods transformed the usually tranquil Susquehanna into a roaring monster, whose liquid tentacles stretched out in every direction to ensnare its prey; but it is gratifying to report—principally as a matter of permanent record—that 230 State Street was beyond its reach.

THE LIBRARY

The package library service was opened to borrowers on Jan. 1, 1936. Its collection of reprints has steadily increased until there are now approximately 15,000 classified and filed, ready for use. The subject headings in the *Quarterly Cumulative Index Medicus* are meticulously followed in the classification of this material. More reprints continue to be received from individual physicians and from clinics, thus steadily increasing the potential usefulness of the library.

A report of its activities and progress is being published in each issue of the JOURNAL, thus enabling each member of the society to keep in constant touch with the development of the service.

To date 128 packages have been loaned, consisting of 1604 separate pieces of literature. Borrowers have evidenced interested appreciation in the efforts which have been made to send satisfactory material in response to requests.

The auxiliary activities of the library include the custody of the donations received by the Archives Committee, the routing of the cancer control film, and the mailing of material on socialized medicine and similar topics to debate teams, libraries, and other interested parties.

Archive material is placed in the fireproof, waterproof vault at the society headquarters. A list of recent acquisitions is recorded in the report of the Archives Committee.

Approximately 20 organizations have made use of the cancer control film. Although it is impossible to state definitely the number of persons who have viewed this film during the past year, it is obvious from the reports of the organizations which have used it that the total would be literally tens of thousands—perhaps hundreds of thousands.

Seventy-five packages of material on socialized medicine and allied subjects have been mailed by the librarian, 40 to individuals interested in debating and 35 to various libraries which have requested copies of our own monographs. This is in addition to the material mailed from the secretary's office. The dissemination of authoritative literature of this character doubtless redounds to the best interests of the medical profession.

* * * * *

With gratitude I express deep appreciation for the fine co-operation which society representatives have given to me, and with high regard for the value of their services I call attention to the continued loyalty of my coworkers in the Harrisburg office.

Respectfully submitted,

LESTER H. PERRY, *Managing Editor*.

REPORTS OF INDIVIDUAL COUNCILORS

DR. GEORGE C. YEAGER, PHILADELPHIA, COUNCILOR FOR THE FIRST DISTRICT

To the President and House of Delegates:

The activity of the First Councilor District has been kept at top speed the past year due to the great interest shown by the members of the society in the work of their local county society.

During the past term the work of the Emergency Child Health Committee has been taken up in this district, under the direction of a committee of eminent members who are particularly interested in child care,

and promises to be of great service to those on relief and to the community at large.

The work of the Committee on Public Relations has been well carried on under the able direction of the chairman, Dr. Francis F. Borzell. This committee has had many grave problems presented to it and has always answered in a way which reflected great credit to the committee and the society. The work of this committee seems to be becoming greater each year, as the questions which are arising from the threatened changes in the social relations between the physician and the public come more to the front. The members of the medical profession must assume more and more responsibility as carriers to their clientele of medical opinion and experience regarding the varying forms of sickness service, and must assume, more than ever, the work of directing the general public thought.

There has been a healthy growth in membership in this district, as physicians realize the advantages of becoming members of the organized profession.

The scientific programs furnished to the members of the local society have been worthy of commendation.

During the year a series of lectures and seminars was presented which marked a new "high" for graduate work. This was largely due to the work of the Scientific Program Committee, which was headed by Dr. Rufus S. Reeves, and to the advice given to the committee by the eminent teachers who are on the Advisory Committee on Medical Education.

This work was climaxed by the Postgraduate Institute, which was inaugurated in April, 1936, and which drew physicians from 22 states and several from Canada to the City of Philadelphia. The institute was the first endeavor of any county medical society to engage in such an extensive attempt at graduate instruction. The topics throughout the 5 days were confined to diseases of the heart and kidneys with their ramifications.

This effort, having met with great success, will be repeated by the county society. It received commendation from state and national medical societies, and the good wishes of the American College of Surgeons, as being the first effort of organized medicine to meet the desires of many physicians throughout the country.

A Councilor District Meeting was held in conjunction with the Postgraduate Institute, which was addressed by Dr. Frank Lahey of the Lahey Clinic of Boston, Mass.

The meeting was honored by the following representatives of The Medical Society of the State of Pennsylvania: President Alexander H. Colwell, President-elect Maxwell Lick, Secretary Walter F. Donaldson, Drs. Harvey F. Smith, first vice-president, and Edgar S. Buyers, chairman of the Board of Trustees, Councilors John J. Brennan, E. Roger Samuel, Augustus S. Kech, David W. Thomas, and Laurrie D. Sargent, also Chairman Chauncey L. Palmer of the Committee on Public Health Legislation.

Attention is drawn to the demand for a medical forum. This pioneer work, if properly developed, might prove of great value to the profession and to the public. Three such meetings were held in this district and were successful, but there should be an educational foundation prepared for this type of work in those communities where there is a demand for public discussions.

At present there is no loud demand for any kind of health, sickness, or hospital insurance in the first district.

During the year only one suit for alleged malpractice was brought to the attention of the councilor.

**DR. EDGAR S. BUYERS, NORRISTOWN,
COUNCILOR FOR THE SECOND
DISTRICT**

To the President and House of Delegates:

The counties composing the Second Councilor District (Berks, Bucks, Chester, Delaware, Montgomery, and Schuylkill) have been officially visited by the councilor and found to be in a most healthy condition.

During the past year the district has been fortunate in that no new suit for alleged malpractice has been instituted. There is, however, one case pending which will probably be tried in September, and there are 2 threatened suits.

The councilor commission meeting of our district was held in Norristown, on Feb. 19, 1936, with 25 county society officers and committee chairmen of the district present. The program included papers as follows: "The Emergency Child Health Committee and Its Work and How It May Lead to Periodic Health Examinations in Adults," by Chairman Robert M. Alexander of the Emergency Child Health Committee of the Berks County Medical Society; "Hospital Insurance Plan," by Chairman Francis F. Borzell of the State Society Committee on Medical Economics; "The Medical Society and the Press," by Mr. Roy Jansen, publicity director of the State Society. The latter paper was most unique, expressing a layman's view of the medical profession and its members. It was most favorably commented upon and freely discussed.

The councilor district meeting was held at the Reading Country Club, Sept. 19, 1935, with approximately 150 persons present. The meeting was opened with an address of welcome by President Wm. F. Krick of the Berks County Medical Society, followed by a 2-minute report from each district censor; "A Brief History of the Berks County Medical Society," by David S. Grim of Reading (this completes the histories of the 6 county societies comprising the second district); "Intrapartum Care in Relation to Maternal Mortality," by Philip F. Williams, member of the State Society Committee on Maternal Welfare; "Some Mental Hygiene Viewpoints on the Sterilization of the Unfit," by the late Clarence A. Patten, member of the State Society Committee on Mental Hygiene. After luncheon 3 members of the district who had been in practice 50 years were presented with testimonials: Drs. Anthony F. Myers, Blooming Glen; Josiah C. Keylor, Cochranville; and Levi S. Walton, Jenkintown. Papers read on the after-luncheon program included "What the Medical Department of the United States Army Has Contributed to Human Progress," by Matthew A. DeLaney, United States Army; "Collapse Therapy in Pulmonary Tuberculosis," by Moses Behrend, then president of the State Society; "Some Phases of Public Relations," by the late William H. Mayer, chairman of the Committee on Public Relations; "The County Society and Medical Service Plans," by Chairman Francis F. Borzell of the Committee on Medical Economics; "Emergency Medical Relief," by Chairman George L. Lavery of the Medical Advisory Committee; "Legislative Problems Concerning Public Health," by Chairman C. L. Palmer of the Committee on Public Health Legislation.

The 1936 Councilor District Meeting will be held at the U. S. Veterans Hospital, Coatesville, on Sept. 17.

As emergency medical relief wanes the important problem now before the societies of the district is how shall the unemployables as well as some of the employables receive adequate medical care. Three societies of the district are now studying the problem as others will immediately following the summer vacation. The

prevalent question—"Can we meet our responsibilities?"—must be answered satisfactorily to the patient, the physician, and the taxpayer, i. e., medical control over all things medical.

The county societies of the district have been favored by having Mr. Roy Jansen, publicity director of the State Society, in their midst during the year. Mr. Jansen has visited and talked with the officers of the county societies and has also interviewed the newspaper editors of the district, resulting in the development of better understanding and more cordial relations between the medical profession and the local press. The State Society releases in the name of county societies have a large circulation in the papers throughout the second district.

Emergency Child Health Activities.—The emergency child health program has been well developed in most of our counties. The following will show at a glance the work completed in the Second Councilor District: Berks County has examined 1492 children on relief and corrected 564 defects; there were 188 tonsillectomies and 112 dental corrections; 100 children are under treatment for malnutrition, the percentage suffering from malnutrition being 21.8. Since our 1935 report the number of children examined was 911 and corrections made, 395. The Bucks County group has examined 1874 indigent children with these results: 2072 defects corrected; 222 children vaccinated against smallpox; 534 immunized; 132 tonsillectomies; 236 dental corrections; 210 under dietary control for malnutrition; the percentage of malnutrition, 28.7. Since our 1935 report 380 children have been examined and 907 defects corrected. Nutritional instruction is being given. In Montgomery County 3210 children were examined; 3460 defects corrected; 289 vaccinated; 921 immunized; 109 eye defects corrected; 237 tonsillectomies; 318 dental corrections; 105 under care for lung conditions, 753 for malnutrition, and 215 postural or orthopedic defects under medical care; the percentage of malnutrition, 28.9. Since our 1935 report 405 children have been examined and 1223 defects corrected. Nutritional instruction is being given.

In the entire district 8095 children have been examined to date and 7133 corrections of defects were secured. Since our 1935 report 1696 have been examined and 2525 corrections have been made.

The Berks County Society has had an unusual attendance during the year, 52 per cent of its membership being present at all the meetings. The membership at present is 174, 9 new physicians having been elected during the past year.

The State Society graduate seminars were enthusiastically accepted and well attended. The following subjects were discussed: Office gynecology, endocrinology, common pediatric diseases, diseases of the digestive tract, evaluation of laboratory findings, and cardiovascular renal disease.

The Medical Economics Committee solved a problem of vital importance to the profession, namely, the immunization of children who can afford to pay but who are brought to the baby welfare stations and given the injections free of charge.

The Public Relations Committee of the society has recently submitted to the County Board of Poor Directors a plan similar to the Mercer County plan for the care of the indigent of Berks County, but at this date no reply has been forthcoming from the poor authorities.

The Emergency Child Health Committee, which examines only children in families on relief, has brought credit to those participating in its program of service during a period when children would otherwise have been neglected.

The physicians of the county are interested in the child health problem, and are co-operating unreservedly with the committee. More than 200 children are examined monthly.

The society has made extensive improvements to its building during the year.

The Bucks County Society has experienced the most active year in its history. The meetings have been well attended and the programs have included topics that were in accord with the needs of the membership.

The Committee on Public Relations has sponsored a program whereby printed letters were furnished by the society to all its members to be sent to their patients, stating the value of preventive medicine in certain diseases, and ending with the plea that children be taken to the family physician to be immunized against many of the infectious diseases. This committee and the Committee on Economics have been most active and earnest in their endeavors to co-operate with the Red Cross and other health organizations.

The society, co-operating with the Public Health Association of Bucks County, held a public meeting in May. The society's representative discussed the topic, "The Medical Problem of the Unemployable."

The society also has been active in continuing the campaign for 100 per cent toxoid immunization of all children under school age. It has begun a similar campaign for the undernourished child, including the application of the Mantoux test with subsequent roentgen-ray study in suspected cases.

A letter from the county society secretary states, "The society wishes to go on record strongly favoring any measure which has for its purpose the unifying of our profession and the elevation of medical standards, but we cannot give sanction to measures which have for their ultimate purpose the socialization of our profession and the regimentation of physicians. It is almost bewildering at times to contemplate the many outside forces which are attempting to break in upon our profession, foisting upon us their ideas of social security, which have naught for their purpose but the obliteration of the physician-patient individual relationship which every human being has as his inalienable right."

The Chester County Society has inaugurated a plan of diphtheria immunization whereby all children are served in the office of the family physician, thereby abolishing mass immunization in the schools as was done heretofore.

Through an agreement with the county commissioners the physicians of Chester County may have patients suffering from tuberculosis promptly sent to Rush Hospital, where they are treated at the county's expense until such a time as they are able to be placed in a state sanatorium.

The society has recently inaugurated a Public Health Commission composed of 13 doctors throughout the county, whose duty is to co-ordinate the endeavors of all health or semi-health agencies in the county, under the direction of the county medical society. The result has been harmony in every phase of health activity in the county.

The 7 members of the Executive Committee of this county society have referred to it all business matters from other society committees a week before each regular county society meeting. The Executive Committee studies these reports and makes recommendations to the society at its next regular meeting. This reduces to a minimum lengthy discussions and increases the time devoted to the scientific program.

The society has studied contract practice thoroughly and has succeeded in having adopted by the trustees of the West Chester State Teachers College the plan for the medical care of students approved by our 1935 House of Delegates. The delegates from this society will present a report on this subject at the next meeting of the House of Delegates.

The society has developed a plan of procedure for the various state and hospital clinics operating throughout the county, making it obligatory that no patient, except in emergency, be admitted to any clinic without first presenting a card from a practicing physician endorsing his acceptance.

The Delaware County Society has had a series of excellent scientific meetings during the year. One meeting was held in conjunction with the various county welfare agencies.

The society was addressed by Mrs. William Jaquette, president of the Delaware County Welfare Council, on the subject, "Who Are the Indigent Sick in Delaware County?" Other subjects were "What Is Expected of the Public Health Nursing Service," "The Referral of Health Problems in Families Coming to Welfare Societies," and "Operation of Child Health Centers in Chester."

At the regular meeting the following month the society reviewed and discussed the relationship of physicians and welfare organizations.

At the annual meeting of the society held in January, at which the members of the woman's auxiliary were guests of the society, Dr. A. V. Hart discussed "Public Relations As I See Them."

At the present time the society is discussing a plan similar to the Mercer County agreement for medical service to the indigent of the county.

During the past year the society has revised and brought up to date its constitution and by-laws.

The Montgomery County Society has the largest membership in its history, having added 18 new members during the year. The total membership is now 203, entitling the society to 3 elected delegates to the State Society.

The society observed Pennsylvania Health Day in October, sponsoring an open meeting in the Y. W. C. A. building, Norristown. The meeting was attended by about 150 persons.

The society gave a dinner dance in January in honor of the woman's auxiliary, in acknowledgment of splendid accomplishments, especially of their generous contribution to the Medical Benevolence Fund of the State Society.

The County Directors of the Poor having requested the appointment of a committee from the county society to pass upon plans for increasing the capacity of hospital wards and isolation unit of the county home, a most satisfactory round-table conference ensued and the recommendations of the society's committee were endorsed by the Directors of the Poor.

The society is supporting a movement tending toward

the eventual adequate hospitalization of tuberculous patients either in county or state sanatoria.

The Committee on Maternal Welfare has been most active in investigating and reporting to the State Society committee on all maternal deaths occurring in 1935.

The society has recently purchased a home in Norristown, the county seat, consisting of a clubhouse, containing an auditorium seating 300 persons, 4 other large rooms which may be used for the library, committee rooms, reading rooms, and the meetings of the society and the woman's auxiliary. The building also contains a bowling alley and pool room; there are 5 tennis courts adjoining.

Twelve years ago the county society was granted articles of incorporation by the court and is now an incorporated body under the laws of Pennsylvania.

The Schuylkill County Society reports better attended meetings than at any time in its history. The average attendance has been almost 50 per cent, which is excellent considering distances and recent weather conditions.

The society has completed its second State Society graduate course, which is reported most successful. Thirty members took the course. The Schuylkill County Society is outstanding in the second district for its interest in these graduate courses.

The woman's auxiliary held a one-day Health Institute in Pottsville, in which the county society co-operated. The meeting was addressed by many physicians prominent throughout the state.

The society has the largest paid membership in its history, numbering 167.

During the year the society published and distributed to its entire membership "The Early History of the Schuylkill County Medical Society," as prepared and read at a recent Second Councilor District Meeting by its veteran member, Dr. M. C. Householder.

DR. JOHN J. BRENNAN, SCRANTON, COUNCILOR FOR THE THIRD DISTRICT

To the President and House of Delegates:

The councilor for the Third District, comprising the Carbon, Lehigh, Lackawanna, Luzerne, Monroe, Northampton, and Wayne-Pike county medical societies, herewith submits his report for your consideration.

The continued prenatal and child welfare activity in the district is carried on with much interest. Graduate instruction is carried on in all the larger communities.

Quarterly meetings are held by Carbon, Monroe, and Wayne-Pike county societies.

All county society reports indicate increased interest in the problems and the activities of the various Public Relations and Medical Economics committees, and especially in those of the Committee on Public Health Legislation. The membership throughout the district is evidently more keenly interested in medical legislation. This is a good omen as to the future influence of the profession in molding the laws that affect the health of the citizens of the commonwealth.

The annual meeting of the Third Councilor District was held at Skytop, May 23. The principal speaker was Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*. His subject was "Medicine and the Changing World." The address was characteristic of the man—filled with pertinent information and interesting facts, and delivered in his usual rapid-

fire oratorical style. It was thoroughly enjoyed, and those absent missed a real treat.

Dr. Alexander H. Colwell, president of The Medical Society of the State of Pennsylvania, delivered one of his learned talks on the problems confronting the membership. Dr. Maxwell Lick of Erie, president-elect of our society, made his first appearance before the members of the Third District and was well received. The chairmen of several State Society committees reported on their activities. The district censors reported the important details which indicate society progress or indifference. The various woman's auxiliaries to the societies of the district were represented by a host of members, and Mrs. Harry M. Kraemer, councilor for the district, made her report of the various auxiliary activities.

The councilor is grateful to the guests and the members of the district who helped make this meeting a success.

I take pleasure in reporting that during my first year as councilor there has been only one application made for defense against a suit for alleged malpractice, while we have been able to dispose of one case that was non-suited. The last result was due to the efficient work of my predecessor, Dr. Frederick J. Bishop. While on the subject we repeat the warning to have roentgen-ray pictures made in all fracture cases, or be sure to have release forms signed, which may be obtained from the secretary of each county medical society.

We are all indebted to the newspapers of the district that publish the health column prepared and distributed by the State Society, and for their editorial interest and fairness in all things pertaining to the health of the public.

DR. E. ROGER SAMUEL, MT. CARMEL, COUNCILOR FOR THE FOURTH DISTRICT

To the President and House of Delegates:

The Fourth Councilor District consists of Bradford, Columbia, Montour, Northumberland, Snyder, Sullivan, Susquehanna, and Wyoming counties.

The report from the district censor of each society indicates that the membership has been increased and that interest in medical problems has been marked during the past year.

Emergency medical relief service has not received very much discussion at the county society meetings this past year.

The employables on relief seem to have been fairly well absorbed by PWA employment projects. In most of our counties, the poor districts are divided throughout the different boroughs and townships so that it becomes difficult to plan a county control of medical service to the indigent, although local agreements on county medical society fee proposals are possible.

The newspaper health column released daily by our State Society is being published regularly in many newspapers throughout the district, and has increased interest in various health problems among editors and readers alike.

Nearly all of the county societies have devoted at least one meeting during the year to the discussion of medical economics and to public relation problems.

As this is a year for state elections, the various societies are contacting the candidates and asking them to consult with their medical constituents before voting on health measures.

The counties of the district enroll in their membership few physicians not engaged entirely in general practice.

They report that they have heard no demand by the public for state or socialized medicine, and that patients seem perfectly satisfied to continue with the type of practice and service that has been established.

Graduate work under the State Society plan has been carried on in the northern part of the district by the Bradford, Susquehanna, Tioga, and Wyoming county societies. These sessions have been held at the Robert Packer Hospital at Sayre. Many interesting subjects were requested by the subscribing physicians and were later presented by the visiting teachers.

In the southern section of this very fortunate councilor district, the George F. Geisinger Memorial Hospital, at Danville, provided all-day graduate seminars to scores of physicians from Columbia, Montour, Northumberland, Snyder, and surrounding counties. The Danville State Mental Hospital also contributed to this work. Speakers were also invited from distant places, and splendid clinical exhibits of pathology and roentgenology were arranged and presented by the hospital physicians.

Our Councilor Commission Meeting was held at Berwick, Nov. 21, 1935. After a luncheon at the Berwick Hotel, a round-table discussion ensued. Several of the county societies were officially represented at this meeting and the discussion was general.

Emergency child health committees are active in several of the counties. Physical examinations are still being made; corrective work among the children is going on, and some nutritional work is being undertaken.

The Fourth Councilor District Meeting was held at Eagles Mere, July 9, 1936.

Following a luncheon served at 12:30 at Forrest Inn, 95 members of the Fourth District, with their wives and daughters, met under the trees in a splendid meeting. The meeting was presided over by the trustee and councilor.

The district censors, Drs. George E. Richardson, Bradford County; Charles B. Yost, Columbia County; John H. Sandel, Montour County; Samuel L. Savidge, Northumberland County; Franklin A. Stiles, Susquehanna County; and William W. Lazarus, Wyoming County, gave brief reports of their societies.

Assisted by Dr. David W. Thomas, councilor for the Seventh District, the councilor for the Fourth District presented 50-year testimonials to Drs. Charles Reed of Towanda, who has practiced 56 years; Edward R. Gardner of Montrose, who has practiced 54 years; John H. Sandel of Danville, who has practiced 54 years, and Clarence L. Boston of Noxen, who has practiced 52 years. These gentlemen responded with splendid short addresses.

Testimonials were also sent through fellow members to Drs. J. Percival Herman of Selinsgrove, who had practiced 60 years, and to Dever J. Peck of Susquehanna, who has practiced 50 years. Both of these gentlemen were ill at the time, Dr. Herman having since died.

A report on appendicitis mortality in the Fourth Councilor District was given by Dr. William W. Lazarus, of Tunkhannock, member of the State Society Commission on Appendicitis Mortality.

Dr. Donald Guthrie, of Sayre, past president of the State Society, presented Secretary Walter F. Donaldson, who spoke on "Constancy and Change in Medical Service."

In the absence of Dr. J. Elmer Shuman, of Bloomsburg, Dr. Yost, secretary of the Columbia County Medical Society, read a brief history of that society.

Dr. Clarence R. Phillips, councilor for the Fifth

District, presented President Alexander H. Colwell of the State Society, who gave a splendid talk on "Cardiovascular Emergencies in General Practice."

Dr. John J. Brennan, councilor for the Third District, presented Dr. Laurrie D. Sargent of Washington, who spoke on "Hypotension."

Altogether the meeting was a most enjoyable social and scientific meeting.

The annual meeting of the woman's auxiliaries of the Fourth Councilor District was also held on July 9, at Eagles Mere, the wives, daughters, and sisters of physicians attending the luncheon and meeting, at which an enjoyable program was presented. The meeting was under the leadership of Mrs. Henry F. Hunt, of Danville, the district councilor, and was attended by Mrs. W. Burrill Odenatt, of Philadelphia, president, and Mrs. David W. Thomas, of Lock Haven, president-elect, of the State Auxiliary.

There were no suits for alleged malpractice instituted against any member of the district during the year.

DR. CLARENCE R. PHILLIPS, HARRISBURG, COUNCILOR FOR THE FIFTH DISTRICT

To the President and House of Delegates:

All of the county medical societies of this district are in a healthy condition; in most of them meetings are well attended, with splendid medical and economic programs being presented. The smaller societies have, as they usually do throughout the state, a better percentage of attendance than most of the larger ones. For this I have no answer or solution.

The newspapers of this councilor district have been very co-operative as to State Society educational releases and, without exception, so far as my information goes, maintain a friendly interest in our profession and its problems.

In spite of all the propaganda about the scarcity and the high cost of medical care this councilor has had no evidence from any physician that the public is very much interested. However, some of the societies in this district are endeavoring to develop plans for the benefit of low income groups, which will include free choice of physician and payment on a budget plan.

At least one county medical society in the Fifth District has made arrangements with the county commissioners and relief board for medical service to the indigent to be paid for from county tax funds. Other societies are endeavoring to make such arrangements.

As usual this district held 2 summer meetings. The Tri-County meeting was held at the Harrisburg Country Club and was a very pleasant affair but not largely attended. Reed Carty, editor of the *Danville Times*, was the guest speaker. The West Branch of the Fifth Councilor District held its meeting at York. There were members from each county in the district present and the program was well received.

The Councilor Commission Meeting was held on the afternoon of September 16 at the Penn-Harris Hotel, Harrisburg. It is a pleasure to report that the woman's auxiliaries to the societies of the district have been active and continue their good work.

DR. AUGUSTUS S. KECH, ALTOONA, COUNCILOR FOR THE SIXTH DISTRICT

To the President and House of Delegates:

A review of the activities of the component counties of the Sixth Councilor District, which consists of Blair,

Center, Clearfield, Huntingdon, Juniata, Mifflin, and Perry counties, shows continued and sustained interest in medical problems.

Blair, Center, Clearfield, Huntingdon, and Mifflin counties have increased their membership. It has been encouraging to see the younger men in the profession take an interest in county society affairs. This has been especially true in Center County. The Blair and Clearfield county societies publish their own monthly bulletins while Center, Huntingdon, and Mifflin make use of the monthly "letter-bulletin" service offered by the State Society secretary's office.

The Blair, Huntingdon, and Mifflin county societies have been successful in making satisfactory contacts for the medical care of the indigent of the county on a free choice of physicians and fee basis.

An Emergency Child Health Committee is formed in every county except Clearfield. It is very active in Blair County. In the other counties there seems to be difficulty in sustaining interest in the organization and its work.

The Huntingdon County Medical Society (32 members) has pioneered in establishing a medical-dental service bureau. This bureau has a full-time executive secretary, Mr. Sedgley Thornbury. Medical and dental service is made conveniently available to all who apply, including the low income group.

This bureau is overcoming a reluctance on the part of the local hospital administration to co-operate. The bureau became self-supporting in June, and all the interested parties are satisfied with the progress made. This society has also made a fee system arrangement for the indigent with the County Commissioners. It is an attempt of a small county medical society and associated dentists to work out the medical economic problem of its people. The councilor congratulates them on their endeavor, and is observing their progress with great and sympathetic interest as an experiment for other counties.

The Clearfield County Society conducted a graduate seminar during the past year with great success.

Two councilor commission meetings attended by officers and committee chairmen were held during the past year at State College. At these meetings round-table discussions were conducted on the work of the active State Society committees which require county society support and activity, bringing out the interim reaction of the Board of Trustees to such problems.

The annual Councilor District Meeting was held at Philipsburg, on June 4, and was well attended. The address of welcome was made by the Honorable Edw. J. Thompson, senator of the Center-Clearfield district, after which the district censors gave their annual report of county activities. Dr. C. L. Palmer, chairman of the State Society Committee on Public Health Legislation, spoke on "Social Security and Pennsylvania Legislation." Two scientific subjects were discussed: "Clinical Allergy," by Dr. Richard A. Kern of Philadelphia, clinical professor of medicine at the University of Pennsylvania Medical School, and "Appendicitis Mortality in the Sixth Councilor District," by Dr. LaRue M. Hoffman of Williamsport, substituting for Dr. John O. Bower of Philadelphia. After a one o'clock luncheon an interesting program followed, including the presentation of testimonials to the honor guests, Drs. William H. Morrow of Bellwood, Blair County, and John I. Brockbank of DuBois, Clearfield County, both of whom had reached the half-century milestone in the active practice of medicine. Secretary Donaldson of the State Society spoke on the "Responsibilities of Membership—

1848 to 1938." A "Medical History of Clearfield County" was read by Dr. John M. Quigley of Clearfield. President Alexander H. Colwell of the State Medical Society talked to the group on "Our Dual Purpose—Scientific and Economic."

The councilor, in his visits to the different counties, has not observed directly or by reflection any crystallized demand on the part of the public for any change in the present forms of sickness service; however, our profession seems to appreciate changes in the social order and is giving consideration to ways and means of providing adequate service to all the people.

The officers and members throughout the district have co-operated graciously and effectively with the councilor in the solution of the medical problems presenting themselves for consideration.

DR. DAVID W. THOMAS, LOCK HAVEN, COUNCILOR FOR THE SEVENTH DISTRICT

To the President and House of Delegates:

The county medical societies composing the Seventh Councilor District, namely, Clinton, Elk, Union, Lycoming, Potter, Tioga, and Cameron, have for the most part taken an active interest in all the activities sponsored by the State Society, as manifested by the attendance at the county medical society meetings and at the councilor district meeting. All the counties composing this district, with the exception of Elk and Potter, have had regular monthly meetings.

All the county societies in the district have completed the initial examinations for the State Emergency Child Health program, and in a number of the counties periodic re-examinations and correction of the defects and malconditions found have been made.

The daily and weekly newspapers throughout this district, with a few exceptions, have published the State Society column "Your Health."

The Commission on Appendicitis Mortality has been active in contacting the public in regard to appendicitis, but owing to the fact that the work was not started until near the close of the school year, it was decided to discontinue it until the reopening of the schools in September, at which time the program of education will be brought to every high school in this district.

The Commissions on Cancer and Mental Hygiene have conducted public meetings in all the counties of the Seventh Councilor District, and all were well attended.

Two of the county societies in this district have formulated plans and contacted the county poor and relief officials regarding agreements for medical service to citizens supported by tax funds.

A Councilor Commission Meeting has not been held since last September; at that time representatives came from every county in this district. It is planned to hold a meeting in September, 1936, at Lock Haven, previous to the State Medical Society meeting in Pittsburgh.

The annual Seventh Councilor District meeting was held at the Williamsport Country Club, Williamsport, July 10, 1936. Dinner was served at 12:30 p. m. to 62 physicians. Twenty other physicians who were unable to attend the dinner arrived in time for the program, which began at 2:15 p. m. The various district censors of the district reported for their respective societies. These reports showed that as a whole the members are taking an active part in county society affairs.

Testimonials in the form of certificate awards were given to Drs. William H. Follmer, Williamsport, who has practiced 54 years; James W. Ritter, Jersey Shore, who has practiced 52 years; and Francis P. Earley, Ridgway, who has practiced 50 years.

The following trustees and councilors attended the meeting: Drs. E. Roger Samuel, Fourth District; Clarence R. Phillips, Fifth District; Augustus S. Kech, Sixth District; Laurie D. Sargent, Eleventh District.

The program follows: "State Medical Society Problems" by Secretary Donaldson; "Diagnosis of Heart Conditions" by President Alexander H. Colwell; "Obstetrical Hazards" by James S. Taylor, chairman of the State Society Commission on Maternal Welfare; "Appendicitis" by LaRue M. Hoffman, member of the Commission on Appendicitis Mortality.

The members present decided that there should be a change in date of meeting, owing to the extremely hot weather which usually prevails during the early part of July, and after some discussion it was decided to hold the next annual councilor district meeting in the month of May instead of July.

There were no suits for alleged malpractice instituted in this district during the year.

DR. GEORGE A. REED, ERIE, COUNCILOR FOR THE EIGHTH DISTRICT

To the President and House of Delegates:

The following is the report of the trustee and councilor for the Eighth District (Crawford, Erie, Forest, McKean, Mercer, and Warren counties).

The societies in this district are well organized and active, having good programs and well-attended meetings.

There seems to be somewhat of a tendency toward indifference to State Society affairs and problems in this district, as evidenced by the attendance at the annual councilor district meeting held in Cambridge Springs on June 3, although an attractive program was presented by President-elect Maxwell Lick, Secretary Donaldson, Chairman Chauncey L. Palmer of the State Society Committee on Public Health Legislation, and Dr. Charles G. Strickland, a member of the Maternal Welfare Commission. An excellent paper by Drs. Robert L. Anderson and James J. Lee on "Transurethral Prostatic Resection—Review of 532 Cases" gave information which every member of the State Society should have.

Emergency child health activities have had some consideration in all the counties but Forest. McKean, Mercer, and Warren have done the most, with only a gesture in this direction in the others.

Several of the county societies, notably Mercer, have progressed well along the line of county society recognition in the care of the indigent, also under emergency medical relief.

Most of the urge for change in the method of sickness care seems to emanate from social workers and pressure groups, but great regard is given to the opinion and proffered co-operation of the county medical societies.

The newspapers have been co-operative in publishing the educational articles entitled "Your Health."

There have been no suits for alleged malpractice in the past year, although 2 were threatened.

Crawford and Erie county societies publish their own periodicals, while Mercer and McKean county societies address their membership through the "letter-bulletin" service of the State Society.

DR. ALEXANDER H. STEWART, INDIANA, COUNCILOR FOR THE NINTH DISTRICT

To the President and House of Delegates:

The county medical societies comprising the Ninth Councilor District (Armstrong, Butler, Clarion, Indiana, Jefferson, and Venango) have been functioning in a very satisfactory manner during the past year. The aggregate membership is about the same as last year. Several deaths of members of this district have occurred, mostly among the older men. These patriarchs of medicine will be greatly missed because they upheld the ideals and traditions of medicine through their many years of service. We have received into membership several younger men, who we hope will take hold of the work laid down by those who have finished their tasks and carry it throughout the years of their practice.

The various policies of the State Society have for the most part been carried out in the 6 societies of this district.

The Armstrong County Society held 10 meetings during the year in 4 different places in the county. Their membership this year is 45 compared with 48 last year, one member having been lost by death and 2 by removal from the state; 2 others were made affiliate members. This society issues a "letter-bulletin" periodically through the State Society secretary's office.

The Butler County Society has increased its membership from 49 to 54 members during the past year. An agreement has also recently been completed between the society and the county poor authorities for medical service to the indigent of the county on a free choice of physician and fee basis. It is hoped that other county societies will follow their example. The society has an active woman's auxiliary.

The Clarion County Society also reports a decrease in membership from 29 to 27 members, one member having died and another removed from the state. The members of this society report enthusiastically on the State Society graduate course of 6 lectures completed in the early summer. They are also about to close an agreement with the Poor Board of the county for the care of the indigent.

The Indiana County Society has increased its membership during the past year from 44 to 50 members. It has an active woman's auxiliary and publishes a monthly bulletin. Ten meetings were held, including the annual dinner meeting.

The Jefferson County Society membership remains the same as last year, namely, 48 active members, in spite of a loss of 3 members by death and the transfer of one member to the affiliate list. Ten meetings were held, 2 of which were clinical, at different points in the county; one was a combined meeting with the Indiana County Society. The society sponsors a crippled children's clinic.

The Venango County Society has a membership of 51 as compared with 56 members last year, having lost 2 by death during the year and one by removal from the state. Meetings are held monthly at 2 different points in the county. They publish a monthly bulletin. A well baby clinic and a Red Cross clinic are conducted in Oil City under local auspices and the sponsorship of the Venango County Medical Society. The society has an active woman's auxiliary.

The emergency child health work seems to be progressing satisfactorily throughout the district, as does also the emergency medical relief work.

The annual councilor district meeting was held on

July 30, at the Kittanning Country Club. The Armstrong County Medical Society was host at this meeting, and our gratitude and appreciation are extended to this society, its officers and committees, for the excellent arrangements, dinner, and good time provided. The meeting was called to order at 10:15 a.m. by the trustee and councilor for the district, who in a brief address of welcome introduced the president, the secretary, and the chairman of the Committee on Arrangements of the Armstrong County Society, Drs. Ivan N. Boyer, Jay B. F. Wyant, and Ellis C. Winters, respectively. Interesting reports of the district censors from each county were given and showed activity in these societies.

Dr. M. M. Auslander of Ernest, representative from the Ninth Councilor District on the State Society Commission on Maternal Welfare, presented a fine analysis of the commission's plan, as well as a report by counties of the district on causes of maternal deaths therein during the past year.

Dr. C. L. Palmer, chairman of the State Society Committee on Public Health Legislation, gave a résumé of the activities, policies, and prospects of medical legislation. He invited from the members of the district suggestions and constructive criticism regarding the legislative policies of the State Society. After discussion of the various phases of public health service under federal social security influences, he advised that the various county societies and their members now choose between (1) antagonism, (2) indifference, and (3) co-operation with the State Health Department, which is required by the law to administer the social security legislation. Dr. Palmer demonstrated that he and his committee keep eternal vigilance over health and welfare as affected by medical legislation at Harrisburg.

Our State Society secretary, Dr. Walter F. Donaldson, spoke on "Our State Society," briefly calling attention to the cycle in which the fundamentals underlying successful public health service originate in the problems of private medical practice, pass through State Society and state legislative consideration to the State Department of Health, and back again to the private practitioners for successful application. As always, we appreciated his remarks.

President Alexander H. Colwell spoke on "The Incompatibility of the Economics of Business and the Ethics of Medicine" in his usual splendid manner, emphasizing that for centuries the true physician has given service first and that compensation was secondary; also that the physician has a social standing unequalled in any other profession, in that he enters the homes of the rich and the poor alike and is a welcome visitor in all.

These helpful talks by official representatives of the State Medical Society were followed by 2 interesting scientific papers: "Hypotension," by Dr. Laurie D. Sargent of Washington, Pa., and "Modern Methods of Treating the Enlarged Prostate Gland," by Dr. Robert L. Anderson of Pittsburgh. Dr. Sargent brought out many new and important phases of his subject. Dr. Anderson cited more than 500 operations performed by him and his associates, with a very excellent percentage of cures and benefits and a very low mortality, but chiefly rapid recovery and a minimum of economic loss of time to the patient. Dr. Anderson's paper demonstrated his knowledge of the subject and his intense interest for the good of the patient.

At this point in the program luncheon was served, and although, as usual, many members had failed to make reservation, none were turned away. Seventy physicians were present from 10 different county so-

cieties, and the occasion was graced by the presence of 15 visiting ladies.

After luncheon President-elect Maxwell Lick gave a fine informal talk on "Early Diagnostic Essentials in Abdominal Conditions." He prefaced his scientific talk by emphasizing the importance of councilor district meetings from a social standpoint, members becoming thereby better acquainted with their colleagues and thus developing a more co-operative and friendly feeling. He stressed the importance of the use of our God-given senses—sight, touch, and hearing—and of using common sense in making diagnoses of abdominal conditions. It was a very educational résumé and was thoroughly enjoyed and appreciated. Dr. Lick's talk was illustrated by transilluminated roentgen-ray negatives.

The meeting adjourned at 2:55 o'clock.

No suits for alleged malpractice have been reported in this district during the past year.

During the year the activities, co-operation, and results obtained in the Ninth Councilor District compared favorably with those in any other district.

DR. ROBERT L. ANDERSON, PITTSBURGH, COUNCILOR FOR THE TENTH DISTRICT

To the President and House of Delegates:

On Dec. 23, 1935, the American Medical Association, The Medical Society of the State of Pennsylvania, and the Allegheny County Medical Society sustained a severe loss in the death of the beloved Edward B. Heckel. His activities and accomplishments are too well known to this society to require repetition here. It is appropriate, however, that the following excerpts from his obituary, written by his close friend and associate, Dr. William H. Mayer, appearing in the February number of the PENNSYLVANIA MEDICAL JOURNAL, be quoted:

"His approach was always kind and accompanied by a directness of expression which was ever on the highest level. Professionally and socially and in his public life he was ever thoughtful and humane. There is a permanency about his achievements which will make his influence upon the profession of our state and nation always a factor in the course of our history.

"His capacity for friendship and his splendid record for genuine altruism are indelibly inscribed upon our society and they shall stand as a beacon for the guidance of physicians to come. His broad concept and his vision will continue to lead those of us whose privilege it is to carry on. Pennsylvania can proudly say, 'We are better doctors because he lived.'"

During the past year the continued loyalty to, and co-operation with, the State Society have stood out in the 4 counties comprising the Tenth Councilor District (Allegheny, Beaver, Westmoreland, and Lawrence). There has been a very commendable increase in the already high standards of scientific meetings and in the attendance thereon in each of the counties.

It is your councilor's belief that the all-time outstanding event of Allegheny County Medical Society activities was reached in the celebration of "Buchanan Day." On Jan. 21, approximately 975 members and guests attended the afternoon meeting marked by scientific presentations by Drs. Dean Lewis, Edward C. Rosenow, and Joseph E. Sheehan, and presided over by the guest of honor. More than 800 attended the testimonial dinner in the evening, following which the audience was addressed by the speakers of the afternoon, by state and county society officers, and by the repre-

sentative educational, professional, and civic leaders of western Pennsylvania. The meeting concluded with the presentation of an appropriately engraved gold medallion to Dr. J. J. Buchanan, in the name of the Allegheny County Society, which has been graced by his 52 years of active membership. The success of the occasion, marked by a well-deserved tribute, was largely due to the able guidance and devoted efforts of Dr. Lester Hollander and his committee.

The annual dinner of the Allegheny County Medical Society, under the chairmanship of Dr. Norman Ochsenhirt, assisted by Drs. Hollander and Connelly, was another epochal occasion, which for attendance and interest closely approached the memorable Buchanan dinner. Two-thirds of the membership were present at one time or another during the meeting, which began at 2 o'clock in the afternoon. Approximately 600 remained for dinner and the evening addresses by Drs. Temple Fay and Walter G. Alvarez.

On May 14 the Beaver County Medical Society was addressed by Dr. Roy W. Scott, professor of medicine at Western Reserve University Medical School. This meeting convened at the Beaver County Country Club, was well attended by members of the surrounding county societies, and was arranged by a committee headed by Dr. Bert C. Painter. The Beaver County Society resumed publication of its bulletin during April, 1936. A very commendable publication comprising 16 pages of well-presented, timely subjects, it bears favorable comparison with other bulletin exchanges coming to our notice.

On June 3 the annual clinic of the Westmoreland County Medical Society was held at Latrobe Hospital. The committee on arrangements was guided by Dr. Thomas St. Clair, of Latrobe. The program consisted of papers and presentations in the morning by physicians of Westmoreland and surrounding counties. In the afternoon well-attended medical and surgical clinics were conducted by Drs. Louis Hamman, of Baltimore, and John Cooke Hirst, of Philadelphia.

As this report is being written, plans are under way in Lawrence County for an all-day clinic in September. Your councilor feels assured that under the able guidance of Dr. William A. Womer, secretary, the high standards of similar meetings held in the Tenth District will be maintained. The difficulties in Lawrence County with dispensaries and clinics have been amicably adjusted by the good offices of the county society organization. In this county 2 hospitals have adopted insurance plans, and the membership is apprehensive that medical service may soon be included. Your councilor has been assured that this proposal will receive active opposition from the county medical society, which will be supported by State Society representatives.

The emergency child health program is being continued in Allegheny and Westmoreland counties under the leadership of Drs. Henry T. Price and Louis J. C. Bailey respectively. These committees have done an enormous amount of work, reports of which are contained elsewhere in the September, 1936, issue of the JOURNAL and in the Official Handbook. The State Society and its members owe Drs. Price and Bailey a vote of gratitude for the skill, time, and effort which they and their associates have expended in forwarding this worthy project in behalf of the children on relief.

In Beaver County, "The Beaver County Plan" is working very satisfactorily. Physicians are receiving the regular fee for services rendered to indigents, and the relation between the county medical society and county commissioners is one of harmony. The details

of this plan have been published in the PENNSYLVANIA MEDICAL JOURNAL, and its study and possible adoption by counties similarly situated are well worthy of consideration.

The Board of Directors of the Allegheny County Medical Society wisely inaugurated a movement to appropriate annually a substantial sum to assist in the maintenance of the Pittsburgh Academy of Medicine library. This will enable the library to remain open 3 evenings a week (with an attendant), and places at the disposal of all physicians of western Pennsylvania the facilities of one of the best medical libraries in the state.

During the week of Mar. 16, Pittsburgh as well as other communities throughout the state experienced the worst flood in the history of this commonwealth, and several physicians of the Tenth Councilor District, with homes and offices in river districts, suffered considerable loss and great inconvenience. During this disaster and for 2 weeks following, physicians were unable to reach their offices in downtown Pittsburgh. Telephone, elevator, and light services were cut off during this period. The Allegheny County Medical Society established a temporary office in a building outside the flood zone, and through the efforts of the executive secretary, Dr. George R. Harris, gave efficient service to many members of this society and their patients. The service, voluntarily and freely rendered by physicians of the district in behalf of the thousands of homeless victims of the flood, has been recognized and acknowledged by the newspapers of the district and by the American Red Cross.

At present, under the very able councilorship of Mrs. Howard A. Power, there are in the Tenth District 4 very active woman's auxiliaries to the county medical societies. Mrs. Power, by her knowledge and experience with programs and program committees, has stimulated attendance at various auxiliary meetings.

DR. LAURIE D. SARGENT, WASHINGTON, COUNCILOR FOR THE ELEVENTH DISTRICT

To the President and House of Delegates:

I have this year completed the remaining year of the unexpired term of Dr. Arthur E. Crow, of Uniontown. I owe him much for timely advice based on his experience and his great desire for the success of the medical profession.

In submitting my report of the Eleventh Councilor District I do so with a great degree of humility, in that I fear I may not have met successfully all the responsibilities of the councilor and trustee for the district.

I have visited all of the component societies. I was amazed and gratified on meeting the large nucleus of medical men who are really strong and active in medical society work, and disappointed at the same time to learn of the large number of members who are totally indifferent to the value and the need for active participation in the affairs of our county organizations. I have no solution for the awakening of their interest in this relation of medicine but hope that they will soon see that we all need each other.

Many members of our district lost disastrously in the great flood of St. Patrick's Day. With Secretary Donaldson and Chairman Frontz of the Benevolence Committee I visited some so afflicted and helped, with their county society representatives, to plan for them as best we could with funds voluntarily contributed by our state-wide membership. The courage and determination

manifested in my district by physicians afflicted by the flood must be recognized.

No defense applications in suits for alleged malpractice were called to my attention.

I wish to make reference to the health talks which are sponsored by our State Society, credited to the county societies, and published in our daily papers, as being productive of great good throughout the district.

The Councilor Commission Meeting was held in Somerset, on Mar. 17, 1936. The program arranged was abandoned because none of the speakers were present, except the councilor, due to obstructions by high waters during the worst flood in the history of Pennsylvania, which particularly affected this district. About 40 members reached Somerset, with official representation from every society except Bedford County. The subjects of socialized medicine and emergency medical relief were freely discussed, and the meeting was well worth-while.

The Councilor District Meeting was held in Bedford Springs on July 16, 1936. This proved to be a most successful meeting from the standpoint of program presentation, attendance, and enthusiasm manifested. Two hundred and forty were in attendance, including 80 members of the woman's auxiliaries to various county medical societies.

I wish to compliment Mrs. Stanley A. E. Brallier, councilor to the various auxiliaries of the Eleventh District, for her helpful work during this year.

I wish also at this time to credit the officers and members of the societies composing this district with the essential co-operation they have given, thereby making for me a pleasant year, and I trust to all a year of progress.

Bedford County Medical Society has 15 members, the same number as last year; 3 members were lost through removal and 3 gained; there were no deaths during the past year.

This society holds monthly scientific meetings in Bedford. During the past year they had also 2 social and 2 clinical meetings, and there was one meeting to which the public was invited.

The society does not publish a bulletin but makes use of the "letter-bulletin" service available through the State Society secretary's office. It has no woman's auxiliary.

Their contact committees are quite active with the county commissioners, directors of the poor, and the county emergency relief board. The indigent people throughout the county are receiving medical service through free clinics and the county emergency relief board. This they expect to continue.

Their members are comparatively young, active, and vigorous, due, as their district censor reported July 16, to the fact that they have been raised on the waters of Bedford Springs.

This is the largest and apparently the most active society in the district. The members are energetic and provide the best of everything in the direction of medical progress. Their programs are typified by the following teachers: Drs. Francis C. Grant, professor of neurosurgery, and Truman G. Schnabel, assistant professor of medicine, University of Pennsylvania Medical School; Curtis C. Mechling, professor of proctology, University of Pittsburgh Medical School; Ralph M. Tyson, professor of pediatrics, and Harry A. Duncan, associate professor

of gynecology, Temple University Medical School; Russell L. Haden, Cleveland Clinic; Hugh H. Young, professor of urology, and Samuel Wollman, associate professor of medicine, Johns Hopkins University Medical School.

They have held the following meetings with several splendid presentations by their own members: 10 scientific, 2 clinical, 1 social, and 1 cancer control meeting to which the public was invited.

They publish an excellent monthly bulletin, termed *The Medical Comment*, under the editorship of Dr. George Hay.

The present membership of this society is 177, a net gain of 5 during the past year. There have been 6 deaths during the past 12 months.

Their committees have been active in contacting the directors of the poor, county commissioners, and county emergency relief boards.

Their woman's auxiliary is most active.

This is one of our most active societies, and its members continue to carry on the good work of which they have always been capable. The society consists of 112 members, 2 less than last year, there having been 6 deaths.

During the year they had 10 scientific meetings, one social, and one clinical, also one combined with the dentists, which was social, and one combined with the pharmacists, which was scientific. All scientific meetings were held in Medical Hall in Uniontown Hospital, with the exception of one held in Connellsville.

The scientific programs have included the following speakers: Drs. James L. Gilmore, William H. Guy, and Zoe Allison Johnson, of Pittsburgh; Emil Novak, of Baltimore; L. Dale Johnson, Connellsville; Elliott B. Edie, Clark M. Luman, and Hubert Lund, of Uniontown.

The society publishes a monthly bulletin, *The Mirror*, the editor being Dr. Charles C. Hubbard, of Uniontown.

They have a most active woman's auxiliary.

They sponsor free clinics, approved by the county society as follows: Genito-urinary, prenatal, tuberculosis, and a crippled children's clinic.

I believe the work done by the Emergency Child Health Committee in this county ranks equally with any similar endeavor in the state. This is under the leadership of Dr. Charles H. Smith, and his untiring zeal has made possible the amalgamation of the efforts of the interested persons and groups essential to such success. They have made a total of 16,175 examinations of indigent children and have directed the nutritional instructions and the corrective operations so widely needed in this industrial county. We must give recognition to this great work in this county.

The membership of this county society at the present is 23, showing a loss of 4 members since last year.

There were 2 deaths. They held 10 scientific meetings during the year, one social, one clinical, one liberally attended by the public, and one joint scientific meeting held with the Washington County Society. They have a good attendance and all programs are most instructive.

In addition to their own members the following speakers appeared during the course of the year: Drs. George J. Busman, Harold W. Jacox, and Eben W. Fiske, of Pittsburgh, and the trustee and councilor for the district.

They publish a bulletin monthly and have a very active woman's auxiliary.

The outstanding accomplishment of this society has been its success in interesting the county commissioners and directors of the poor in the medical service rendered throughout the county, and in gaining public support for the building of the new hospital at Waynesburg.

Weekly free clinics approved by the society in this county are carried on regularly.

This county society has 40 members, although several other physicians of the county, because of geographic location, are permitted to unite with the adjoining society of Cambria County.

SOMERSET COUNTY SOCIETY Two deaths occurred during the year.

The society meets 6 times a year; there are 5 scientific meetings and 1 social meeting. Graduate lectures and clinics at the hospital, arranged by the State Society Committee on Graduate Education, attracted a large attendance.

The seminar course had the following teachers from the University of Pittsburgh: Drs. William H. Guy, Sidney A. Chalfant, William L. Mullins, Paul Dodds, Paul B. Steele, and D. Hartin Boyd.

The outstanding accomplishment of the Washington County Medical Society is the result of its membership campaign, boosting WASHINGTON COUNTY SOCIETY 128 of a year ago (117 earlier in 1935) to a present total of 140 members. There were no deaths.

Meetings are held each month of the year, except July and August. These meetings are a combination of scientific, social, and clinical procedures. There were none open to the public last year. All meetings are held in the Washington Hospital; most of the essayists are local.

The society continues to publish monthly *The Medical Program*, the first county medical society bulletin to be published in the United States.

There is a very active woman's auxiliary, which meets at intervals with the society in a social way. Committees as a whole are most active.

There has been in this society a great deal of discussion concerning the economic problems of medical practice.

The work of the Emergency Child Health Committee in this county has been most active, under the leadership of Dr. Robert A. Knox. The total number of examinations made is approximately 5000; the correction of defects and the number of immunizations is exceedingly high. Great credit must be given to this committee for its splendid work among the children of the indigent.

REPORTS OF STANDING COMMITTEES

COMMITTEE ON PUBLIC HEALTH LEGISLATION

To the President and House of Delegates:

During the extraordinary session of the Pennsylvania Legislature of 1936, which considered relief in all its phases and the taxation to raise the necessary funds, there were only a few items justifying the special in-

terest of the membership of The Medical Society of the State of Pennsylvania.

House Bill No. 30, by Mr. Hoopes, Berks County, a joint resolution proposing an amendment to the constitution of the Commonwealth of Pennsylvania, providing for sickness insurance and unemployment insurance. Referred to the Committee on Constitutional Amendments, May 5, 1936. Reported as committed, June 2. Passed first reading, June 3. Passed second reading with amendments, June 8. Passed third reading and final passage, June 9. In the Senate as Bill No. 70, referred to the Committee on Constitutional Changes, June 9, where it was indefinitely postponed.

House Bill No. 101, introduced by Mr. Homer S. Brown, a joint resolution proposing an amendment to Section I, Article 18, of the constitution of the Commonwealth of Pennsylvania, giving the power to the legislature by a two-thirds vote of submitting a constitutional amendment such as they might propose to the people for general vote in a special election. Referred to the Committee on Constitutional Amendments, May 20. Reported as committed, June 2. Passed first reading, June 3. Passed second reading, June 8. Passed third reading and final passage, June 9. In the Senate as Bill No. 71, referred to the Committee on Constitutional Changes, June 9, where it was indefinitely postponed.

House Bills No. 30 and 101 are joint resolutions merely providing for a change in the constitution. Under the present law these resolutions and all resolutions suggesting a change in the constitution must pass 2 consecutive sessions of the legislature, then be presented to the people for a vote, and, if approved in a general election, specific bills must be presented and passed in the legislature for these different forms of social insurance. Under existing rules such proposals could not be presented to the voters for decision until November, 1938.

Your committee has followed these resolutions very carefully. We found it difficult to decide to go on record as opposing liberalization of the privilege of changing the constitution of our commonwealth. It is very difficult to predict 2 years in advance the sentiment of the majority of our people and of our own organization during such trying times.

Your committee will follow the progress of these resolutions and to the best of our ability present the views of the organized medical profession of this state and await results.

House Bill No. 132, by Mr. Sowers of Philadelphia County, an act to provide revenue by requiring a certificate to be obtained by naturopaths was referred to the Committee on Public Health and Sanitation, June 16. According to the latest available information it was indefinitely postponed.

RELIEF FROM A LEGISLATIVE STANDPOINT

There is no question that relief, as known in all its ramifications in Pennsylvania, since 1932, is on the wane as a result of the general uptrend in business, and because almost everyone recognizes that for the good of all concerned relief as administered must be made less attractive. To this end many legislative measures were introduced in the recent special session of our legislature.

There was a strong sentiment in favor of returning relief to county units. Some think it should be returned to the poor boards of the various counties. Others think each county should have a commission to

administer and distribute relief, with the county paying a portion of the necessary expenses and the state a portion, this being planned on a sliding scale so that the state's share will gradually become less each year, until at the end of 3 to 5 years the state may be completely eliminated and the counties will then resume their normal function regarding public welfare.

With forceful minds concentrating on the relief problem, it is very important at this time that the proper committee of each county medical society should watch these movements very carefully, contacting their present official county or district welfare agencies and developing leadership in the future distribution of medical care to the recipients of tax-supported benefits.

WORKMEN'S COMPENSATION AMENDMENTS

During the regular session of the legislature of 1935, the amendments recommended by your Committee on Workmen's Compensation Laws were, after joint consideration with your Committee on Public Health Legislation, incorporated with the amendments in the administration bill No. 1199. There were about 20 other amendments presented by different legislators also embodying our amendments. These were all indefinitely postponed, retained within the Committee on Labor and Industry of both the House and Senate.

House Bill No. 1199 and Senate Bill No. 1459, containing our amendments, were the only 2 amendments to the Workmen's Compensation Act which were released from the committee. House Bill No. 1199 and Senate Bill No. 1459 both failed to pass because of the differences in opinion regarding these measures on the part of the 2 legislative bodies.

We look upon our policy regarding workmen's compensation amendments during the 1935 session of the legislature as educational, inasmuch as these 2 bills were discussed on the floor in both the House and the Senate, and thus our legislators gained an understanding of our ideas regarding these amendments. Had we presented these amendments solely under our sponsorship, they would have met the fate of the other amendments presented by other groups and been indefinitely postponed in the committee, without any consideration being given to them by the House and Senate.

At the present time we believe that these amendments should be presented in the 1937 legislature separately, under our own direction, and that every effort should be made through our various county medical societies to influence our legislators to support the adoption of these amendments. Our final policy will of course be influenced by the political make-up of the House and Senate during the next regular session.

OCCUPATIONAL DISEASES

A commission has been appointed by the Secretary of Labor and Industry, the Honorable Ralph M. Bashore, to study occupational diseases with the idea of presenting legislation at the next regular session to make such diseases compensable. President Alexander H. Colwell of our Society, Chairman Calvin M. Smyth of our State Society Committee on Workmen's Compensation Laws, and Dr. Edith MacBride-Dexter, Secretary of Health of Pennsylvania, represent The Medical Society of the State of Pennsylvania on this commission.

We suggest the following policy for our organization regarding compensation insurance for occupational diseases: (1) Because of Pennsylvania's diversity of industries, legislation for occupational diseases will no doubt lead to a great deal of controversy both legally

and from the medical viewpoint; (2) very little is known regarding sensitivity of individuals following exposure to these various fumes, dust, and chemicals; (3) it is very difficult to evaluate the effect of various respiratory diseases produced by fumes and dust on the subsequent development of other chronic lung and heart diseases, such as tuberculosis, etc.

If definite occupational disease legislation is attempted at present, it may produce very active and far-reaching rebounds. Industry may require positive evidence of good health from present employees and future employees. It may seriously affect employment throughout the state because of slight physical defects.

It would seem, therefore, that before adopting such laws the Pennsylvania Legislature should carefully consider legislation expanding the present facilities for research and administration of the Industrial Hygiene Division recently very wisely placed in the Department of Health. Because of the great diversity of the industries of this state, it would seem logical that the department retain someone who has a definite knowledge of practical research work in its various phases to head a division such as this, and to develop research engineers, both sanitary and chemical, to make preliminary studies of this great combined engineering and health problem. The various chemicals in use at present should be investigated from their development to their practical use in industry.

Tests should be developed to determine human sensitivity to these various agents. Studies should be made and statistics compiled to determine where basic pathology specifically due to employment ends and a definite bacterial infection begins.

As facts are thus determined appropriate legislation can be developed to include only diseases of definite industrial origin. In the meantime, this state department should inspect and investigate the various industries throughout the state, co-operating with their medical and engineering departments in order to determine ways and means of correcting plant conditions that seem definitely to contribute to the development of occupational diseases.

COMPULSORY HEALTH INSURANCE OR SICKNESS INSURANCE

During the regular session of 1935 the legislature passed resolution No. 174, which provides that the Governor appoint a commission of 9 to investigate sickness in this commonwealth and recommend some form of compulsory health insurance legislation to be presented not later than February, 1937. At present writing this commission has not been appointed.

The Federal Social Security Act, passed by Congress and signed by the President of the United States, August, 1935, has provisions which may be so interpreted as to favor compulsory health insurance operated through the United States Public Health Service and our own State Department of Health. No doubt an effort will be made by the proponents of this form of insurance to have the Pennsylvania Legislature in 1937 adopt some governmental form of sickness insurance.

All these activities demand that we continue to be ready to counteract the arguments of those favoring this form of insurance, and in the interest of public health do what we can to influence and direct both public and legislative opinion into the proper channels, so that the people of this commonwealth may be assured a progressively improved quality of individualistic medical service.

MEDICAL SERVICE PLANS

The organization, in each county where practical, of a satisfactory medical service plan should be encouraged by the county medical society. It is now believed that because of recent relief experiences we will be confronted with the problem of medical care for low income groups, especially in catastrophic illnesses. This is due to recent propaganda regarding government-controlled forms of sickness insurance and the development during the depression of a receptive frame of mind on the part of the general public.

Your committee has knowledge, through reliable sources, that medical service plans are being contemplated by certain labor groups in Pennsylvania. This will be in the form of voluntary periodic contributions by employed members to provide the funds with which to employ physicians to deliver the medical service to subscribers and their families.

All such projects demand careful scrutiny on the part of the medical societies in the respective counties of this state and prompt consultation with the Committee on Medical Economics of our State Society.

The development of medical service plans for the low income groups, without the intervention of third parties, in as many counties as possible will help to answer the arguments for a legislative form of sickness insurance and give the public and ourselves an opportunity to evolve a nonlegislative plan of constantly improving medical practice.

The State Insurance Department has requested our co-operation in devising legislation to regulate such plans, that is, by having the power in the Insurance Department to investigate the financial state of these plans, guaranteeing to the public the safety of contracts entered into by them but not regulating the medical service phase. This should be helpful if such legislation is carefully planned.

CULT LEGISLATION

There is no doubt that the chiropractors and naturopaths will be active in the 1937 regular session to obtain for themselves a board to govern their particular branch of the healing arts profession and separate them from the present high standard of training set forth by the Pennsylvania Department of Public Instruction.

There is no reason to change our policy of attempting to present our previous arguments in behalf of the retention and maintenance of the present high standards of Pennsylvania's present educational requirements for all seeking license to treat the sick. The present act has been supported by all our courts.

We recommend also that the various medical schools throughout the state give a limited amount of time to instruct the senior students in the fundamentals of the treatment advocated by the various healing cults and also give them some knowledge of Pennsylvania's medical practice laws.

CO-OPERATION WITH THE DEPARTMENT OF HEALTH

Inasmuch as the State Department of Health was originated by legislation introduced under the sponsorship of The Medical Society of the State of Pennsylvania, and all activities of the department are dependent upon regulation and legislation, your Committee on Public Health Legislation is willing to assume its share of the responsibility in suggesting the policies followed by our society in this particular relationship.

To its original purpose—the protection of water and food supplies, the control of epidemics by the enforcement of quarantine laws, *etc., etc.*—our State Health

Department, by reason of its responsibility for the quality of the health service to the indigent, has taken advantage of and provided for the indigent the diagnostic, and, to a certain extent, the corrective benefits that have developed from medical research and discovery, such as diphtheria antitoxin and toxoid, the Wassermann test, various procedures for the tuberculous, *etc., etc.*

There is little doubt that in the future this public service will continue to keep step with medical progress. The department desires the co-operation of all private practitioners and in turn is willing to work with us to the fullest extent. At present they particularly desire our co-operation in a diphtheria prevention campaign and a campaign for the control of syphilis.

Your committee, in the face of these facts and its previous experience, can suggest nothing but hearty co-operation with the Department of Health, and toward that end recommends the continuation of contact and conference committees similar to the committee (See page 1062) from our society which, in the last few months, has contacted and worked out ways and means of carrying on the provisions of the Federal Social Security Act in a series of conferences with representatives of the State Health Department and the federal bureau concerned. We think such a committee should be appointed each year.

LAWS PASSED UNDER OUR SPONSORSHIP DURING THE PAST SESSION

1. Amendments to the medical practice act. These are now in operation and are in the process of legal interpretation, but it will probably take several years for a final definite decision regarding the legal interpretation of these amendments to be made.

2. The dangerous drug act regarding the prescribing of barbituric acids and derivatives. This is now in force and very liberal regulations have been adopted, but they have not as yet been sent out from the Department of Health because of a lack of appropriation for so doing.

PROPOSED NEW LEGISLATION

Proposed new legislation referred to our committee includes the following referred by the 1935 House of Delegates:

1. Merit or civil service system for the trained professional personnel of the Departments of Health and Welfare.

2. Lien law, providing for liens for medical and surgical treatment rendered insured victims of highway accidents.

3. Law covering charity patients in hospitals who leave estates.

4. Medical examination of automobile drivers.

5. Removal of quarantine for German measles, presented recently by Montgomery County Medical Society.

We are preparing bills to cover the removal of quarantine for German measles, for a merit or civil service system for the trained professional personnel of the Department of Health, and a lien law, which we will present at the next regular session. We expect your hearty co-operation in influencing your local legislators to support these bills.

Regarding the question of defining a charity patient and attaching estates of so-called charity patients, we intend to give this our careful consideration as to constitutionality and policy.

Regarding physical examination of automobile drivers, we think this is a rather important measure and are in sympathy with the intent of this proposal. It will open

up many debates from different angles and it might better be sponsored by automobile organizations.

In order to enhance the value of our advice along health legislation lines we urge, in each county where possible, that an organization should be effected by the county medical society with the nurses, dentists, pharmacists, hospital conferences, and the woman's auxiliaries to these organizations.

Your State Public Health Legislative Conference, combining such organizations, is very active and we are quite sure is of considerable assistance to each of the component organizations. We therefore urge the revival and the maintenance of a public health legislative conference in each county of this state.

NEW STATE ADMINISTRATIONS AND POLITICAL PATRONAGE

1. Under our present system of politics, patronage plays an all-important part, and physicians as a group are just as much responsible as any other group for permitting this.

2. When an individual accepts a political appointment, he should realize the conditions under which it is accepted.

3. When a political party gains a dominant position by popular vote, it has the right to assume that the people voted for a change of administration.

4. If our medical organization entangles itself in political alliances for the benefit of deposed individuals or those seeking preferred positions, we place our organization in a nonstrategic position in influencing important public health legislation.

☛ If the various county medical societies of this state exercise their influence in the election of those candidates who stand for the present high standard of medical training and public health legislation, we will have very little difficulty with our public health legislation. If this is done, we will very likely be consulted by any dominant political party in this state regarding the appointment to office of the medical personnel under the direction of the state, and will be requested to suggest individuals with the proper qualifications.

There has been considerable discussion in this report regarding policies. It is the duty of the House of Delegates and the Board of Trustees, with the assistance of the committees concerned, to approve policies. These policies should be far-sighted because The Medical Society of the State of Pennsylvania, a guiding influence since 1848, is going to outlive the reign of any dominant political group in this state.

Policies of necessity not infrequently need to be changed very suddenly due to unforeseen circumstances arising in our course.

Your Committee on Public Health Legislation desires your criticism of its activities and recommendations. We can only suggest ideas for your consideration and give you reasons for recommending them. We wish to receive your suggestions along these lines and, if after thorough discussion beneficial changes can be recommended, we are only too willing to co-operate for the best interests of public health and The Medical Society of the State of Pennsylvania.

Respectfully submitted,

CHAUNCEY L. PALMER, *Chairman*,
CLOY G. BRUMBAUGH,
ALEXANDER H. COLWELL,
JOSEPH A. DALY,
WALTER F. DONALDSON,
THOMAS R. GAGION,
JAMES D. STARK.

COMMITTEE ON PUBLIC RELATIONS

To the President and House of Delegates:

Your Committee on Public Relations begs leave to report as follows:

At the outset of this year, under your approval and with the subsequent financial support provided by the Board of Trustees, your committee planned the inauguration of health councils in various communities throughout the state which should unite all local agencies interested in public health problems, with the hope that a general presentation freed from dissension might be made to the public.

Weather conditions of an unprecedented nature prevented, in large measure, the completion of our preliminary plans. We seek an opportunity to further this type of enterprise, believing that it is, after all, the best policy thus to amalgamate local interests and assume the leadership which shall naturally follow as the result of the intimate knowledge of the true aspects of health situations familiar to the organized medical profession.

We therefore recommend that the House of Delegates continue its support of this policy in the future.

Second, the use of the "Your Health" column for the instruction of the public as to the medical aspect of proposed sociologic legislation has been carried on with utmost discretion. Repercussions occur when this phase is stressed too much in our health instruction columns devoted to sickness prevention. The primary purpose of these columns is to establish the health leadership of the county medical society in the various communities of each county. To this end we believe this effort should be enlarged, not in competition with, but in contrast to the present newspaper syndicated health articles which deal so largely with the treatment of disease.

We believe the local editors and publishers will eventually recognize the values in the local relationship and will turn to our county societies and our State Society for medical leadership. Such a happy outcome requires time, and we do not expect to produce the results hoped for in any short period. To date much has been accomplished which cannot be set down in facts and figures. The greatest need for success is that the local county society representatives should assume their responsibility and develop an active interest in broadening the influence of the county societies with and through the local press.

In complete co-operation with the Committee on Economics and the Committee on Public Health Legislation and the Board of Trustees each statement made by this committee has been thoroughly digested before any outward expression as to policy has been made. We cannot detail the difficulties which may surround any public position we may take. Our legislative position or influence may be completely destroyed by an unfortunate or premature statement made officially in the name of the State Society.

We bespeak your tolerance for our conservatism and caution in the face of irritating attacks made throughout this year, and assure the membership of the House of Delegates of our full understanding of the injustices wrought by individual members taking hypercritical positions. Publicized controversy over moot questions never helps us to gain public confidence.

It will be understood that your committee believes that active assistance to county medical societies and throughout councilor districts by carefully chosen, thoroughly trained, and adequately compensated individuals who may represent the medical point of view, is an ideal

toward which we strive. Practical experience seems to demand such an enlargement of our activities.

This recommendation has the support of President Colwell and the Public Relations Committee. We, in the light of the experience of other county or state societies, enthusiastically laud the plan, but again from practical experience realize that we must first find the individuals. Personality is necessary to the success of such an enterprise. The Board of Trustees will no doubt be guided by the practical aspects of this proposal. If it is necessary to spend more money, certainly our membership should be willing to provide it. This is recommended to meet that which is believed to be no longer a threat but an actual menace to our respect, our ideals, and our livelihood.

Our committee will again present an exhibit—a program of instruction—during the Pittsburgh session. This will include a motion picture film which was recently prepared by our Subcommittee on Periodic Health Examinations. After Oct. 10 this film will be available, as is the cancer control film, for use at meetings sponsored by county medical societies. Requests should be addressed to the Librarian, 230 State St., Harrisburg, Pa.

Respectfully submitted,

*WILLIAM H. MAYER, *Chairman*,
PATRICK E. BIGGINS, *Secretary*,
GEORGE H. CROSS,
CHARLES FALKOWSKY, JR.,
CHARLES F. NASSAU,
FRANCIS F. BORZELL,
JOHN P. HARLEY,
WILMER KRUSEN,
ROBERT M. ALEXANDER,
ALEXANDER H. COLWELL, *Ex-Officio*,
MAXWELL LICK, *Ex-Officio*,
EDGAR S. BUYERS, *Ex-Officio*,
ROBERT L. ANDERSON, *Ex-Officio*,
WALTER F. DONALDSON, *Ex-Officio*.

COMMITTEE ON MEDICAL BENEVOLENCE

To the President and House of Delegates:

The Medical Benevolence Committee during this past year has been more active than in any previous year, due in part to the state-wide record-breaking flood of last March.

With the approval of the Board of Trustees, the committee expended \$253.50 from the society's treasury to solicit the entire membership by mail for contributions to a special flood relief fund to assist those members in the flood districts who had lost their office equipment and, in many cases, a large part of their household furnishings.

A total of \$6040 was received, which was apportioned among 31 physicians located in 5 different counties. Quite a number of other members of our society had equally heavy losses, but reported that they were able to finance their rehabilitation themselves. Details regarding this special activity of our committee were published in the May, June, and July numbers of the PENNSYLVANIA MEDICAL JOURNAL.

On Sept. 1, 1935, we had 23 persons receiving benefits periodically from the benevolence fund. Seven others were approved during the year; 4 were discontinued, leaving a total of 26 beneficiaries at the time of this report.

Our committee again welcomes the opportunity to express its thanks and appreciation to the members of the woman's auxiliaries to the various county societies and the auxiliary to our State Society for their devotion to the purposes of the benevolence fund, as evidenced by their munificent contributions during the past year, all of which were expended in support of the fund's beneficiaries. The committee is also appreciative of the generous contributions received from several members of our society.

It is with sadness that we here record the passing, on Dec. 23, 1935, of the treasurer of our committee, Dr. Edward B. Heckel of Pittsburgh, who had served faithfully in that capacity since the inception of the committee in 1905. We shall greatly miss his sound judgment and wise counsel. Dr. Ross V. Patterson of Philadelphia, who is a past president of our State Medical Society, as was also Dr. Heckel, was appointed treasurer to fill the vacancy.

The report of the treasurer of the committee follows:

BALANCE ON HAND, AUG. 31, 1935	\$982.51
RECEIPTS	
From Treasurer Lowman	
Contributions from woman's auxiliaries	\$3,109.94
Contributions from 2 members	107.00
Interest on investments	3,384.40
Transferred (from Medical Benevolence Fund) from cash accumulated from contributions and unexpended earned income from the fund prior to 1933	3,000.00
	<u>9,601.34</u>
	\$10,583.85
DISBURSEMENTS	
September, 1935	\$637.50
October	1,545.00
November	350.00
January, 1936	337.50
February	1,440.00
March	515.00
April	325.00
May	1,607.50
June	325.00
July	310.00
August	1,742.50
	<u>\$9,135.00</u>
BALANCE ON HAND, AUG. 31, 1936	\$1,448.85

Respectfully submitted,

HOWARD C. FRONTZ, *Chairman*,
ROSS V. PATTERSON, *Treasurer*,
WALTER F. DONALDSON,
CLARENCE R. PHILLIPS.

COMMITTEE ON SOCIETY COMITY AND POLICY

To the President and House of Delegates:

No business has been referred to this committee during the past year; therefore no meetings were held.

Your committee will present to the House of Delegates at the Pittsburgh session the names of nominees to the House of Delegates of the American Medical Association to serve as follows: 5 delegates to serve for 1937-1938; 1 delegate to serve for 1937 to complete the unexpired term of 1 year of Dr. William H. Mayer, deceased; 11 alternates-designate to serve for 1937-1938; and 11 alternates-at-large to serve for 1937.

Respectfully submitted,

J. NORMAN HENRY, *Chairman*,
THEODORE B. APPEL,
WILLIAM T. SHARPLESS,
J. K. WILLIAMS WOOD,
JAY B. F. WYANT.

* Deceased Aug. 22, 1936.

COMMITTEE ON NECROLOGY

To the President and House of Delegates:

The time has come again when this society pauses to recall to mind those fellow members throughout the state who, a year ago, were in the ranks but have since been called by death; their places are vacant and their presence is missed. They have passed beyond our vision as passes this moment of regretful comment, but remembrance of those of whom we now speak will linger on.

The names of these 148 physicians have been recorded, month by month, in the PENNSYLVANIA MEDICAL JOURNAL and in the annual Roster of the society; therefore your committee does not repeat them in this report. The records of service which they have left in their various communities are such as to stimulate us to continue on our own way, in the practice of the art of medicine, as described a long time ago by Hippocrates, so as to be "respected by all men in all times."

Respectfully submitted,

ROBERT G. BARCKLEY, *Chairman*,
WALTER F. DONALDSON,
JOHN FOSTER,
EDWARD R. GARDNER,
CHARLES-FRANCIS LONG.

COMMITTEE TO CONFER WITH GOVERNMENTAL AND PRIVATE HEALTH AGENCIES

To the President and House of Delegates:

The functions of this committee as laid down in the by-laws of the State Society are as follows: "To strive to prevent and adjust misunderstandings between members of the society and public health welfare agencies throughout the state, and to co-ordinate all such endeavors, working to the common end—the betterment of public health; to confer with the various private and governmental health agencies with the object of formulating a working, amicable program whereby the services rendered by the medical profession to all such agencies shall be under the jurisdiction of, or, at least, have the sanction of the state and local component medical societies."

With the exception of conferences with the State Secretary of Health relative to the extension of health services under Federal Social Security funds, a review of the year's happenings furnishes no evidence of the need for conference with this committee by any of the above-named agencies, nor has there been any official call upon this body to adjust any existing or potential differences. The year has been marked by a splendid spirit of helpfulness by all concerned in the promotion of public health.

One needs only to have followed the public prints to be aware of the splendid spirit of co-operation evident in meeting the situation caused by the devastating floods which swept the major portion of the state during the spring months. Whether there had or had not been any previously existing organization to meet such a catastrophe, the medical profession arose spontaneously to the need and worked hand in hand with all health agencies with a supreme good will and sacrifice that ever characterizes our calling. The accord which exists between organized medicine and regularly constituted health authorities is a splendid commentary on the comity which exists in our state when a common call comes to the medical profession.

It is still the sense of this committee that the several component societies add to their roster of committees a local contact committee, comparable in its functions to the parent committee.

Furthermore, it is suggested that all county societies should keep in close touch with local health boards and public health agencies within their jurisdiction, that we may continue to have the continued good will of such agencies.

As an evidence of the quick and sympathetic response to inquiry as to the relations of public health agencies, we quote from a letter published in full in the July PENNSYLVANIA MEDICAL JOURNAL, which is self-explanatory.

"DEAR DR. ODENATT:

"Inquiry has been made as to the type of patient that is being treated in the genito-urinary clinics conducted by the State Department of Health. Such communication recently came from one of the component bodies of the State Society.

"It should be of interest to your committee to know that only those are accepted for treatment who are not able to pay for private service.

"The chiefs of the clinics are instructed to determine the ability of patients to pay for private service. If there is a question concerning this matter, they are told to refer the patient to the family physician, who should be in position to advise the clinic on the subject.

Very truly yours,

EDGAR S. EVERHART,

Acting Assistant Surgeon, U. S. P. H. S."

This is only one of numerous instances of the splendid spirit which is engendered by close co-operation.

Respectfully submitted,

W. BURRILL ODENATT, *Chairman*,
PAUL H. WILSON,
CURTIS C. MECHLING,
FRANK G. HARTMAN,
MAURICE J. KARPELES.

REPORTS OF SPECIAL COMMITTEES

COMMITTEE ON MENTAL HYGIENE (Subsidiary to Committee on Public Health Legislation)

To the President and House of Delegates:

The Committee on Mental Hygiene is happy to report very cordial co-operation from the officers of the State Medical Society, the editor of the JOURNAL, the county medical societies, the Bureau of Mental Health of the Department of Welfare of Pennsylvania, and the superintendents of schools, institutions, and mental hospitals, in carrying out the committee's program during the past year. From the reports received throughout the state, the committee feels that we have had a fairly satisfactory year.

It is with regret that your committee reports the death during the year of one of its active members, Dr. Clarence A. Patten. A distinguished neurologist, psychiatrist, and a long and earnest worker in the mental hygiene field, Dr. Patten's background and years of experience and training will be missed by those who carry on.

Your committee expresses its sense of loss in the forced retirement of several superintendents throughout the state who, by their genuine helpfulness in years

past in our committee's educational programs, will always be remembered with grateful appreciation, and we trust their co-operation will continue in their chosen fields. The committee likewise appreciates the co-operative efforts of their successors, and sincerely trusts that the cordial relations between the institutions and the mental hygiene committees of the adjacent county medical societies will not be broken.

The committee learns with regret of the resignation of Dr. LeRoy M. A. Maeder, who for years, as director of the Mental Hygiene Committee of the Public Charities Association, co-operated with this committee in carrying out its programs. We trust that the reorganization of the Mental Hygiene Division of the Public Charities Association will be such that the mental hygiene activities of this association will not be curtailed.

Respectfully submitted,

J. ALLEN JACKSON, *Chairman*,
CHARLES H. HENNINGER,
JAMES W. McCONNELL,
*CLARENCE A. PATEN,
HOWARD K. PETRY.

COMMISSION ON CANCER

(Subsidiary to Committee on Public Relations)

To the President and House of Delegates:

The annual meeting of the Cancer Commission for planning purposes was held in Harrisburg, Nov. 14, 1935. At the same time the seventh annual meeting of the Pennsylvania Association of Tumor Clinics was held. These 2 meetings were held at the same time in order to reduce the commission's expenditures of State Medical Society funds, the Board of Trustees having found it advisable to reduce the commission's approved expenditures from the high level of \$1239 in 1935. It was decided best to follow the general outline of work originated by the late Dr. Jonathan M. Wainwright, the commission's chairman for 25 years, and so ably carried on by Dr. George E. Pfahler, chairman in 1935. It was determined that for the ensuing year the endeavors and efforts of the Cancer Commission would be particularly focused on *early diagnosis*. The state was divided into 9 districts, that being the number of members comprising the Cancer Commission.

The American Society for the Control of Cancer has requested the commission's co-operation and help with their plan for an organization to spread cancer education throughout the country. The various states are to be organized much like the tuberculosis societies have been carrying on.

The usual letters were sent out to the nurses' training schools of the state (141 in number) requesting continuation of the cancer lectures to nurses.

The fifth annual \$50 prize essay contest for registered nurses of Pennsylvania was conducted by the commission. The papers on the subject "How Can a Nurse Help Diminish Deaths from Cancer in Pennsylvania" are being examined by a committee appointed at our request by the Pennsylvania State Nurses' Association. The contest was held later than usual this year and for that reason the report from the committee has not yet been received. The winner will therefore be announced later. It was disappointing that there were not more contestants entered in this contest. We are hopeful that more interest and enthusiasm will be shown next year.

The State Department of Health agreed to help in any way possible in the spread of knowledge in regard to cancer control.

The meeting of the State Association of Tumor Clinics took place at the Harrisburg Hospital, Harrisburg, Nov. 14, 1935, under the directorship of Dr. Harvey F. Smith, who made an excellent selection of speakers and cases for demonstration. The Harrisburg Hospital had a wealth of material and made us all more certain of the impelling need of tumor clinic development in the state as well as the nation. The tumor clinic at Scranton, organized by former Chairman Wainwright, has been revived and displays every evidence of its successful continuation. Efforts are being made to organize tumor clinics in those sections not having them.

Dr. Stanley P. Reimann has arranged for a large cancer meeting to be held in Philadelphia, at which time he has invited the Tumor Clinic Association members to hold their eighth annual meeting. As many have expressed themselves in favor of the Philadelphia meeting, it is recommended that Dr. Reimann's invitation be accepted.

A cancer study course was held in Johnstown on June 11, 1936, under the auspices of the Cambria County Medical Society, and arranged by the Committee on Cancer Control of that society. This was a most successful and interesting meeting. The guest speakers were Drs. George E. Pfahler, of Philadelphia; Wm. Frank MacFee, of New York; Edwin A. Merritt, of Washington, D. C.; Laurie D. Sargent, of Washington, Pa.; in addition our president, Dr. Alexander H. Colwell, and Drs. Bortz, Grier, and Waterworth of the Cancer Commission took part in the program. There was a symposium on carcinoma of the breast, uterus, colon, and rectum. There were 3 sessions—morning, afternoon, and evening. There was a large lay group in attendance upon the evening session. Dr. Harry M. Stewart, chairman of the Cambria County Cancer Control Committee, deserves a great deal of credit for this very fine meeting. Our commission earnestly requests that more activity and interest be displayed in the future by the chairman of the cancer control committees of the various county medical societies.

A cancer control meeting was held in Altoona, June 23, under the direction of Dr. William H. Howell. This was a combined meeting of the Mifflin, Huntingdon, Bedford, and Blair county medical societies. A symposium on cancer of the breast was held, demonstrating the values of preoperative irradiation combined with surgery and postoperative irradiation and of irradiation treatment per se. Dr. Howell reports that there is to be a cancer control meeting in Chambersburg the latter part of the summer.

Dr. Reimann reports great activity in that cancer has been brought to the attention of lay groups during the past winter and spring on an average of once a week in the district including Philadelphia and suburbs.

The majority of county societies have co-operated very well in holding at least one meeting devoted entirely or in part to cancer.

Dr. William L. Estes is arranging for a large meeting in his district to be held at Allentown in the fall. This meeting will be similar to the one held in Bethlehem last year.

A meeting of the Cancer Commission was held on April 2, at the Hotel William Penn, Pittsburgh. Meeting with 5 of the commission members who were able

* Deceased June 2, 1936.

to attend were Dr. Walter F. Donaldson, secretary of the State Society, and Dr. Lester Hollander, in charge of the Scientific Exhibit. Plans were made for the cancer exhibit at the State Society meeting. The visiting physicians will have the advantage of examining (1) moulages; (2) the living patient (dry clinic); (3) the steps in making a diagnosis by examination of sections, frozen and fixed, also the Aschheim-Zondek test and its modification. The exhibit has been very interestingly described in detail by Dr. Hollander in the July issue of the JOURNAL. It is strongly urged that every physician attending the state meeting make it a point to visit the cancer exhibit.

There is to be a paper on cancer read by Dr. Donald Guthrie before the general session. Most of the sections have very kindly agreed to include cancer subjects in their programs.

Respectfully submitted,

SAMUEL J. WATERWORTH, *Chairman*,
HARRY W. BERNHARDY,
WALTER M. BORTZ,
ALBERT J. BRUECKEN,
WILLIAM L. ESTES, JR.,
GEORGE W. GRIER,
GEORGE W. HAWK,
WILLIAM H. HOWELL,
STANLEY P. REIMANN.

COMMITTEE ON ARCHIVES

To the President and House of Delegates:

During the past year the archives of our society have been enriched by the addition of 2 county medical society histories, both of which were read at annual councilor district meetings, namely, "A Brief History of Columbia County Medical Society," by Dr. J. Elmer Shuman of Bloomsburg, and "A Brief Medical History of Clearfield County," by Dr. John M. Quigley of Clearfield.

The committee takes this opportunity to urge once again upon councilors that they use their influence in having such histories prepared and read as a part of the program of their annual councilor district meetings. This has been completed in the Second District with the reading of "A Brief History of the Berks County Medical Society," at the 1935 councilor district meeting in September; with 3 exceptions (Center, Mifflin, and Perry counties) this procedure has been completed in the Sixth Councilor District; and with 3 exceptions (Bedford, Greene, and Somersct counties), in the Eleventh District.

A priceless contribution to our archives was received from Dr. Arthur C. Morgan of Philadelphia—an old bound volume, in good condition, containing the "Proceedings of the State Medical Convention Held in Lancaster, April, 1848, and Constitution of The Medical Society of the State of Pennsylvania Then Adopted." This volume, according to a statement therein, was published in 1848 by order of the convention, and is bound with the similarly published proceedings of the annual sessions of our State Medical Society for the years 1849 to 1853 inclusive.

This gift completely rounds out the bound volumes of transactions of The Medical Society of the State of Pennsylvania from the year of its organization, 1848, to 1896 inclusive, which transactions, since the latter year, have been preserved to date in the bound volumes of the PENNSYLVANIA MEDICAL JOURNAL.

A copy of the Roster of the society's membership is included each year in the volume of bound transactions, which is added to the bound volumes for previous years and stored in the fireproof and waterproof vaults in our society's building at 230 State Street, Harrisburg.

The librarian, Miss Mary Elizabeth Taylor, whose full-time services are employed by the society, continues to serve in a most interested and efficient manner.

Respectfully submitted,

WALTER F. DONALDSON, *Chairman*,
GEORGE HAY,
J. NEWTON HUNSBERGER.

COMMITTEE ON TELEPHONE DIRECTORY CLASSIFICATIONS

To the President and House of Delegates:

Your committee has functioned steadily, quietly, and successfully in attending to the duties assigned, with the usual success in accomplishing the deletion of many listings that were in print and with the prevention of many others from being printed.

Your committee desires to express appreciation of the splendid co-operation accorded to us by members of the society throughout the state.

Respectfully submitted,

ARTHUR C. MORGAN, *Chairman*,
ARTHUR B. FLEMING,
RUSSEL R. JONES.

COMMITTEE ON DEFENSE OF MEDICAL RESEARCH

To the President and House of Delegates:

The Committee on Defense of Medical Research has the honor of submitting its report for the year of 1935-36.

In January, 1936, Representative James L. Quinn, 31st District of Pennsylvania, introduced H. R. Bill 7295 into Congress to prohibit experimentation on dogs in the District of Columbia. Your committee got into communication with Representative Quinn at once and obtained a copy of the bill and a promise of notification of the time set for the hearing on the bill.

During the conversation it was found that Representative Quinn was under the impression that the Drs. Mayo had committed themselves publicly as being opposed to animal experimentation. Through Secretary Walter F. Donaldson and Dr. William C. Woodward, Director of the Bureau of Legal Medicine and Legislation of the A. M. A., Dr. William J. Mayo was reached. He wrote directly to Representative Quinn, setting forth his actual views in a clear and unmistakable manner. Up to the present time your committee has not been notified of any hearing on this bill.

The committee herewith expresses its earnest thanks to Dr. Edward B. Krumbhaar and his associates for their prompt and efficient assistance in arranging data to be used at the hearing.

The introduction of bills to prohibit animal experimentation, to lower the standards of medical education, and to force the recognition of untrained cultists by health authorities and by hospitals, are dangers common to all the people and must be opposed by public opinion and the organized medical profession.

Respectfully submitted,

SAMUEL R. HAYTHORN, *Chairman*,
HARVEY F. SMITH.

COMMITTEE ON WORKMEN'S COMPENSATION

To the President and House of Delegates:

During the past year your committee held one full meeting at Harrisburg on June 24. In addition, numerous subcommittee meetings and conferences were held and a large amount of business was handled by correspondence.

Your committee is of the opinion that at the 1937 session of the legislature we should reintroduce the recommendations outlined in our previous reports, but that these should be presented in the form of amendments to the present Workmen's Compensation Law and *not as a part of any new law*. This recommendation is made because, judging from past legislative reactions, our committee concludes that the Legislature will in all probability act favorably upon these purely medical matters.

Although the recommendations of the society are by this time well known to the membership, may we at this time recall that they include (1) removal of the existing time and money limits in the treatment of compensation cases; (2) giving to the physician a definite standing at law (party at interest) in order that he may have a means of safeguarding his interests, a right which under the present act is denied him.

At the last full committee meeting the following matters were discussed and acted upon:

1. *Fee Schedule*.—Your committee in 1934 refused to recommend the adoption of a fee schedule as being impractical by reason of unavoidable differences in conditions obtaining in different localities. The position taken by the committee in 1934 was reaffirmed. It was agreed, however, that although opposing the fee schedule in principle, the schedule at present being followed by the State Workmen's Insurance Fund represents a fair basis for determining fees for this type of work.

2. *Compensation of Physicians for the Treatment of Ambulatory Patients in Hospitals, Clinics, Etc.*—It is the practice of most hospitals to charge a fee for treatment of the ambulatory compensation case that is much higher than fees for like services to noncompensable patients. This has resulted in refusal on the part of many insurance carriers to pay *any* additional fee to the hospital attending physician on the ground that such payments constitute duplication of medical expense. The situation resulting from this practice is that the physician is exploited by the hospital, which in effect *sells* the services of the physician and fails to compensate him in return. While we recognize the right of the hospital to charge for dressings, drugs, *etc.*, we do not believe that these charges should be in excess of the charges for like services in noncompensable cases. We also recognize that practices in this connection differ in different localities and in different hospitals in the same locality. It is, therefore, impossible for your committee to formulate a plan suitable for general adoption, but we strongly urge upon all physicians practicing in hospitals that they insist upon *an arrangement whereby the physician is paid for his treatment of every compensation case*. We believe this latter problem worthy of careful consideration and wise action by most county medical societies.

We wish to call attention to the fact that if the Pennsylvania Act is amended to give the physician a definite standing at law, the much complained-of practice, namely, the "lifting" of patients, will be automatically controlled.

3. *Choice of Physician*.—Your committee unanimously maintains the position, however, that it is unable to

recommend the unlimited free choice of physician in compensation cases.

Again we emphasize the need for harmony and unity. Querulous objections to minor points in our proposed amendments to the Pennsylvania Act will, if repeated again, harm our cause.

The approval by this House of Delegates of the above proposals of your committee and the combined interim activities of the committee with the Committee on Public Health Legislation and the Board of Trustees should guarantee unqualified county society membership support throughout the legislative districts as well as harmony during our appearances before the committees of the 1937 Legislature at Harrisburg.

Respectfully submitted,

CALVIN M. SMYTH, Jr., *Chairman*.

EDWARD PARDOE, *Secretary*,

GEORGE H. CROSS,

CHARLES FALKOWSKY,

LEWIS K. FERGUSON,

GEORGE W. HAWK,

GEORGE L. LAVERTY,

*WILLIAM H. MAYER,

FRANKLIN P. PHILLIPS,

LOYAL A. SHOUDY.

MEDICAL ADVISORY COMMITTEE TO THE STATE EMERGENCY RELIEF BOARD

To the President and House of Delegates:

Medical relief to the unemployed is a program which has been sponsored by the trustees of The Medical Society of the State of Pennsylvania and endorsed by the House of Delegates. The State Medical Advisory Committee is your agent entrusted with its faithful administration in co-operation with the SERB. During a period of 3 years we have labored for the objective that a high quality of medical care should be rendered economically and efficiently, honestly and honorably, by our participating members. Herewith we submit a report of our stewardship during the fiscal year now terminating.

A STATISTICAL REVIEW

The relief load is tabulated by the number of cases—a case including families plus nonfamily individuals. One case thus tabulated represents an average of approximately 4 individuals. The number of cases on relief July 6, 1935, was 430,668. On July 4, 1936, this number of cases had been reduced to 173,749. These numbers may be compared with the maximum relief load of 449,743 cases during May, 1933. In this reduction of 256,919 cases, the Statistical and Research Department accounts for a net of 34,919 returned to private employment. The remaining 222,637 very largely represent cases who are employed on WPA projects and who are not eligible for medical care. There has been a net transfer in relief rolls to WPA of 271,403 cases. Thus it appears that about 50,000 WPA workers have secured private employment during the past year.

The total expenditure for relief from June 1, 1935, to May 31, 1936, was \$122,218,195.50. Of this amount the total paid for medical expense was \$2,241,782.64—the ratio being 1.8 per cent. These figures exclude administrative expense and certain collateral activities paid from special funds, as transient camps and shelters, aid to college students, and certain processing projects. Of the amount expended for emergency medical relief, 74.4 per cent was paid to physicians, 14.4 per cent to

* Deceased Aug. 22, 1936.

dentists, 8.2 per cent to pharmacists, and 3 per cent to nurses.

RESOLUTION

The House of Delegates in session at Harrisburg, in 1935, approved and referred to this committee a resolution introduced by the Schuylkill County Medical Society. This petition requested the SERB "to set aside at least 3 per cent of federal relief funds for emergency medical relief." Accordingly it was submitted to Mr. Robert L. Johnson, then executive director of the SERB. During the latter months of 1935 federal contributions were reduced rapidly, terminating in December. Since Jan. 1, 1936, the only funds available for relief have been those appropriated by our own State Legislature. Your advisory committee has had the assistance of the Board of Trustees in its appeal for the continuation of the medical relief program and the allocation of adequate funds for its support. Mr. Johnson and his successor, Mr. Karl deSchweinitz, have been sympathetic toward our efforts. However, the continuation of the medical program became quite uncertain on several occasions on account of the inadequacy of the funds appropriated.

The resolution referred by the 1935 House of Delegates further petitioned that "when the county chairman and his associates in each constituent county on emergency relief have passed on a given bill from any physician in that county, this bill shall be paid as and for the same amount as passed by the county chairman and his associates, unless some extenuating circumstances have developed of which the county committee is ignorant." The relief administration has accepted this proposal. However, the occurrence of "extenuating circumstances" has led to controversy. Conferences have been held with your Board of Trustees and with Mr. deSchweinitz in an endeavor to carry out this provision more effectively. If and when funds are provided for relief in sufficient amount, it is proposed to allocate a proportionate amount thereof to each county on the basis of its relief load. All medical bills will be paid from this fund as approved by the respective county professional advisory committees. Should the amount of medical service provided exceed the appropriation, it will be necessary for all approved bills to be reduced proportionately during that month. The relief administration proposes a trial of this plan promptly in several counties if the legislature now in special session provides sufficient funds.* The results obtained by this experiment in decentralization will depend greatly upon the type of local leadership aroused.

HEALTH SURVEY

Our report to the House of Delegates in session last year outlined plans for a comprehensive survey of illness and its economic effect on the family unit. Funds could not be obtained for conducting this study. However, a survey has been made by the United States Public Health Service. The questionnaire was similar to but less detailed than that proposed by your committee. Your chairman and Secretary Donaldson conferred with Surgeon General Hugh S. Cumming and several of his subordinates in an endeavor to broaden the scope, but were unsuccessful. This survey was made with funds provided by Congress in the Social Security Act. The Surgeon General informed us that his effort was directed only toward ascertaining the facts regarding the extent and the effects of chronic illness; that the economic problems associated there-

with were beyond the domain of his jurisdiction. However, it is evident that information has been obtained which may enable protagonists of sickness insurance plans to deduct biased if not false conclusions. For this reason we urge cautious acceptance of any economic conclusions derived from this study. The report should be published during the coming year.

PERMANENT RELIEF PLAN

In a nation recently stunned by an economic catastrophe, witnessing privation, suffering, and poverty, and flooded with precipitate propaganda of pressure groups, it may be anticipated that the individuals who compose our profession would be swayed from unanimity of thought.

An indigent group has been with us always and will ever remain. Fundamental economic forces now in operation appear to be raising us out of the depression. Thus now we must seek to determine, among other things, the extent and the nature of the future relief program; to evaluate the corrective measures now in vogue; and to attempt to improve these methods by a study of the past inefficiencies.

It is anticipated that the normal relief load of the next several years will exceed that of the predepression period. Productive capacity of industry and of the farm now exceeds actual consumption, although it lags behind the requirements for desired standards of living. The lag in re-employment will remain until there develops a decrease in costs by quantity production and an increase in the purchasing power of the consumer. Disregarding cross-currents, thus it appears that the next several years will need to provide for a gradually diminishing amount of unemployment as a carry-over from the depression.

In our consideration of this problem there can be but one opinion as to maintaining the general health of the community; our ideas may vary as to the most practical method. This committee supports the prevailing tenet that medical care for the indigent is a community responsibility. The controversy continues as to whether this responsibility rests upon the nation, upon the state, or upon smaller governmental units. In the operation of emergency medical relief we have observed that the most efficient service has been rendered in those communities where a county medical advisory committee has had the inspiration of a faithful and conscientious chairman supplemented by the support of a loyal county medical society. This situation has prevailed generally throughout the state.

The attention of the House of Delegates is directed to the few counties in which co-operation has not been constant. In some instances, officers of county medical societies have issued to the public press and published in local medical society bulletins, criticisms expressing personal opinions but conveying the impression that such was the voice of the society. Some of these utterances are critical of interpretative actions of this committee. We deem it advisable for this House of Delegates or its properly constituted committee to provide opportunity for free discussion of this subject. The files of this committee will be available. Some correspondence heretofore not made public will be at your service to support our actions which, having received the interim approval of the Board of Trustees, continue to be questioned or flouted.

It is the recommendation of this committee that plans for future medical relief should encourage decentralization, with increased authority vested in the county unit; state control should be limited to the co-

* Since this was written Pennsylvania has announced abandonment of emergency medical relief. See page 1076.

ordination of efforts of local units but with power to intervene when local units fail to meet their delegated responsibility. The demands of epidemics or of catastrophes justify the continuation of some measure of preparedness under state jurisdiction.

Preservation of the patient-family physician relationship and payment on a fee basis for services rendered have proven to be sound in principle and in practice.

The funds necessary to provide medical care to those in need should be adequate to supply all necessary health services, and should be estimated on a per capita basis for an expected relief load—not by allocation from funds provided for general relief needs.

The numerous appropriations now provided for state-owned and state-aided hospitals, for nursing services, for diagnostic laboratories, and for various other activities of the health and welfare departments should be studied and these respective activities correlated with such proposed plan. The professions of pharmacy, dentistry, and nursing, as well as the State Hospital Association, should conduct similar studies and join us in evolving a co-ordinated and acceptable program. This plan should include a systematic program of professional education to physicians; of sanitation and preventive measures to the laity; provisions for mass immunization; and for periodic physical and dental examinations.

ACKNOWLEDGMENT

We beg to record our gratitude to Mr. Robert L. Johnson who served as executive director of the SERB during the calendar year 1935. He was tolerant in his deliberations, fair in his decisions, and allowed neither fear nor favor to swerve him from his course. His successor is Mr. Karl deSchweinitz, a professionally trained sociologist, who holds organized medicine in high regard. He looks to organized medicine to evolve a plan which will best solve that phase of the problem with which it is a party at interest.

Dr. Harold A. Miller has continued to fill efficiently his important and difficult task as medical director of the SERB. Your officers and trustees have responded wisely in advising us concerning perplexing problems, of which there have been many.

However, those men who have served so faithfully and conscientiously on their respective county medical advisory committees, who have performed their thankless tasks without complaint, who have spent countless hours with no recompense except the sense of service well rendered, are the ones to whom we wish to pay full tribute and to give credit for whatever measure of success the emergency medical relief program in Pennsylvania may have attained.

Respectfully submitted,

GEORGE L. LAVERTY, *Chairman*,
W. BURRILL ODENATT,
HENRY T. PRICE,
CHARLES H. SMITH,
WILLIAM E. ROBERTSON,
WALTER F. DONALDSON.

COMMITTEE ON CONSERVATION OF VISION

To the President and House of Delegates:

The Committee on Conservation of Vision desires to report a continuation of activities outlined in its 2 previous annual reports. The pace set for these activities has been somewhat slowed, due to the necessity of using our contacts for the publicizing of information

among the ophthalmologists regarding legislation affecting their interests as well as that of the community.

Educational work among lay groups regarding vision and its conservation has not been allowed to halt, however, and we are pleased to report the awakening of interest in sections that have heretofore been very dormant. The reference to this committee of many questions by lay organizations throughout the state convinces us that our work has had a far-reaching influence. The Philadelphia County Medical Society has been especially sympathetic with our endeavors, and one entire evening's program was given by the Eye Section of that society. Several hospital societies have likewise extended the privilege of their program to our speakers.

As we have pointed out on several occasions, this kind of work must be continuous, although lay and even professional interest for the time being may lag. The problem being a perpetual one, the treatment must likewise be perpetual.

Respectfully submitted,

SAMUEL HORTON BROWN, JR., *Chairman*,
LLOYD C. PIERCE,
HUNTER H. TURNER.

COMMISSION ON APPENDICITIS MORTALITY

To the President and House of Delegates:

The chairman and members of the commission appreciate the action of the 1935 House of Delegates in establishing a Commission on Appendicitis Mortality.

The annual meeting of the Commission on Appendicitis Mortality was held in Harrisburg on Feb. 13, 1936, with 6 of the 11 members present.

At the beginning of 1936, it was evident that after 2 years of work some of the councilor districts of the state were very well informed regarding the appendicitis mortality campaign, while others had not even heard of it. Various circumstances are responsible for this, the main one being the extent of territory to be covered by each member of our commission and the time required to build up an organization to reach every part of the state.

Secretary Donaldson suggested that the commission be made up of a chairman and a representative from each councilor district, each member to be responsible for the work in his councilor district.

Following is the plan of organization and work which was sent to each district chairman early in March, 1936.

PLAN OF ORGANIZATION AND WORK

I. Each member of the commission is chairman of his councilor district and responsible for the carrying out of the plan. Any difficulties arising in the accomplishment of the work should be reported to the chairman of the State Commission.

II. Each district chairman will submit within the next 2 weeks his 50-word warning paragraph on appendicitis to be printed in a leaflet for distribution to the high schools for publication in their school papers.

III. He will organize his entire district by counties, appointing an appendicitis committee in each, in one of the following ways:

1. He will suggest the appointments himself and submit them to the county medical society for approval.
2. He will request the president of the county medical society to make the appointments.

IV. Each county commission chairman, after acceptance of appointment, should be instructed to review immediately the educational work on appendicitis that has previously been accomplished in his county. The district chairman will meet the various county chairmen before Mar. 15, discussing in detail the program for each county, planning the work so that the 2 sets of lantern slides available for each councilor district may be kept in circulation, giving each member a chance to use them before the high school term and women's clubs' programs close for the summer. The number of warning stickers needed by each member should also be decided upon at the meeting. Details of the work to be covered follow:

1. *An Appendicitis Meeting in Every County Medical Society Early Each Year.*—Early in each year, a meeting of every county medical society should be given over entirely to the discussion of acute appendicitis. If desirable, guest speakers will be provided. This will prepare the way for the organization of the county society appendicitis committees.

2. *High Schools.*—About 40 per cent of the cases of acute appendicitis develop during high school age (10 to 20 years). We wish eventually to reach every high school student in Pennsylvania.

A suggestive 10-minute talk with lantern slides will be furnished by the State Medical Society to be used in presenting the subject of appendicitis to the student body.

A leaflet containing paragraphs written by the district chairmen will be given to each high school to be used in their school paper, hygiene classes, or in other ways to reach all students.

After a high school has been covered as described above, an effort should be made to have a lecture given at least once a year through the hygiene or physical education department so that every student is reminded of the appendicitis hazard every year.

3. *Civic Organizations.*—These organizations (Rotary, Kiwanis, Lions, athletic clubs, social clubs, etc.) are always interested in health problems and welcome a scientific talk. The State Society lantern slides can be used for such talks while at hand for the high schools.

4. *Women's Organizations.*—About 80 per cent of laxatives used are given or taken by women. Because of this fact we feel that they should be the next group to be reached with the appendicitis mortality facts.

Talks with lantern slides should be given to parent-teacher associations, nurses' alumni, women's hospital auxiliaries, women's clubs (literary, social, etc.), and country club auxiliaries.

5. *Radio and Newspaper Publicity.*—Radio talks and newspaper publicity sponsored by the Committee on Public Relations will be given under the supervision of the Appendicitis Mortality Commission.

6. *Hospital Surveys.*—In order to check up on the effectiveness of our campaign to reduce the mortality of acute appendicitis throughout the state, a survey of all hospital records will be made.

The surveys should be conducted through the health departments wherever possible.

Permission and the necessary arrangements should be sought in advance with the superintendents of hospitals. Their interest and support in making the survey is assured.

The surveys consist of abstracting on a form we furnish all hospital charts of all acute appendicitis patients.

This material will always be confidential; no hospital's or surgeon's name will ever be mentioned; numbers can be used to designate the individual hospitals.

Statistics based on the data in these abstracts will reveal the appendicitis mortality in any given councilor district and collectively will give the state mortality. A second survey, after a year has elapsed, will show how much the campaign has accomplished.

V. Either by meetings arranged or by requesting reports, the district chairmen will check up on the progress of the work undertaken in each county each month. This is absolutely essential if we are to justify the appointment of this commission.

VI. Each district chairman will submit a quarterly report to the state chairman in March, June, September, and December, and a complete report annually, of the work completed in his councilor district before Aug. 1, in order that the report of the commission may be ready for the House of Delegates of the State Medical Society.

Before submitting the report of this year's work, we wish to call attention to the March flood with its unfortunate sequelae, paralyzing for a time every sort of public as well as private enterprise, in practically every part of the state with the exception of the first and second councilor districts. The time that might have been given to the work of the commission was spent mainly in the organization of the councilor district and the county society committees. Reports from several of the district chairmen show that they will be ready to start actively on the plan early in the fall. Some had nothing to report. We wish to report the following:

1. Eight trustees and councilors have to date given time on the programs of their annual district meetings for a talk on appendicitis mortality; one has allotted time for a meeting to be held next September, and the other 2 have reserved time on next year's program. Their indispensable co-operation is deeply appreciated.

2. Ten thousand leaflets furnished by the State Medical Society have been or will be distributed at the meetings of the student and alumni nurses of the various nurses' training schools throughout the state.

3. Twenty thousand stickers have been distributed despite the comparatively small amount of actual high school work undertaken before vacation.

4. Twenty new sets of lantern slides were furnished by the State Medical Society and are being distributed as the members of the commission send in their requests for the number they need.

5. The records of acute appendicitis in 11 hospitals have been surveyed (3 of which covered the charts for 10 years) totaling 7062. A marked improvement has been noted in the records.

6. Twenty civic organizations in 6 councilor districts have had appendicitis talks presented to them.

7. Nine nurses' organizations have been given a talk on appendicitis and 2000 leaflets distributed. Several other meetings have already been arranged to be held early in September or October.

Respectfully submitted,

JOHN O. BOWER, *Chairman*,
CECIL F. FREED,
PAUL CORRELL,
WILLIAM W. LAZARUS,
S. GILMORE PONTIUS,
HARVEY F. SMITH,
J. HAYES WOOLRIDGE,
LARUE M. HOFFMAN,
FRANK B. KRIMMEL,
RALPH W. WALKER,
JOHN W. SHIRER,
JOSEPH P. REFLOGLE.

COMMITTEE ON PEDIATRIC EDUCATION

To the President and House of Delegates:

The report of the Committee on Pediatric Education for the year ended July 1, 1936, is as follows:

The committee has taken part in numerous activities during the past year. Special programs were put on in Berks, Butler, Cambria, Lancaster, Lycoming, and Somerset county medical societies; before the Pennsylvania State Medical Society, the Postgraduate Institute of the Philadelphia County Medical Society, the Philadelphia College of Physicians, and the Mercy Hospital medical staff.

In addition, 6 of the members of the committee discussed medical problems presented by lay organizations in Philadelphia (including Philadelphia on Parade), Williamsport, Washington, Scranton, Wilkes-Barre, Pittston, Sayre, at Wilson College (Chambersburg), and before several groups of nurses in Philadelphia.

Reports from various members of the committee show that the teaching has been well received, and numerous invitations have been received for a continuation of this type of education.

Inquiries have been made concerning refresher courses, primarily for the general practitioner, that might be given in one of the medical centers of the state. Plans have been discussed, but no definite action has been taken in regard to carrying out this idea. A number of counties have not been given any demonstration, mainly because of financial requirements. The committee feels that a more intensive line of work could be given with some financial support.

Respectfully submitted,

RALPH M. TYSON, *Chairman*,
EMILY P. BACON,
EDWARD L. BAUER,
HOWARD C. CARPENTER,
JAMES K. EVERHART,
JOHN M. HIGGINS,
ROBERT A. KNOX,
FRANCIS T. O'DONNELL,
HENRY H. PERLMAN,
HENRY T. PRICE,
*ROBERT K. REWALT,
JOSEPH STOKES, JR.,
JOHN D. STURGEON, JR.

COMMISSION ON MATERNAL WELFARE

To the President and House of Delegates:

The Commission on Maternal Welfare herewith submits its report for the first half of 1936. It wishes to express its appreciation to our State Society secretary for his invaluable assistance.

The main purpose of our commission is to be accomplished by the gathering of statistics for a survey based on a specific report of every maternal death which occurs in Pennsylvania. This investigation and interrogation through the attending physicians was begun as of Jan. 1, 1935, and is being continued through the present year.

The commission has also assumed responsibility for carrying a message to the people of Pennsylvania regarding the causes of maternal deaths and for trying to enlist their very necessary interest and support in efforts at lowering maternal mortality. Several public meetings have been held under the sponsorship of

women's clubs or the woman's auxiliaries to our various county medical societies. A beginning has been made in this field. A more intensive campaign must be carried out during the coming winter, and we hope thus to gain the co-operation of the public in our efforts at reducing the number of maternal deaths. Sponsored public lectures were given in Altoona, Hollidaysburg, Erie, Pittsburgh, and Greensburg.

The commission has endeavored to take part in county society meetings, and during the past summer members have addressed councilor district meetings held at Williamsport, Indiana, Kittanning, and York.

Since last fall, under the sponsorship of the State Health Department, we have been organizing "refresher" or graduate courses of lectures in obstetrics, and it is with a great deal of pleasure that we can now announce that a series of 3 "obstetric institutes" will be presented to the physicians of Pennsylvania during the next 3 months. On each day 3 lecturers will be supplied from the medical schools of the state who will bring to every sufficiently interested physician in the state the latest obstetric knowledge in the treatment of obstetric complications.

It is the hope of all concerned that these lectures will stimulate a higher grade of obstetric service. We solicit the active assistance of county medical society officers and members alike in arousing interest and attendance. We also have in course of preparation a booklet, which we trust will meet the needs of the expectant mother in a most practical way.

What is the present status of maternal deaths? Have we accomplished anything? The following figures tell the story, and it is not all in vain that our commission has exerted its energies.

COMPARISON OF FIRST 4 MONTHS OF 1935-1936

	1935	1936
Total births	54,634	54,469
Maternal deaths	316	278
Maternal death rate per 1000 total births	5.8	5.1

OUTSTANDING CAUSES ONLY

Abortion (sepsis)	61 (19.3%)	46 (16.5%)
Toxemia of pregnancy ..	44 (13.9%)	47 (16.9%)
Puerperal sepsis	62 (19.6%)	57 (20.5%)
Ectopic gestation	14 (4.1%)	17 (6.1%)
Placenta praevia	13 (4%)	8 (2.9%)
Postpartum and abruptio placentae	23 (7.2%)	19 (6.8%)

There was a complete report of maternal deaths for 1935 published in the PENNSYLVANIA MEDICAL JOURNAL for June, 1936. A decline is shown in such deaths, and it is sincerely believed that there will be an appreciable decline by the end of 1936.

The majority (58) of the county medical societies have committees on maternal welfare and they have on the whole made an honest effort to carry forward the work. The longer the work is carried on the easier and more encouraging it becomes, especially since good results are beginning to appear.

The commission is appreciative of the opportunity afforded in conducting this survey and deeply grateful to all who have been responsive in any manner. The endeavor to remind both the profession and the public of their separate responsibilities and of trying to correlate the efforts of both groups in the lowering of

* Deceased July 27, 1936.

maternal mortality should be actively and consistently continued.

Respectfully submitted,

JAMES S. TAYLOR, *Chairman*,
 PHILIP F. WILLIAMS,
 OSCAR J. KLEVAN,
 WALTER J. LARKIN,
 ROY E. NICOBEMUS,
 THEODORE B. APPEL,
 JOHN B. NUTT,
 CHARLES B. STRICKLAND,
 MILTON M. AUSLANDER,
 PAUL DODDS,
 WALTER C. RAYMOND.

COMMITTEE ON MEDICAL ECONOMICS

To the President and House of Delegates:

The Committee on Medical Economics respectfully submits the following report of its activities for the current fiscal year. The activities have been varied and may be divided under the following heads: (1) Fact-finding, (2) advisory, and (3) auxiliary.

SUBCOMMITTEE ACTIVITIES

The subcommittees appointed last year have been confining their activities to the accumulation of data concerning the varied economic phases of medical practice in Pennsylvania, as indicated by the titles of the several committees.

1. *Lay Workers in Professional Fields.*

The general committee approved of the decision to confine the activities of this subcommittee to the study of the status of lay anesthetists for the present. This study has been started by the submission of a questionnaire to the several counties. At present the work is not advanced far enough for any conclusions or recommendations.

2. *Health Department Co-operation.*

Owing to some difficulty with personnel, this committee has not progressed as far as desirable, but renewed activity has been manifest recently. Discussion of the problems arising under the head of health department co-operation indicated the necessity for serious consideration of the following question: Is this a public relations activity and to what extent does medical economics enter into this field?

In this respect the experiences of the past year indicate one fact above all others, that is, if the organized medical profession is to maintain its position, the county society must become more acutely sensitive to its individual responsibilities.

A few counties have solved some of their economic problems; others expect some extraterritorial force to do it for them. In order to bring the county societies to a more keen realization of their own responsibilities, the question should be determined as to whether the sensitizing agent should be the Committee on Medical Economics or some other specially designated agency, such as a full-time field worker. The committee therefore recommends for purposes of stimulation that the Board of Trustees consider the necessary steps to engage such a field worker.

3. *Hospital Economic Relations.*

This committee is accumulating considerable data covering this field and we hope to be able to present a

supplementary report in time for the State Society meeting at Pittsburgh.

4. *Industrial Medicine and Contract Practice.*

This committee is also engaged in accumulating data that should prove of value in assisting in the settlement of a number of questions now very controversial. The committee has been in conference with certain leaders in insurance and industrial fields and anticipates co-operative assistance from these sources. Here again, however, the serious work has been hampered by failure on the part of many county societies to secure accurately the information asked of them. For instance, one county reported no contracts, whereas reports from industries in this county showed that there were contracts.

5. *Committee on Nursing Care.*

There is nothing to report at present, as the committee decided to delay activity in this field.

MEDICAL SERVICE PLANS

The so-called medical service plans were studied and may be divided under 3 major headings: (1) Indigent, (2) low income groups, (3) finance credit plans.

1. *Indigent.*

The secretary, Dr. Donaldson, has kept the entire society, through bulletins and the State JOURNAL, fully acquainted with various plans for care of the indigent in operation in Pennsylvania. This committee, however, begs to make certain observations based upon its studies.

The question of proper classification of employables and unemployables was discussed. This appears to be a problem causing serious difficulties in many counties, tending to complicate local problems. The difficulty of differentiation between temporary and permanent indigency in certain instances results in conflict in classification of those who are legitimate wards of the poor boards and those who should be cared for through the SERB.

The committee recognizes the fact that because of local conditions, mainly political, it does not appear to be possible to establish a plan that would be adopted by each county. It seems desirable and sound, however, that in the best interests of the patient, the taxpayer, and the physician, the medical care of the indigent in any county should be under the supervision of the county medical society, maintained on a free-choice-of-physician basis and on a fee-for-service basis rather than contractual. That this is possible has been demonstrated in at least 9 counties. Attention was called to the many communications issued through the secretary's office upon this subject.

Concerning medical care under SERB, the committee discussed various phases at length but took no action, recognizing that this phase of medical economics is in the hands of the Medical Advisory Committee to the SERB.

2. *Low Income Groups.*

The question of the provision of medical care for low income groups was the subject of both study and discussion. In the light of our observations, and in keeping with past utterances and the position of the A. M. A., the committee recommends that the State Society reiterate its opposition to any prepayment insurance scheme.

3. Finance Credit or County Society Medical Service Plans.

After careful study of the leading plans and proposals under consideration or actually in operation throughout the country, the committee came to certain conclusions, as follows: It was decided that none of these experiments had been in operation sufficiently long to permit of any conclusions as to their respective merits. The committee believed that, as at present constituted, they all are, in the last analysis, nothing more or less than collection agencies plus finance credit plans.

The committee was of the opinion that certain statements and cautions should be expressed concerning these plans.

a. The presentation of plans as medical service plans that are, in fact, only collection agencies or finance credit plans, are misleading to the public and may eventually excite unfavorable reaction. This is particularly true if these plans receive official county or State Society approval in the name of medical service assistance to the low-income groups.

b. Certain trends and implications are inherent in many of these plans. Their official acceptance by the organized profession carries the implication that it recognizes the need for some plan of payment for medical services other than adjusted fees between patient and physician. The injection of a third party immediately breaks down one of our strongest arguments, even though the third party is the county medical society.

c. There is a danger that the profession may be stampeded into equivocal positions.

The conclusion of the committee was that we could not, at this time, recommend or approve any specific plan now in operation except as purely collection agencies and finance credit bureaus.

GROUP HOSPITALIZATION

The chairman reported that the following hospitals have either adopted or have under consideration group hospitalization plans.

Easton Hospital—In operation. Permanency dependent on final approval by the State Medical Society.

Adrian Hospital (Punxsutawney)—A plan was submitted which at first could not be approved. The plan finally adopted met all the recommendations of this committee.

Clearfield Hospital—Plan submitted which met the requirements.

Corry Hospital (Eric County)—Plan promised but not yet submitted.

Jameson Memorial (New Castle)—Plan submitted after request. Criticisms made and sent to secretary of Lawrence County Medical Society.

Adams County—Inquiry for information on hospital insurance.

Philadelphia County—Under advisement.

A discussion of the subject of group hospitalization indicated the necessity for a concrete statement of the position of the State Society through its House of Delegates, covering its attitude toward a previous resolution opposing group hospitalization. Shall or must the State Society modify that position?

In view of our present paradoxical position, would it not be better to state specifically those conditions that we consider vital and which involve medical services?

The committee recommended the following:

1. Exclusion of all types of medical service, specifically laboratory, roentgen-ray, and anesthesia, avoid-

ing approval of anesthesia by laymen, this to be clearly emphasized to avoid misunderstanding as to what constitutes hospital care.

2. Active inclusion of the county society in the program of organization.

3. Admission of patients under any plan only on the recommendation of the patient's physician.

WEST CHESTER STATE TEACHERS' COLLEGE PLAN OF STUDENT HEALTH SERVICE

The committee studied this plan as submitted and conclude the following:

This is an ideal set-up for the intelligent control of any local student health service, and Chester County Medical Society is to be congratulated thereon. We are in receipt of the following comments regarding it:

"This program has the endorsement of the trustees of the college, as well as the approval of the Chester County Medical Society. This particular outline is in keeping with and has been modeled after the 1932 plan of Dr. I. D. Metzger, quoted in the minutes of the 1935 meeting of the House of Delegates of the State Medical Society.

"It is hoped that this program can be given as much publicity as is consistent, and that it may ultimately serve as a guide in formulating a policy for other state-owned and state-controlled educational institutions where such services are being established."

The plan itself, in the opinion of the committee, is ideal and should provide a real health service to the students without encroaching upon the rights and prerogatives of the local physicians. The committee is pleased to commend this instance of prompt application based on an action of last year's House of Delegates. Similar action should be given serious consideration by other component societies in those counties in which are located state-owned or subsidized institutions. Secretary Donaldson has already sent copies of the plan to the officers and committee chairmen of such county societies.

ADVISORY ACTIVITIES

The committee has been called upon from time to time to consult and advise on various economic problems of local nature, particularly on group hospitalization. Also, it has served in an advisory capacity to a special committee of the Board of Trustees appointed to study the social aspects of sickness service.

The assistance rendered in both personal contact and the furnishing of literature to the high school debating teams on the subject of socialized medicine we believe has been of inestimable value in strengthening our position in the minds of intelligent people throughout the state.

RESOLUTIONS REFERRED BY 1935 HOUSE OF DELEGATES TO THE COMMITTEE ON MEDICAL ECONOMICS

Two resolutions submitted to the 1935 House of Delegates at Harrisburg were submitted to this committee for consideration and report.

The first by Dr. James B. Mason, chairman of the Committee on Hospital Economics of the Philadelphia County Medical Society, called for a law permitting hospitals and doctors to render reasonable bills against the estates of patients dying in charitable wards of hospitals. This was referred to the Committee on Public Health Legislation. The resolution further called for a legal definition of a ward charity patient, as contrasted with a full-pay ward patient. A third suggestion in the resolution called for legislation mak-

ing it a misdemeanor punishable by fine to accept charity unlawfully. This resolution, in the opinion of the committee, indicates the necessity for legal action involving the state, the public, the hospitals, and the medical profession. The committee will confer further with the Committee on Public Health Legislation concerning this resolution.

The second resolution presented by Dr. John A. Farrell, of West Chester, deals with the practice of certain insurance companies entering into contracts with designated physicians to treat compensation cases in a given community. It calls for a definition on the part of the State Society as to what constitutes reasonable competition in contract practice. The resolution also calls upon the State Society to state definitely whether such designated physicians are guilty of violation of the Code of Ethics of The Medical Society of the State of Pennsylvania.

The committee gave this resolution serious consideration, recognizing the desirability for clarification and standardization of the term "reasonable competition," to the end that the local county societies might have the advantage of such State Society enactments in the consideration of local conditions. Unfortunately, the committee fails to find it possible for the State Society to make such clarification or standardization that will justly cover each county society or community, because of the gross variability of conditions existing in the separate counties and communities.

The conclusions of the committee are as follows:

1. Reasonable competition must be defined in terms of local conditions.

2. Violations of the Code of Ethics must be determined in each specific instance by the board of censors of the local county society.

However, the committee recognizes that the implied purpose of the resolution is not thus satisfied and would therefore recommend the serious consideration of such revisions and additions to the by-laws of the state and county societies that will provide a set-up for more satisfactory investigations by the county society board of censors than now exists, which shall eliminate the necessity for the lodgment of specific charges by one member against another, to inaugurate fact-finding studies about the existing or proposed contracts of any member or group of members. Provisions should be made by the state and county societies for proper disciplinary measures, when necessary, and the proposed amendment to Section 4, Chapter IX, of our State Society By-Laws is designated to enlarge State Society control over its membership.

A recent action of the House of Delegates of the American Medical Association, granting to the Judicial Council such powers in cases peculiarly too difficult for state or county society action, affords the precedent for similar state and county action, and, in fact, seems to make it imperative that appropriate local provisions be made. With such machinery established, each county society could determine for itself what constitutes reasonable competition in the light of its own local conditions and likewise determine specific violations of ethics.

It would seem that the nearest we may come to a definition of reasonable competition would be by the application of 2 basic principles to each specific situation under consideration:

1. How fully is the free choice of physician by patient maintained?

2. Is the contracting physician, considering at all times the good of the public, placed in a preferential

position over his fellow practitioners by reason of his contractual relations?

Even these rather broad statements imply the ultimate necessity for the consideration of each case on its own merits, and this is obviously the function of the county society.

RADIOLOGIC ECONOMICS

The chairman of the committee, in his capacity as delegate from our State Society to the House of Delegates of the American Medical Association, received communications from the Pennsylvania Radiologic Society suggesting certain resolutions dealing with fee schedules for radiologic work on WPA workers under federal compensation. The chairman called a conference of representatives of the Pennsylvania Radiologic Society and the Philadelphia Roentgen Ray Society, together with other members of the State Society Committee on Medical Economics and 2 other delegates to the American Medical Association. This conference concluded that it would be unwise to ask for a fee schedule as proposed, but recommended certain resolutions that would tend to continue radiology in the same status as other branches of medicine and eliminate the necessity for a fee schedule with attendant dubious potentialities. As a result of this conference, certain resolutions were presented to the House of Delegates at Kansas City.

The Reference Committee of the A. M. A. House of Delegates, after consideration of these, together with other resolutions in like vein, recommended to the House of Delegates certain resolutions which establish basic principles for the specialty.

In justice to the radiologists who are members of our State Society, this committee recommends official approval by the House of Delegates of the action of the A. M. A. House of Delegates, elaborated sufficiently to clarify the import of these resolutions.

SOCIAL SECURITY ACT

Certain economic phases of the Social Security Act were discussed. The committee, although recognizing that certain dangers to the traditional and affirmed position of medical practice in this country are inherent in these plans, accepts the conclusions of the special advisory committee of the State Society appointed to confer with the State Secretary of Health, Dr. Dexter, and approves the plan adopted. The Committee on Medical Economics believes, however, that the future effects of federal influence on State Health Department activities depend entirely on county medical society acquaintance with the limitations of the various proposed extensions, and on active co-operation by county society members within the scope of health education and of service to the indigent. Within these limitations a spirit of co-operation with the state authorities is essential to the future economic interests of our profession and the health interests of the public. Antagonism or indifference will not only beget unfavorable public reactions but will result in our natural places in the various extensions being assumed by nurses and social workers.

UNITED STATES PUBLIC HEALTH SURVEY

The present status of the United States Public Health Survey on the incidence of chronic disabling illness in 19 states, including certain chosen counties of Pennsylvania, was discussed. With a certain desire for assurance that the interpretative attitude of the new Surgeon-General will be sound, and with a full

knowledge of the obvious technical weaknesses of the survey, the committee recommends that the Board of Trustees consider a request to the proper authorities for the privilege of studying the results of the survey, as it applies to Pennsylvania, before the findings be made public.

COUNTY SOCIETY CO-OPERATION

Our committee's experience has again demonstrated that one of the major problems confronting the organization is the all too prevalent absence on the part of the county societies of a realization that the basic unit of our organized activities is the county medical society, and that the strength of our state and national organizations is in direct proportion to the sensitization of the county society to its responsibilities and the willingness of its representative officers and committees and the rank and file of members to assume these responsibilities actively in their own localities. We believe that the Board of Trustees should consider this problem further and determine whether the responsibility for intra-organizational stimulation on matters of medical economics and its social aspects should be a function of this committee or the Committee on Public Relations or some specially designated agency.

FUTURE OF THE COMMITTEE ON MEDICAL ECONOMICS AS TO POLICY AND PERSONNEL

The committee discussed this subject and reached the conclusion that a certain reorganization should be effected, looking toward a continuing committee, with the personnel appointed for 3-year periods and in such a manner as to insure a "back log" of experienced members, essentially similar to the Committee on Public Relations. The committee recommends this suggestion for the serious consideration of the Board of Trustees and of the House of Delegates.

It was felt that the committee should continue to function in a strictly fact-finding and advisory capacity, maintaining close contact with the Committees on Public Health Legislation and Public Relations as well as the Committee on Workmen's Compensation.

The committee realizes the difficulty of exact evaluation of its work because of the very nature of its activities. It recognizes the necessity for consideration, among other things, of such subjects as:

1. Definition of terms with changing social conceptions; such terms as the following must be redefined: Medical economics, hospital economics, charity, indigent (this term is sometimes synonymous with unemployable), low-income worker, dispensary, outpatient department, contract practice, reasonable competition.

2. The development of a more intimate and sympathetic relationship with the State Hospital Association. This the committee needs in order to have access to data otherwise inaccessible.

3. The appointment of a nonprofessional advisory board to this committee.

The committee recommends that the Board of Trustees consider the advisability of sending a copy of the PENNSYLVANIA MEDICAL JOURNAL monthly to the intern quarters of the Pennsylvania hospitals approved by the A. M. A. for intern training.

Respectfully submitted,

FRANCIS F. BORZELL, *Chairman*,
FREDERICK J. BISHOP,
EDWARD L. BORTZ,
WALTER S. BRENHOLTZ,
JAMES H. CORWIN,
GEORGE R. HARRIS,
FREDERICK O. ZILLESSEN.

PROGRESS REPORT OF CHAIRMAN OF EMERGENCY CHILD HEALTH COMMITTEE

To the Board of Trustees:

The following covers sketchily the progress of our work since my report at your February meeting, which was published in the April number of the PENNSYLVANIA MEDICAL JOURNAL. However, the last report made to the Board of Trustees was under date of Aug. 1, 1935.

The visits to the counties have continued. Mrs. Strauss and Dr. Royer have continued their services,

Dr. Royer covering practically all of the counties in which we are organized.

VISITS TO THE COUNTIES Mrs. George H. Earle, who at an earlier date addressed the first meeting of the Berks County committee, also kindly addressed the first meeting of the Lebanon County committee, in the same gracious manner, on July 20.

In recent months we have had added to our force of volunteer field workers Dr. Thomas H. A. Stites, who is working in the eastern part of the state. We are indeed fortunate in having secured his interest and service. He has been most helpful in assisting the chairmen to develop the work of their committees to a higher point of perfection. Dr. Stites has also addressed, most acceptably, local meetings in several counties at the request of the chairmen.

Miss Edith B. Jack has been appointed supervisor of our WPA nursing project for the counties in the western part of the state. She is a registered nurse and has had extensive experience in rural nursing. She is thoroughly interested and is doing very effective work. She has been remaining in the counties for a number of days or until such time as she feels she has accomplished all that that visit can yield. This continued contact has proven most helpful.

It is very gratifying to report that several counties that had been recently inactive have reorganized their committees and are now included

PARTICIPATING among our most active counties:
COUNTIES namely, Berks, Indiana, Lancaster, Luzerne, Potter, Sullivan, and Union.

Within the last few weeks Warren County, which had become completely inactive, has been reorganized and gives promise of broader service than has been rendered at any time in the past.

The Board of Directors of the Philadelphia County Medical Society voted unanimously to organize an emergency child health committee. Dr. J. Alexander Clarke has accepted the chairmanship of the committee. This is an ideal selection. The committee will begin work in the early autumn.

Miss Jack reports from a recent visit to Fulton County that there is very definite promise of activity there.

Lehigh County has recently been reorganized with a new chairman. This committee had become very inactive, but work is now developing. A new chairman has been appointed in Northampton County with a new zone chairman in Easton. The work is progressing very satisfactorily. New chairmen have also been appointed in Center and Perry counties. The former chairman in Perry county was completely washed out by the recent floods and felt he could not continue. He recommended his successor, who is doing very satisfactory work.

Delaware and Chester counties, reported inactive a year ago, are still inactive. Pike County is inactive owing to the illness of our chairman, but the fine service he

had rendered had practically cleared up the health supervision of the children in the families on relief.

Cambria County is inactive. Here again both the chairman and co-chairman of that committee suffered most serious losses in the flood. The county society is still interested and will undoubtedly become active later.

The other counties have been continuing their activities very satisfactorily.

There have been reported to Aug. 1, 1936, 105,933 examinations. The progress report made to the State Committee in February showed 93,290

EXAMINATIONS examinations to the fifteenth of that month. From that date to Aug. 1, therefore, 12,600 additional children have been examined. It is striking to note that 6794 of these have been reported in the past 2 months. In addition to the above, 4882 re-examinations have been made.

It was reported a year ago that there had been a striking increase in the number of corrections of defects over the previous year. Your chairman is RESULTS pleased to report that in the first 5 months of 1936 there were twice as many corrections made as in the first 5 months of 1935. A total of 102,713 corrections have been reported, which represents 38.5 per cent of the total defects reported. This does not include miscellaneous corrections; miscellaneous defects, corrections, and percentage are shown on the accompanying table. This is a very remarkable result, as in the routine experience among agencies working with children corrections rarely exceed 25 per cent. It should not be overlooked that great numbers of the corrections were made in rural communities where it has been difficult in the past to secure corrections. It is also very unusual to have educational health procedures reach these rural communities.

The table included in this report covers the defects found with their percentages, and the corrections obtained with their percentages. Please note the striking increase in corrections shown in this table.

The average percentage of malnutrition shows a downward trend. The present average is 27.8 per cent, and that of a year ago was 29 per cent.

MALNUTRITION There are several possible explanations of this, one being that the Emergency Relief Administration has become better organized as time has passed, and another, which is probably significant, is that the early examinations were made largely in congested areas, in some of which percentages as high as 50 were discovered.

The home economics work continues to increase persistently. Such programs are now under way in 41 counties, as compared to 39 in HOME ECONOMICS August, 1935, and 27 in August, WORK 1934. To date 52,129 mothers have received nutrition instruction, chiefly in small groups in their own kitchens.

The field work of the Nutrition Division of the LRA has been discontinued, so that the Emergency Child Health Committee nutrition work is even more important today than heretofore.

After much delay our secretarial project was transferred from the Work Division of the SERA to the WPA. This necessitated our SECRETARIAL PROJECT losing all secretaries not on the UNDER THE WPA relief rolls with the exception of a few nonrelief appointments.

The delay in the transfer and the securing of new secretaries and the loss of many of our former competent secretaries was very destructive to the work of our county committees for the last half of 1935. A number

of the WD secretaries volunteered their services during the interim, which was very commendable. As time has passed the newly appointed secretaries have become more efficient and the work, as has been stated before, has been progressing most satisfactorily.

In the latter part of August, 1935, the Emergency Child Health Committee was asked to apply for a nursing project under the WPA. Your NURSING PROJECT chairman at once communicated UNDER WPA with the chairmen of the county committees asking whether they approved a nursing project for their counties and, if so, how many nurses they could use effectively. It was felt very important that we should have the approval of the chairmen because when paid workers are used in a county it is very apt to have a detrimental effect on volunteer service. Practically all desired nurses. The project was written on the basis of the number of nurses requested, although it was necessary to follow the labor inventory submitted to us by the WPA, which included the 4 following classifications: Registered, graduate, trained, and practical nurses. It was impossible to find out what the word "trained" meant, but we were led to believe it referred to nurses who had graduated many years ago and still used the old-fashioned term "trained nurse." After conference with representatives of the nursing organizations, state and national, who very properly objected to practical nurses being assigned on a nursing project, the term "practical nurse" was not used. Attendants were substituted.

This project was submitted to Harrisburg on Sept. 12, 1935, and was approved Jan. 21, 1936. Because of this delay, on the date of its approval it was discovered that the labor inventory of nurses on relief showed few registered, graduate, or "trained" nurses available. After several conferences with the Washington and Harrisburg offices we secured the broadening of the selection to include registered nurses, graduate nurses, nutritionists, home economists, medical social workers, or any highly qualified lay individuals available from the relief rolls, inasmuch as workers under this project were to render service similar to that given by the secretaries.

This project is now working and 69 of the appointments have been made. Under this project we were granted 2 nonrelief supervisors (one for the eastern end of the state and one for the western) and 10 per cent nonrelief appointments.

Despite the intense severity of the winter weather the work continued in practically every county that had been previously active, but, of WEATHER CONDITIONS course, at a decidedly reduced pace. The severe floods in March were most destructive for some of our chairmen. During this period we asked our chairmen and committees to render every service possible in the flooded areas. The response was instant and very helpful. We received a letter of appreciation from the Governor, together with others from different sections of the state.

State Government.—The Governor of the state has been very co-operative and has made Co-OPERATION all appointments recommended by the State Society. Mrs. Earle has also been very much interested and most helpful.

We have had most helpful co-operation from the State Department of Health. Dr. MacBride-Dexter and Miss O'Halloran, in charge of the Nursing Division, have requested full co-operation on the part of their field workers and this has been given.

The SERA has been most co-operative. They have

manifested increasing interest in the work and have expressed high regard for its value.

The WPA, both in the Harrisburg offices and in the various areas, has given most valuable assistance. Nothing has seemed to be too much trouble to them in furthering this work.

The Medical Profession.—Your chairman has frequently spoken in high praise of the service the medical profession has given this cause. The spurt the work has taken in the past several months indicates a vital interest in and keen appreciation of the value of the work to the children and to the profession.

The Dental Profession.—The State Dental Society has given us full co-operation. Although retaining their Emergency Child Health Committee, they have agreed to work with us. This has resulted in the appointment of Walter E. Mendel, D.D.S., president of the Pennsylvania State Dental Society, as an honorary chairman; the appointment of James E. Aiguier, D.D.S., to a vice-chairmanship; and the addition to the membership of the State Committee of C. Barton Addie, D.D.S., H. K. Cooper, D.D.S., George W. Hevner, D.D.S.

This arrangement brings about a co-operation between The Medical Society of the State of Pennsylvania and the Pennsylvania State Dental Society that will be of inestimable value in the years ahead as well as in the pursuit of the work of this committee.

Pennsylvania Congress of Parents and Teachers.—The co-operative plan reported last year with this organization for the effective putting over of their Summer Round-Up is working most satisfactorily, and there is every promise of a more effective result than was accomplished in the 2 years immediately preceding. It is interesting to note that the National Congress has approved our examination form for use in Pennsylvania.

Other Organizations.—We have continued to receive the efficient support of the various organizations that have been co-operating with us heretofore, and the reports from the county committees indicate that their effort as a co-ordinated project is becoming increasingly successful.

Your chairman has been notified that there are no additional funds available for financing the Emergency Child Health Committee from the FRA, FINANCING and that there is no prospect of securing funds from the SERA. It has been suggested further that it would be desirable to appeal to the next regular session of the State Legislature for the appropriation of a fund to carry on this work. Your chairman desires at this time to bring this matter to your attention and make an earnest appeal for your full co-operation in securing such an appropriation.

The county committees continue to receive liberal local support for their corrective work. I should like to quote 2 statements, one from a vice-chairman of one county committee and the other from a chairman of another county committee, which will give you some idea of the community support vouchsafed the county committees.

"It is impossible to compute the donations as we had no tangible assets. We lacked for nothing that we asked and received countless donations, including nursing, secretary and typewriter services, cars, farm products and equipment for canning, supplies for home food demonstrations, free advertising in all local papers, heat and light for clinic rooms. Children were provided with clothing so that they might appear for examination. The local hospitals gave of their facilities, including

operating rooms and anesthetists, several hundred times. Mailing expenses were borne by the chairman and vice-chairman.

"Our only assets were the loyalty of the committees, the co-operation of the parents and the public, and the unflinching kindness and courtesy of the medical and dental men of the county."

The other quotation reads as follows:

"I did not believe, when we were so advised by members of the State Committee, that funds and help would be available when needed. When an appeal was made to the various organizations in the community for aid, which was not done until we were well organized and many examinations made, the very hardest thing we had to do was to find enough children with defects to exhaust the funds subscribed and the voluntary help offered. We still have money available."

The quotations illustrate the co-operative spirit of the agencies and individuals in the counties and explain the high percentage of corrections accomplished.

Since the last report the following have been added to the personnel of the state committee: Dr. Maxwell

J. Lick of Erie, president-elect of the MEMBERS OF STATE The Medical Society of the State COMMITTEE of Pennsylvania; Dr. Lester K. Ade, Superintendent of Public Instruction, succeeding Dr. James N. Rule; Dr. Karl de Schweinitz, executive director of the State Emergency Relief Board, succeeding Mr. Robert L. Johnson; and Commander John D. Pennington, Secretary of Welfare, succeeding Dr. J. Evans Scheele. In addition there are 4 new dental members, referred to above.

Dr. Colwell automatically became an honorary chairman when he took office as president of the State Society. Dr. Behrend again became a member of the state committee. Mr. Alexander Fleisher withdrew as vice-chairman but continues as a member of the state committee. Dr. James E. Aiguier became vice-chairman in his stead. He also holds the office of treasurer.

I regret to report that Dr. George S. Schlegel has withdrawn his membership from the state committee due to his active participation in the work of the Berks County committee.

It is my sad duty to report the death of Dr. Clarence A. Patten, a member of the state committee. Dr. Patten, in the opinion of your chairman, was one of the most outstanding psychiatrists in the city of Philadelphia. From the beginning of the work of the Emergency Child Health Committee he was most interested, active, and co-operative. He served, until his death, as treasurer of the committee. Dr. Patten's passing is a great loss to our committee, not only because of his great interest but because he had a very definite vision of the important services this committee could render in guiding parents in the mental training of their children, which he was eager to have this committee adopt and which it is hoped can be carried out.

The committee has also suffered a loss in the death, on July 27, of Dr. Robert K. Rewalt, a member of the committee since its inception, a member of the Pediatric Advisory Committee, and chairman of the Lycoming County committee. Dr. Rewalt was one of the foremost pediatricians of the state and a member of the Pennsylvania Committee of the American Academy of Pediatrics, which overtook your board to plan for the protection of the health of children in Pennsylvania prior to the formation of the Emergency Child Health Committee. He will be greatly missed by our committee.

At the February meeting of the state committee it was considered desirable to create an Executive Committee so that the chairman would have a EXECUTIVE group to which to refer questions frequently arising which seemed burdensome to submit to the entire committee. It was further deemed important to have a group who could directly supervise the expenditure of the recently acquired donation. The personnel of this committee consists of Dr. Walter F. Donaldson, Dr. Moses Behrend, Dr. Charles H. Smith, Mrs. George H. Earle, Mrs. Berthold Strauss, Miss Netta Ford, Mrs. E. E. Kieran, and the chairman and treasurer, *ex-officio*.

Our exhibit was enlarged last autumn to bring the work of the committee up to date and to explain more clearly the activities of the Emergency PROPAGANDA Child Health Committee. The charts were shown at the meeting of The Medical Society of the State of Pennsylvania held in Harrisburg last October. This exhibit was largely attended and created great interest. A number of county chairmen returned home re-inspired to carry on. This exhibit has also been used for other demonstrations. It was sent to the first meeting of the new county committee in Berks County, and later to the ball given by this committee to raise funds. It was also exhibited at

the State Dental Society's meeting in Philadelphia early in February, where there were, among the great number of dentists who studied the exhibit, representatives from England, Sweden, and Bulgaria. It formed part of the Philadelphia County Medical Society exhibit at Philadelphia on Parade, a city-wide annual exhibition, in May.

Addresses continue to be made by members of the committee at various meetings. It is gratifying to have learned that the chairman of the Committee on Public Health Legislation of The Medical Society of the State of Pennsylvania is so impressed by the value of the work of this committee to the medical profession, to the cause of good health legislation, and to the communities participating that he takes every occasion to commend the work highly. His remarks have been very helpful in stimulating the chairmen of the county committees and participating physicians to increased activity.

It is interesting to note that a best-seller (Dr. Paul deKruif's book, *Why Keep Them Alive*) devotes 15 pages to a discussion of the work of the Emergency Child Health Committee. This book was written for popular consumption and based upon information gathered more than 2 years before its publication, when our corrective program was just getting under way.

EMERGENCY CHILD HEALTH COMMITTEE

REPORT TO AUG. 1, 1936

Total examinations, all ages	105,933	Re-examinations	4,882
Examinations in children under age 6	45,204	Partial report of diagnostic procedures ..	2,778

Type of defect	Defects found			Defects corrected and under treatment			
	Number of examinations on which percentage is figured*	Number of defects	Percentage	Number of defects on which percentage is figured†	Number corrected as of August 1, 1936	Percentage	Number of defects corrected as of August 1, 1935
Not vaccinated	103,218	37,242‡	36.1	32,188	13,267	41.2	6,676
Not having had toxin-anti-toxin or toxoid	103,218	60,527¶	64.5	60,487	27,725	45.8	18,310
Eye defects	101,928	7,601	7.5	7,278	2,979	40.9	1,588
Ear defects	101,928	3,242	3.2	3,033	1,127	37.2	352
Nasal obstructions	101,928	8,411	8.3	7,113	3,816	53.6	1,376
Diseased tonsils	101,928	36,178	35.5	33,956	10,727	31.6	7,588
Dental caries	101,928	43,851	43.0	41,511	13,302	32.1	11,035
Enlarged cervical glands ..	101,928	21,501	21.1	16,130	3,761	23.3	1,299
Thyroid gland enlargement	101,928	2,666	2.6	2,443	744	30.5	655
Lung affections	101,928	2,553	2.5	2,437	927	38.0	671
Cardiac defects	101,928	2,579	2.5	2,282	757	33.2	574
Behavior disorders	78,525	10,347	13.2	9,282	865	9.3	.....
Needing circumcision	101,928	6,428	6.3	6,404	845	13.2	563
Venereal diseases	96,022	369	0.4	369	197	53.4	119
Malnutrition	103,218	28,729§	27.8	28,913	16,730	57.9	10,510
Postural or orthopedic defects	101,928	7,452	7.3	7,137	2,085	29.2	1,101
Deficiency diseases	101,928	6,180	6.1	6,177	2,859	46.3	1,769
Totals .....	.....	291,856	....	267,140	102,713	38.5	.....
Partial report of miscellaneous defects ...	.....	15,518	....	.....	14,295	....	.....
Grand totals .....	.....	307,374	....	.....	117,008	....	.....

* In each case the percentage is figured on a different total of examinations because of the difficulty of securing complete and consistent reports from the counties.

† These totals do not include the defects reported by counties which are known to be securing corrections but which have not reported such corrections. They do include the defects found in counties so recently organized that the correction of defects has not yet been started.

‡ Of this number of defects, 33,985 occurred in children under age 6 (75.2%).
¶ Of this number of defects, 33,643 occurred in children under age 6 (74.4%).
§ Of this number of defects, 10,612 occurred in children under age 6 (23.5%).
Additional immunization in 9 counties—10,232 (Bradford, Carbon, Elk, Indiana, Lackawanna, Montour, Perry, Somerset, and Washington).
Nutrition instruction to mothers—52,129 in 41 counties.

Your chairman desires to repeat the following paragraph from his report submitted Aug. 1, 1935, and earnestly trusts that your board will give serious consideration to the part that is italicized:

"As in any great undertaking of this character, the secondary and less spectacular results far outweigh the story of the actual accomplishments. The broad educational value of the procedure to the medical, dental, nursing, nutritional, and allied professions, as well as to the various agencies participating in the work, to the laity and, above all, to those who directly benefit by the services rendered is inestimable. The revelation of the great problem that confronts us should prove a stimulation, and the procedure we have followed certainly indicates, as has never been done before, a unique and effective method of meeting it. That we have accomplished as much as represented in the report in the way of corrections, it seems to your chairman, is a marvelous attainment. Manifestly this service is greatly needed. We have long been conscious of a great problem and one which, since it has to do with health, should be the problem of the organized medical profession. It has never been as fully revealed, however, as in the work of the Emergency Child Health Committee. *Your chairman is hopeful that The Medical Society of the State of Pennsylvania may give serious consideration to the appointment of a committee to study searchingly the activities and accomplishments of the Emergency Child Health Committee and endeavor to work out a procedure by which the protection of the health of children of the indigent can be effectively accomplished in the years to come. Indeed it is equally important that, as physicians, we should endeavor to impress upon those who are able to pay for protective services the danger of innumerable neglected handicaps, which are probably almost as prevalent among the children of the families economically more fortunate as among those of the indigent groups.*"

May your chairman ask that you read with care, and, he trusts, deep interest the section entitled "Results."

Respectfully submitted,

S. McC. HAMILL, M.D., *Chairman.*

SOCIAL SECURITY CONFERENCE COMMITTEE

To the President and House of Delegates:

The report of the conference committee appointed by President Alexander H. Colwell, in October, 1935, to confer with the Secretary of Health of the commonwealth regarding ways and means of carrying out the provisions of the titles concerning child and maternal health service, and crippled children and public health extension work of the Federal Social Security Act in this state, is herewith submitted, including copy of the narrative regarding activities along this line from the Department of Health.

The complete committee, or representative subcommittees, have held numerous conferences in Harrisburg with the secretary and other representatives of the State Health Department, and with representatives of the Federal Children's Bureau.

Remembering at all times that the Federal legislation definitely instructs that health activities provided for shall be directed by the health department of each state "in co-operation with existing agencies," which include medical societies, your conference committee has made every effort to keep the private practitioner in the fore-

ground, hoping thereby, through our experiences and accomplishments under emergency medical relief service and emergency child health set-ups, to demonstrate fitness and to win additional public confidence.

FINANCIAL PARTICIPATION BY THE STATE

1. The lump sum appropriated to the Department of Health for the biennium 1935-37 is \$2,320,000, and for maternal and child health services the following allocations for 1935-36 have been made.

a. Preschool Division	\$26,000
b. School Division	42,000
c. Nursing Bureau (One-third of this appropriation is for child health services)	210,000
d. Dental Division	4,000

Travel expenses are paid from the general fund and are not included in the above sums. For the year 1935 a travel sum amounting to \$7,000 was paid.

Amounts for biologic products in 1934 were for vaccine, \$1802; for toxoid, \$27,133.

2. There are no local subdivisions for health administration; therefore, no funds are allocated to local units. No private funds are received in the State Treasury or the Department of Health for any health work.

The total expenditure of the state for maternity and child health work is \$282,000.

THE STATE HEALTH AGENCIES

Maternal and child health activities are administered directly by the State Department of Health on a state-wide basis. There are no local subdivisions or other autonomous units.

1. Existing Activities:

a. Preschool Division

- (1) Child health centers, permanent year-round conferences for infants and preschool children, served by state nurses and local physicians.
- (2) Prenatal clinics served by state nurses with local physicians in charge.
- (3) Supervision and instruction of midwives in charge of 4 full-time physicians.
- (4) Distribution of maternal and child-care literature.

b. School Division

School medical inspection in fourth-class (rural) school districts and supervision of second- and third-class school districts with a chief supervisor, clerical staff, and field supervisors (part time).

c. Dental Division

With a chief dentist who administers the organized dental hygiene state-wide program.

d. Bureau of Nursing

Serves all bureaus and divisions with a chief nurse and 120 field staff nurses, one-third of whose time is spent in maternal and child health work.

2. New Activities:

a. Preschool Division

- (1) Four physicians to serve in kindergarten and nursery school health work in fourth-class school districts.
- (2) A state supervisor of nutrition and 4 field nutritionists to serve with the 4 physicians

in the kindergarten work and in health centers.

b. School Division

In selected needy areas additional school medical examinations for which additional physicians would work on a per diem basis.

c. Dental Division

Seven oral hygienists to serve with the physicians and nutritionists in kindergarten work and to serve in health centers and rural schools for parental education and prophylaxis with preschool and school children.

d. Nursing Bureau

(1) Six district nursing supervisors for maternal and child health work, to be assigned to definite areas (Erie, Harrisburg, Philadelphia, Pittsburgh, Scranton, Williamsport) for supervision of staff nurses in relation to their maternal and child health work.

(2) Five additional staff nurses to do maternal and child health work.

e. Postgraduate institutes for local physicians in obstetrics and pediatrics.

f. Extending protection work, especially against diphtheria in fourth-class school districts.

g. Conducting the prenatal demonstration in a selected area.

METHODS OF ADMINISTRATION

The Preschool Division in the Bureau of Health Law Enforcement is responsible for the conducting of child health centers, permanent year-round health conferences for well infants and preschool children.

These centers are conducted in counties where the county medical society sanctions such work.

There are 2 groups of child health centers:

1. *State centers*, of which there were 162 on Dec. 31, 1935. Each state center has a state staff nurse detailed for service. It is her duty to be present at each conference and to do the related home visiting in the locality. These centers are served by *local* physicians not appointed by the department. It is the policy of the department to foster the custom of remunerating the physicians, the fees, however, in every case to be paid from local funds only. In no case does the department pay the physicians in the health centers.

2. *Nonstate centers*, of which there were 328 on Dec. 31, 1935. This group of centers is conducted by varying agencies—visiting nurse associations, Red Cross chapters, tuberculosis societies, *etc.*, *etc.* In many instances they are the result of organizing efforts of the Department of Health field workers co-operating with these organizations. The stimulating of communities to desire such service, the help in organizing, and re-visiting again and again has been a part of the routine program of the Preschool Division.

Assurance as to standards which are to be maintained in the complete physical examinations, adequate quarters, and the service of lay committees, has to be given before the department approves the starting of the conferences. It has been the policy of the department to recommend to these agencies that all physicians serving in their conferences be paid.

All centers, whether state or nonstate, are to be conducted for well infants and well children only, and they are never in any sense to be used as dispensaries

for ill children. No prescribing whatever is to be done, nor medical advice or treatment given. All centers must have the services of registered nurses.

There are a few instances in which child health centers are conducted under municipal auspices and the physicians and nurses are being paid from municipal funds.

There are at present 6 prenatal clinics under state control with the services of state nurses. Local physicians are in charge. They are not paid by the Department of Health.

There is a limited amount of field prenatal work done by the state nurses, the expectant mothers being referred to physicians or clinics for examination and care.

Field prenatal work done by the Metropolitan Life Insurance nurses and Red Cross nurses is all reported to the Department of Health by arrangement with their head offices.

Postnatal work is done by state nurses and consists in calling on local registrars of the fourth-class districts to secure the names of new infants and the making of one or more calls in the homes thus secured.

The supervision and instruction of midwives is extensively done in the 2 coal regions of the state. Four full-time physicians are in charge of the work. Regular monthly classes are held for instruction, discussions, and demonstrations. All midwife confinement cases are reported to the county medical directors.

The county medical directors have been requested by the Board of Medical Education and Licensure to serve as county midwife inspectors.

Postnatal calls on midwife delivery cases are routinely done by the state nurses. In any cases requiring attention because of some questionable condition, the mother or baby is visited by the field doctors in the areas concerned. Sore eyes receive immediate and special attention in accordance with the laws and regulations of the Department of Health and sight conservation service of the Council for the Blind.

There are 30 counties in which there are no midwives. In 37 counties the number varies from one to 90. The Department of Health is not responsible for supervision in Philadelphia and Pittsburgh, where other arrangements prevail. Midwives are obliged to hold a license to practice midwifery and must register every year.

The distribution of maternal and child health literature is chiefly through the child health centers, prenatal clinics, and prenatal field work, both state and nonstate. Literature is also used in medical colleges and hospitals in Philadelphia and Pittsburgh in clinics and for the senior obstetric students. Red Cross chapters, tuberculosis societies, visiting nurse associations, and community nurses are welcome to department literature if they report their maternal and child health work.

Work under the Preschool Division, which lapsed recently, because of financial retrenchment, included (1) itinerant work with motor units, which were fully staffed and equipped for operating during the 3 summer months in rural areas, for the examination of preschool children with special emphasis on the 6-year-olds about to enter school; (2) health examinations in kindergartens of the fourth-class districts; (3) a very large spring program carried through, state-wide, with the so-called May Day machinery, for the purpose of covering the territory where neither summer roundups nor motor units were in action, the May Day program in Pennsylvania being the same year after year for 11 years, with special emphasis on preschool child exami-

nations and defect correction and protective measures, and the work increasing over that period until between 75,000 and 100,000 children were reached by all programs combined. Much of this has lapsed either from lack of funds or because it has been absorbed into other activities.

The School Division has a budget of \$25,000 for the field work in medical school inspection and an administrative budget of \$17,000. The former sum is used for the payment of fees for the following services: (1) Inspection in the fourth-class districts; (2) examination of children seeking employment certificates in compliance with the labor laws; (3) the vaccination of children in indigent families and the revaccinating of non-takes; (4) the supervisory visits in third-class districts.

School medical inspectors, according to the Pennsylvania School Law, have to be physicians legally qualified to practice medicine in the commonwealth who have had at least 2 years' experience in the practice of their profession. They are appointed by the Secretary of Health, who, through the deputy, checks their qualifications. The direct administration is through the chief of the School Division, local supervision through the county medical director.

The Bureau of Nursing has 135 nurses on a generalized service: 120 give approximately one-third of their time to maternal and child health work, serving in child health centers and prenatal clinics, and doing prenatal and postnatal home visiting. The nurses are detailed to work in specified areas, usually within county limits. General orders are given from Harrisburg, and in the field the nurses are directly responsible to the county medical directors. Nurses do not serve in county units in the usual sense of that term.

NOTE: County medical directors are physicians appointed by the department for full-time service. They are in charge of the department's personnel in the rural sections, and in borough and first-class township boards of health; they are in charge of rural communicable disease control; they vaccinate indigent school children; and they take part in some of the medical school inspections. The state nurses report to them and are under them in the discharge of their routine duties, and receive from them the midwife birth notices for postnatal visiting. The county medical directors act as county midwife inspectors in those counties where there are midwives. When the establishment of a child health center is contemplated, the opinion of the county medical director is obtained as to the advisability of establishing the conference, and his advice and co-operation may be sought in securing physicians' services for the work.

The program of the Dental Division is in process of organization at the present time, and the chief dentist will administer the program in a state-wide way. For complete details see the subsection on "Plans of the Dental Division" under the section headed "Expansion and Improvement of Local Maternal and Child Health Services."

REPORTS TO THE SECRETARY OF LABOR

The Department of Health through its Preschool Division will make such reports in such form and containing such information as the Secretary of Labor may from time to time require, and will comply with such provisions as may from time to time be found necessary to assure the correctness and verification of such reports.

EXPANSION AND IMPROVEMENT OF LOCAL MATERNAL AND CHILD HEALTH SERVICES

1. *The Preschool Division Plans.*

a. *Child Health Centers.*—These will be organized where requested by localities and sanctioned by the county medical societies. A limited amount of field service is available to help in the organizing. This applies to new centers where state nurses may be detailed to serve. It applies equally to other organizations and agencies requesting advice and help of the department. The latter agencies supply their own nursing service in the centers and secure the services of local physicians and provide also their own quarters and equipment. The literature and record forms of the department are available to these nonstate centers if they conform to department standards and report regularly each month.

The strengthening of local interest in maternal and child health work through the aid of volunteer committees of the child health centers is a great need and can be brought about only by personal contacts, such as will become more possible with the additional physicians and nursing supervisors.

b. *Fourth-Class School Districts.*—Four additional physicians with public health training and experience in pediatrics and obstetrics are to be appointed for the special purpose of conducting health work with infants and preschool children in the fourth-class (rural) districts.

For the entire preschool age group, between ages 2 and 6, there is great need of enlarging the health service, not only to bring under health supervision the majority of children of this age, but also to gain, in this most susceptible group of the population, a higher percentage of protection against smallpox and diphtheria.

The public kindergartens in the fourth-class districts at present offer an almost untouched field in which the department co-operates with other departments and with the school authorities, this with a minimum of organizing since existing groups can be served.

The parent education and nursery school work in the Education Division of the WPA, in conjunction with the Department of Public Instruction, offers large opportunities for health work with mothers and children. It has been ascertained that there is real need here and that such work will be welcomed. Plans may be started in motion at once.

The work in both kindergarten and nursery schools would consist of complete examinations of the children, with the parents present, to be supplemented by the work of the dental hygienists with the children and nutritionists to instruct the mothers by talks and demonstrations.

The Congress of Parents and Teachers offers a very large opportunity for co-operation in their Summer Round-Up Campaign among parent-teacher associations in the rural sections. These will continue to welcome such assistance as the field workers of the Department of Health can give.

 In the summer months, additional itinerant preschool examination work (get-ready-for-school) will be done in localities where it is desired by the county medical societies and school authorities.

The conducting of health education classes for expectant mothers, and mothers of infants and young children, will parallel the child health center and kindergarten and get-ready-for-school work, and will proceed intensively in the summer months, the 4 physicians being accompanied by the nutritionists and dental hygienists.

c. *The Supervision and Instruction of Midwives.*—This activity is to continue as heretofore. There are at present 4 full-time physicians in charge of the work, which is centered chiefly in the coal regions of the state, and in Philadelphia and Pittsburgh, where, however, the supervision is under separate jurisdiction, with regular reports sent to the Preschool Division. No expansion of this service is contemplated further than to improve the postnatal nursing service in midwife delivery cases.

d. *Prenatal Service.*—There is great need of expansion of the knowledge of prenatal care, its meaning and necessity, and parallel to that, extending clinic and public health nursing service. An increase of prenatal clinics is very much needed. There have been several of these opened recently in the smaller hospitals and they should be greatly augmented.

The establishing of such clinics should be paralleled by educational campaigns, especially for the laity, using ready-made groups, for example, the medical societies' woman's auxiliaries, federated women's clubs, etc. These organizations have already signified their interest and are willing to co-operate with the Department of Health.

2. Nursing Service Expansion.

Six nursing supervisors are to be assigned to the Bureau of Nursing, to be detailed to separate areas of the state where they will spend full time in the supervision of the maternal and child health work of the staff nurses belonging to their respective districts.

This means that their responsibilities will be to see (1) that the staff nurses maintain high standards of work in their child health conferences, teaching technics where necessary; (2) that the field visiting in prenatal and postnatal work is done after the approved manner; (3) that in prenatal clinics the nurses understand the technic of carrying out a model service; (4) that where new work may be started under their direction they understand how to organize in needy rural areas and are able to give instructions in the basic principles involved in public health nursing service in maternal and child hygiene.

Such supervision will greatly augment the scope and effectiveness of the child health center service, the related home visiting, and the prenatal and postnatal work now being done by the staff nurses.

The field nurses now doing maternal and child health work number 120. About one-third of their time is spent in this service, and it is planned to continue that ratio of service with their other work.

The 5 new full-time staff nurses will do maternal and child health work in the fourth-class districts where the economic need is pronounced and public health nursing service scarce. These areas have not yet been selected. The staff nurses' present maternal and child health duties include services in the child health centers and home visiting, calling on registrars for new births for postnatal visiting, routinely making postnatal calls on midwife delivery cases, serving in prenatal clinics, and the finding of expectant mothers and making return visits to them. This last is at present a scattered and more or less desultory service and could be greatly increased. Staff nurses are responsible for assisting in the fourth-class school medical inspection and in the follow-up home visiting to aid in securing defect corrections.

3. Expansion of the School Medical Inspection Service.

The fourth-class school districts in Pennsylvania include municipalities with a population under 5000 to-

gether with strictly rural areas, and for medical school inspection in these districts the Department of Health is entirely responsible. The next larger districts, third and second, are responsible for their own medical school inspection but are advised by the department.

Among all the rural school children there is great need of strengthening and expanding the medical inspection service. Funds have been so limited that a complete annual inspection had not been made since 1921-22. Moreover, much parental education is needed besides an increase in the school nursing service, both of which would greatly increase the securing of defect corrections. (The school nursing service is under the Department of Public Instruction.)

The discovery of evidence of tuberculosis in rural school children is recognized as of great importance. Funds for meeting the cost of equipment and the remuneration of experienced personnel for giving the tests and taking and interpreting the roentgen-ray pictures have not hitherto been available.

The method of determining needy areas in which to do an expanded and improved medical inspection service is based on the financial conditions as indicated in the records of the Department of Public Instruction, together with the health needs known by the Department of Health.

The sections of the state given first consideration are those in the soft coal regions which were affected by the last coal strike and became needy areas previous to the present depression, the most seriously affected county being Clearfield, where most of the coal has been exhausted and where the population is to a great extent rural, there being only 2 school districts in the entire county having a population of over 5000, placing almost the entire county in fourth-class districts.

Beaver County has the bulk of its industries and larger centers along a narrow river valley. The rural areas have been particularly hard hit by the failure of land development programs adjacent to the large centers and large industries located within their borders which have not paid taxes and in some cases are in the hands of receivers. This creates a lack of employment and has resulted in acute distress in the rural sections.

Allegheny, Fayette, and Westmoreland counties have the bulk of their wealth within the confines of the larger school districts of the first, second, and third class, which, in most cases, have taken out of the rural sections the most desirable land, while economic conditions have forced the poorer population back into these areas. This section is particularly hard to administer due to the hills and the large rivers which influence road routes.

The rural sections of Bedford and Blair counties in past years have been dependent on lumber, agriculture, and coal for their wealth. Forest lands have been depleted, coal in some sections exhausted, while existing mines are working on a part-time basis, which has created considerable distress in this area.

Huntingdon County has always been recorded as a district of low tax valuations with a scattered rural population.

The other needy sections of Pennsylvania include the soft coal areas of Cambria, Indiana, and Armstrong counties; the exhausted forest areas of Jefferson, Clarion, and Forest counties; and the sparsely populated sections of McKean, Potter, Tioga, and Susquehanna counties on the northern tier, which are dependent upon gas, oil, and dairy products in most cases.

In the hard coal regions, Lackawanna County can be

considered the most needy although the health service provided in that section is above the average.

Clinton, Lycoming, and Sullivan counties were wealthy lumber sections at one time but are now dependent in most cases upon mediocre farms and small industries for their wealth.

There are other sections of the state where conditions are bad in certain rural localities. However, the above-mentioned counties are the ones which both the Department of Health and the Department of Public Instruction feel are the most needy.

The selections for the present, therefore, are based on Allegheny, Beaver, Bedford, Clearfield, Fayette, and Huntingdon counties.

The elementary enrollments in the districts chosen are based on 1934 figures. The plan would involve the employment of physicians on a per diem basis of \$10 a day, providing thus for approximately 4 hours of actual examinations with an average of 40 pupils per day per doctor.

The program in Allegheny, Beaver, Bedford, Clearfield, Fayette, and Huntingdon counties covers an enrollment of 75,000 elementary pupils at a cost of \$25,530. The estimated number of doctors and costs, based on a 9-month school term, is as follows:

County	Enrollment	Number of		Cost
		Doctors		
Allegheny	30,000	15		\$12,500
Beaver	10,000	5		2,500
Bedford	8,500	5		2,100
Clearfield	15,000	8		3,760
Fayette	13,000	7		3,200
Huntingdon	6,000	7		1,470

It is planned to give complete examinations with the parents present, or at least with parental consent, and to include vision testing and the discovery of eye defects; hearing testing and the discovery of ear defects; nose and throat examinations, with special attention to tonsils, adenoids, and nasal obstructions; teeth and gum examinations to disclose dental defects; stethoscopic examination of the chest; notation of condition of scalp and skin; discovery of postural defects, including the examination of the feet; discovery of indications of malnutrition, nervous disease, and glandular disturbances; and some exploration of the mental condition. A check must be made on vaccination and on protection against diphtheria. It is hoped that the Mantoux test will be given to all the children and positive cases followed up with roentgen ray if deemed advisable.

4. Plans of the Dental Division.

The Dental Division is in process of organizing and planning the program on a state-wide basis. It is all new work. The following statement sets forth the proposed plan.

The chief of the Dental Division will have as a staff a full-time dental hygienist, to be the state supervisor, and 7 full-time dental hygienists.

All of these dental hygienists to be employed will be duly qualified under the laws of the State of Pennsylvania. All will be graduates of recognized dental hygiene schools, registered and properly certificated by the State Department of Education.

They will be chosen according to ability and record. The supervisor in addition to this will be selected because of age, experience, personal appearance, and administrative ability.

They will be appointed by the State Secretary of Health.

The dental hygienists' program will be devoted to the

following purposes: Education, examination, and collection of data.

a. *Education*.—The educational portion of the dental hygienist's work is mentioned first because in Pennsylvania the dental hygienist is employed in the public school system under a teacher's contract. The greatest value of the entire program will be to place the emphasis on prevention. This will be best accomplished along the educational route. It is planned to develop a graded course of teaching dental hygiene so that each grade will be given a 15-minute lesson once each week. In addition to this the dental hygienists at regular intervals will hold a preschool conference to which the mothers of preschool children will be invited. This will include talks on general and dental hygiene with particular emphasis on diet. Educational dental motion pictures will be used to sustain interest of the young.

Half of the time of the dental hygienists will be devoted to preschool work to be done in the schools and in the child health centers, especially in conjunction with kindergarten and nursery school work. During the school term (usually 36 weeks) their work will be largely in the schools, and in the summer months in the child health centers and conferences. It is also planned that the dental hygienists will make home visits during the summer months to carry on further the preschool portion of their work.

b. *Examination*.—The oral examination will be made in conformity with that now in use by the public school dental hygienists. This new form contains all detail necessary to cover a complete dental examination and together with attached instruction sheet gives all the necessary information. In order to make this examination of real statistical value, it will be preceded by a prophylaxis in order that all carious surfaces may be properly viewed. Throughout the duration of the prophylaxis the child is given intensive oral instruction as to care of teeth, what to eat, etc.

Not only are the mouths of the children to be examined, but also when feasible their lunches will be examined and talked over in detail by the dental hygienist. The dental hygienists will thus co-operate in all features of the maternal and child health program, namely, physical well-being, habit training, and the preventive program.

c. *Collection of Data*.—These dental hygienists will assemble all these data, tabulate same, and have them ready for intelligent deductions to be made of the results of the field work. All data will be sent to the chief of the Dental Division where it can be co-ordinated with the medical and nursing data in order to have a complete health picture. Further supervision will be maintained through occasional field trips by the chief of the Dental Division. Monthly reports of progress will be submitted to the State Secretary of Health.

The projected employment of these 8 dental hygienists is a new extension of service as no dental hygienists are employed by the State Department of Health at present except those employed directly in state-owned institutions and occupied exclusively in institutional work.

CO-OPERATION WITH MEDICAL, NURSING, AND WELFARE GROUPS

The Secretary of Health confers frequently with a committee of The Medical Society of the State of Pennsylvania composed as follows: Drs. Chauncey L. Palmer, chairman of the Committee on Public Health Legislation; William H. Mayer,* chairman, Public

* Deceased.

Relations Committee; Francis F. Borzell, chairman, Medical Economics Committee; Samuel McC. Hamill, chairman of the Emergency Child Health Committee; James S. Taylor, chairman of the Commission on Maternal Welfare; George L. Laverty, chairman of the Medical Advisory Committee to SERB; W. Burrill Odenatt, chairman of the Committee to Confer with Governmental and Private Health Agencies; Ralph M. Tyson, chairman of the Committee on Pediatric Education; President Alexander H. Colwell; Secretary Walter F. Donaldson; Jesse L. Lenker; Paul B. Steele, assistant professor of orthopedic surgery, University of Pittsburgh; Will D. Everhard, D.D.S., representing the Pennsylvania Dental Society on the Public Health Legislative Conference of Pennsylvania.

On the Advisory Committee also are the Secretary of Welfare, Commander John D. Pennington; Dr. Lester K. Ade, Superintendent of Public Instruction; Mr. Ralph Bashore, Secretary of Labor and Industry; and Miss Helen F. Graine, representing the Pennsylvania State Nurses' Association.

The outline of the state plan for maternal and child hygiene has been approved by the State Medical Society Committee, and from time to time such advice will be sought as will clarify and aid in the methods of procedure and the expansion of activities.

There exists very close co-operation with other agencies responsible for health work, such as the Congress of Parents and Teachers in their Summer Round-Up.

The department's field workers, state physicians and nurses, are included in the planning and carrying out of these get-ready-for-school drives.

In the kindergarten health work the school authorities are consulted at the outset—the county superintendent and under him the principals and teachers. Where there are school nurses (these belong to the Department of Public Instruction), they aid in the follow-up for securing defect correction. In certain counties where especially favorable nursing situations exist in rural areas, the nurses under private agencies who help the school nurses co-operate with the Preschool Division. The supervisor of the school nursing service is in the Department of Public Instruction. Co-operation between this supervisor and the Department of Health is of long standing.

The relation of the Department of Health with certain Red Cross and tuberculosis societies' nursing service has been most co-operative. This refers especially to get-ready-for-school work in the spring and to child health conferences. The department supplies literature, record forms, and general advisory aid, and receives from all regular monthly reports.

The director of medical relief under the State Emergency Relief Board has already expressed a desire for co-operation in work with expectant mothers, with special reference to working out a plan for the distribution of prenatal literature acceptable to the State Medical Society. The State Medical Society under the Commission for the Study of Maternal Mortality desires co-operation from the department in the making of joint publications, bearing both the name of the State Medical Society and the Department of Health, and it also intimates that assistance in the educational program will be acceptable.

The strengthening of local interest in maternal and child health work through aid given to the volunteer committees of the child health centers is a great need, and can be brought about only by personal contacts.

PRENATAL DEMONSTRATION

An area of the state which will include the sections where infant mortality is high and maternal mortality stationary or high has been chosen for intensive work among expectant mothers, together with lay education in mothers' classes. This demonstration will be under the immediate supervision of the chief of the Preschool Division, with the assistance of the full-time staff physicians. Policies for carrying out this work will be discussed with the chairman of the Commission on Maternal Welfare of the State Medical Society.

Under the chief of the Preschool Division, the co-operation of the local hospitals will be gained for the purpose of expanding existing prenatal service and opening prenatal clinics where they do not now exist. As this service progresses, if additional prenatal clinics under state supervision are needed, these will be considered.

The midwives will be brought into line by redoubled efforts to have them find their cases earlier.

The nursing service will emphasize the discovery of expectant mothers for the purpose of reporting them to physicians and continue, if desired, periodic visiting as directed by the doctors.

The Emergency Medical Relief Director and the SERB and local and county relief boards will co-operate by acting as a clearing-house for the names of expectant and nursing mothers, their workers also, where desirable, being supplied with prenatal literature.

Classes for young and expectant mothers will be conducted by physicians, aided by dental hygienists and nutritionists.

The question of a delivery nursing service will be taken up with the county medical society concerned, and it will be ascertained whether or not local doctors desire this service at the time of delivery in low-wage and relief groups.

In any case the larger part of the time of the nurses assigned to the area will be spent in home visiting.

* * * * *

The careful reader of the foregoing narrative of State Health Department plans, old and new, will find many evidences that the department desires the private practitioners of medicine to render the various services discussed. Complete understanding and co-operation on the part of the officers and one or two committees of each county medical society is, we believe, essential to the ultimate success of the various extensions.

Respectfully submitted,

C. L. PALMER, *Chairman*,
FRANCIS F. BORZELL,
ALEXANDER H. COLWELL,
WALTER F. DONALDSON,
SAMUEL MCC. HAMILL,
GEORGE L. LAVERTY,
W. BURRILL ODENATT,
PAUL B. STEELE,
JAMES L. TAYLOR,
RALPH M. TYSON.

COMMITTEE ON PHYSICAL THERAPY

To the President and House of Delegates:

Your Committee on Physical Therapy reports herewith.

Two component societies requested the assistance of the committee in furnishing speakers on the subject of

physical therapy. In one case the request was received too late for action, and in the other speakers were furnished for what resulted in a very satisfactory evening program, although the attendance was only 8 of a total of 26 county society members. Drs. Ebcn W. Fiske and Harold W. Jacox were the speakers.

Your committee requested copies of the forms used in connection with the administration of physical therapy in the physiotherapy departments of all Pennsylvania hospitals. Forms were received from 23 hospitals, and letters from 7 others which stated that no particular forms were used in their institutions. These sample forms, bound in a book or folder, will be contributed to the mail package library of the State Medical Society, in Harrisburg, for use by any of our members who may be interested in this phase of the work.

The committee also arranged with Howard A. Carter, secretary of the Council of Physical Therapy of the American Medical Association, to lend some 10 or 12 films showing the technic of physical therapy to be demonstrated during the 1936 State Society meeting in Pittsburgh.

It is respectfully suggested that the incoming president of our society announce his appointments to this committee, in the early days of the annual meeting, from among members of the society registered at that meeting, this in order that they may confer and organize the work of the committee at the very beginning of the society year. This plan of early appointments will not only conserve time but will save the society's funds. It is also recommended that a budgetary allowance be provided, the amount needed to be the subject of conference and agreement between the committee and the officers of the society at the time of the annual session.

Respectfully submitted,
WILTON H. ROBINSON, *Chairman*,
FRANK L. FOLLWEILER,
RALPH H. HENRY,
GUY H. MCKINSTRY,
JOSEPH SCATTERGOOD, JR.,
WILLIAM H. SCHMIDT.

COMMITTEE ON GRADUATE EDUCATION

To the President and House of Delegates:

We have the honor of rendering the third annual report of the Committee on Graduate Education for your consideration. Five hundred and forty physicians were enrolled in the courses up to Aug. 1. This is not quite as many as profited by the work last year, the number being 592, but we are heartened in the belief that several of our larger county societies are planning to organize classes in the fall. It is our hope that at least 200 more physicians will become enrolled in the fall classes.

The following counties have completed courses of 6 or more seminars:

York-Adams	71
Mercer	25
Venango-Clarion	35
Warren	28
Butler	35
Somerset	28
Berks	52
Schuylkill	44
Lackawanna	25

Lancaster	42
Lycoming	115
Bradford, Tioga, Sullivan, Susquehanna, Wyoming	40
	540

As an illustration of how practical the work is from an economic standpoint, we note that the Lancaster County Society was able to give its original class of subscribers 6 additional seminars last fall from a balance remaining in the treasury after the preceding series. This society is to form another class soon.

Schuylkill County Society completed its third course with 44 members enrolled. This society continues very enthusiastic about the work.

Dr. Julius H. Conroe, reporting for the York and Adams county societies, states that 71 physicians were enrolled; the attendance was always splendid; and considerable interest and enthusiasm were shown. There remains a small balance in the treasury.

In Berks County 52 physicians were enrolled, and every seminar, according to the consensus of opinion, was a huge success. The teachers were excellent. There remained a balance in the group treasury of approximately \$200, which the class by vote divided between the 2 hospitals.

Your chairman believes that with additional work on the part of our committee several classes will be started in the fall; further, that by paying a carefully selected member an appropriate honorarium and his travel expense the work would in one year's time extend its benefits to 50 county societies and 1500 of our members.

Your committee takes this opportunity to express deep appreciation of the unselfish work performed by the teachers of the medical schools in Philadelphia and Pittsburgh. Their co-operation, their fine support, and their unselfishness are much appreciated by the students in the classes and by the members of this committee. We have begun a work that has proven to be of real educational and practical value, and has improved the professional spirit of the members of several of the component county societies.

Your chairman wishes to express appreciation of the work of the central committee, and particularly to stress the splendid work performed by Dr. Frederick B. Utley in the western part of the state.

The House of Delegates and the Board of Trustees now provide and supervise the PENNSYLVANIA MEDICAL JOURNAL, the scientific features of the annual session, and package-by-mail library service. To further round out this educational set-up why not provide the executive machinery to carry to every component society that is receptive the refreshing form of graduate education possible only from the lips of a visiting teacher fresh from a medical school rostrum?

What greater responsibility to our membership do we have than to provide for their acceptance or refusal every reasonable facility by means of which they may keep abreast of medical progress?

Respectfully submitted,
DONALD GUTHRIE, *Chairman*,
JOHN L. ATLEE, JR.,
EDWARD W. BIXBY,
NORBERT D. GANNON,
RICHARD A. KERN,
WESLEY F. KUNKLE,
FREDERICK B. UTLEY.

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

To the President and House of Delegates:

The Advisory Committee to the Woman's Auxiliary desires to report as to the activities of the committee during the year 1935-36. Nothing has been referred to the committee; therefore, we have nothing to report.

Respectfully submitted,

WALTER S. BRÉNHOLTZ, *Chairman*,
W. WAYNE BABCOCK,
LEWIS T. BUCKMAN,
ARTHUR H. GROSS.

REPORT OF DELEGATES TO AMERICAN MEDICAL ASSOCIATION

To the President and House of Delegates:

A complete delegation of 11 duly elected delegates and alternates represented The Medical Society of the State of Pennsylvania in the House of Delegates of the American Medical Association, at its annual session held in Kansas City, Missouri, May 11-15, 1936, as follows:

PERSONNEL

Drs. Francis F. Borzell, Philadelphia; Walter F. Donaldson, Pittsburgh; George L. Laverty, Harrisburg; Samuel P. Mengel, Wilkes-Barre; Arthur C. Morgan, Philadelphia; Howard C. Frontz, Huntingdon; J. Newton Hunsberger, Norristown; J. Allen Jackson, Danville; Frank P. Lytle, Birdsboro; also Charles Falkowsky, Scranton (alternate-designate for 1936), serving for William H. Mayer, Pittsburgh, who was ill; and Curtis C. Mechling, Pittsburgh (alternate-designate for 1936), serving for Charles G. Strickland, Erie, who was also ill and unable to attend. The delegation elected Dr. Donaldson its chairman.

APPOINTMENTS, REGISTRATION, AND ELECTIONS

Appointed from the Pennsylvania delegation to serve on reference committees of the House of Delegates were Drs. Samuel P. Mengel, Amendments to Constitution and By-Laws; Arthur C. Morgan, Legislation and Public Relations; J. Newton Hunsberger, Hygiene and Public Health. Dr. Howard C. Frontz was appointed a sergeant at arms.

The total registration of Fellows of the association was 6749, which was outstanding, this number having been exceeded only at former sessions held in Philadelphia, Chicago, and Atlantic City. The registration of Fellows from Pennsylvania was 128.

In the election of officers held on May 14, our good neighbor and long-time associate in the House of Delegates, a classmate of Drs. Frontz and Mengel, and former chairman of the Board of Trustees of the A. M. A., Dr. J. H. J. Upham of Columbus, Ohio, was chosen president-elect. With full appreciation of the significance of the responsibility, Dr. Charles Gordon Heyd of New York, recently president of the New York State Medical Society, was chosen vice-president. Dr. Olin West was for the eighteenth consecutive time elected secretary and general manager.

The House of Delegates approved the appointment of Dr. Walter F. Donaldson to succeed himself as a member of the Judicial Council.

By a vote of 70 to 69, Atlantic City was chosen over Philadelphia as the meeting place for the 1937 session, June 7-11.

INSTALLATION OF PRESIDENT J. TATE MASON

The House of Delegates at its opening session was immediately confronted with the need for a decision regarding the installation of the president-elect as president, he being at that time on his deathbed. The advice of the Judicial Council was sought by the House. The Council's interpretation of the Constitution and By-laws with respect to the installation of the president-elect recommended adherence to the letter of the law to the effect that the president-elect be not inducted in absentia. The reaction of the House of Delegates to this advice from the Judicial Council was expressed by various speakers, who, "recognizing the Judicial Council as the supreme court of the A. M. A.," and conceding that "it had made the only recommendation possible under the constitution and by-laws," nevertheless declared that "sentiment demanded that the stricken leader, Dr. J. Tate Mason, and his family should not have the honor of the presidency withheld at this tragic time." In presenting to the House the advice of the Judicial Council, Dr. John H. O'Shea, a close personal friend of Dr. Mason, expressed the unanimous sentiment of the members of the Council, which was again expressed in the unanimous vote of the House, to the effect that rules and regulations be waived. To the intense satisfaction of all, Dr. Mason, who died 5 weeks later, was therefore impressively installed in absentia as president of the A. M. A., before an audience estimated at 11,000, at the opening general session, which was participated in by Governor Park of Missouri and Governor Landon of Kansas.

MESSAGE TO ALL DELEGATES

Dr. Nathan B. Van Etten, speaker of the House, in his message, reminded the delegates that they were selected by their state societies as the policy makers of this democratic organization, and that the country looks to them for constructive action which shall reflect the progressive sentiment of American medicine; also that their constituents in turn look to them for an interpretation of the quality of that sentiment.

Dr. Van Etten further charged the members of the House that after they had presented their resolutions they would not have discharged their full duty until they had followed them to the reference committees, to which they were assigned, and had discussed them there so thoroughly that they might be able to report to those whom they represented that the resultant action of the House represented the real opinion of that legislative body (another responsibility thus laid upon the A. M. A. House of Delegates which at all times applies to the personnel of our own House of Delegates).

A full account of the proceedings of the House of Delegates at Kansas City may be found in the *Journal of the A. M. A.* for May 23 and May 30.

FELLOWS IN PENNSYLVANIA

On a membership as well as on a fellowship basis Pennsylvania ranks second among the 48 constituent societies of the A. M. A. While 61 per cent (7669) of all the physicians in Pennsylvania subscribe to the *Journal of the A. M. A.*, only 65 per cent (5499) of our members are Fellows, indicating that many hundreds of our members have met every requirement for Fellowship in the association except that of making the necessary formal application. Application blanks for Fellowship are published at frequent intervals in the *PENNSYLVANIA MEDICAL JOURNAL*, and it is recommended that our own House of Delegates urge all

members to take the necessary steps to become Fellows of the A. M. A., without which one may not register in attendance or take part in the scientific discussions at the 1937 session to be held in Atlantic City.

THE APPLICATION OF DISCIPLINE

In last year's House considerable attention was given to the question of disciplining members of county and state medical societies who appear to be above the disciplinary provisions of local societies, and it was decided that the American Medical Association should be given the right to originate charges in such cases. This year the by-laws were amended, extending original jurisdiction of the Judicial Council to "all controversies arising under this constitution and by-laws, and under the principles of medical ethics, to which the A. M. A. is a party." It will be noted that this makes the powers of the Judicial Council quite extensive.

To make feasible the entrance of the Judicial Council into this venture, the Board of Trustees of the A. M. A. was given authority to appoint committees, upon request of the Judicial Council, "for emergencies and purposes not otherwise provided for, and the president was given authority to appoint a prosecutor, who, in the name and on behalf of the A. M. A., shall prosecute the charges against the accused before the Judicial Council"; and the Council was given the power to "acquit, admonish, suspend, or expel the accused." These rather radical amendments undoubtedly met with approval because of the recent development of county and state medical society responsibility for the success of A. M. A. policies (e.g., 10 points adopted at Cleveland), hence corresponding increase of demand for A. M. A. control over certain phases of county and state society enforcement of ethical principles. (A proposed amendment to our own State Society By-laws will now offer opportunity to increase State Society participation in county society enforcement of the principles of medical ethics.)

BEWARE OF ASSOCIATION WITH CULTISTS

A resolution disapproving the employment of optometrists by hospitals was adopted. It was likewise decided that it is "unwise, unethical, and inadvisable for ophthalmologists to instruct students of optometry."

The Judicial Council also held that while the individual citizen has a perfect right to receive medical care "from himself, his neighbor, osteopathy, chiropractic, naturopathy, or Christian science, he is not entitled, while under the care of such irregulars, to demand that the man educated in scientific medicine furnish opinion and advice in consultation with one so far deficient in education that he cannot understand and apply that opinion and advice as to be able to make satisfactory use of it. Such degrading consultation would cheat the patient out of that which he might expect, and the subsequent failure of results bring discredit on the science of medicine." It was further held that the opinion that "such recognition would work the cultist gradually into scientific medicine is fallacious, and that the result of such a practice would be inevitably to reduce scientific standards."

HOSPITALS

A resolution was also adopted requiring that the Council on Medical Education and Hospitals notify state medical associations when about to revise the rating of hospitals within the state, and give said associations opportunity to present to the Council their views on the matters in hand.

The dividing of any branch of medicine into technical and professional portions was condemned in appropriate resolutions. Similar division of radiology was likewise disapproved, and the policy of the association that radiology, whether for diagnostic or therapeutic purposes, should be considered the practice of medicine was reiterated. It was held that all services in connection with radiology should be under the direct control and supervision of the physician.

The position of the association that a hospital should not practice medicine was reiterated and emphasized, as was also the postulate that in group hospitalization insurance the greatest concern of the medical profession is that hospitalization insurance shall not include a physician's services.

DIRECTORIES

A resolution condemning as unethical the listing of physicians by their specialties in directories published by commercial concerns was referred to the Judicial Council, which later declared that such practices were but subtle ways of avoiding the pronouncements of the principles of medical ethics in the solicitation of patients. The council was also supported in its advice against efforts of a commercial telephone exchange now selling emergency telephone service to secure a single short-wave frequency to be used in a radio-paging service to be sold to physicians in the larger cities.

FEDERAL RELATIONS

The medical and health provisions of the national Social Security Act were given much thought and discussion. Constituent state associations were earnestly advised to co-operate with the federal government in applying the provisions of this legislation, to the end that all medical and health service be kept within ethical and traditional bounds.

A proposal that a federal department of health with a Cabinet officer at its head be established did not meet with the approval of the House of Delegates.

The House voted unanimously that either federal, state, county, or city authorities should assume responsibility for the medical care of WPA employees if responsibility for their other needs is assumed.

The continuation of medical units in the Reserve Officers Training Corps was also supported.

BIRTH CONTROL

The report of a special committee appointed in 1935 to study contraceptive practices and related problems appears in the minutes of the meeting. It is well worth reading. The House recommended that the committee be continued, and that birth control propaganda directed to the public by lay bodies organized solely for the purpose of disseminating contraceptive information be condemned. These recommendations were adopted. The proposal of the special committee that steps be taken to develop standards for judging contraceptive materials was disapproved.

JOURNAL EARNINGS

It is worth-while to note the part played by the *Journal* in defraying the expenses of the A. M. A., net *Journal* earnings for the year being \$605,000. (Would that such support of advertisers might be proportionately accorded the advertisers in the PENNSYLVANIA MEDICAL JOURNAL.)

GUESTS

Guests of the association introduced to the House and bringing greetings from their respective associations were Lord Horder, British Medical Association; Dr. Leon Asher, Switzerland; Dr. T. C. Routley, Canada; Mr. William Shafroth, American Bar Association. The latter's remarks included the following: "I want to say that I have been very much impressed with this deliberative body from the time that it was convened yesterday morning at 10 o'clock and 30 seconds until the present moment. I feel that a representative parliament of the medical profession is one of the reasons for the greatness of your national association, and I know you will be interested to know that at the meeting of our association in Boston this summer a provision will be introduced for the amendment of our constitution to create a house of delegates of the legal profession."

Respectfully submitted,
WALTER F. DONALDSON.

OFFICERS' DEPARTMENT

WALTER F. DONALDSON, M.D., Secretary, 8104 Jenkins Arcade, Pittsburgh, Pa.

SCIENTIFIC EXHIBIT AWARDS

Recognition of the growing value of the scientific exhibits in connection with the annual meetings of The Medical Society of the State of Pennsylvania has resulted in the 1936 scientific exhibit receiving 2 marked evidences of distinction:

- 1. Provision by the Board of Trustees for the issuance of hand-engrossed certificates of merit to the 3 scientific exhibits chosen by the ballots of the members of the society viewing the exhibit as being of the greatest educational value to the general practitioner of medicine;
- 2. The Scientific Program Committee has scheduled recess periods during the afternoon programs for the purpose of permitting those in attendance upon the various sections to visit the scientific exhibit, returning to the various meeting places for the completion of the afternoon program.

REDUCED RAILROAD FARES

The practice of granting reduced fares for conventions was discontinued by the railroads in the eastern section of the United States on June 1. On this date fares were reduced from approximately 3.6 cents per mile to 3 cents per mile for tickets good in Pullman cars and to 2 cents per mile for tickets good in coaches. The surcharge on Pullman tickets was also canceled. In view of this considerable lowering in passenger rates, the usual round-trip rate of 1 and 1/3 fare on the certificate plan will not be authorized by the railroads for the annual session of our State Society to be held in Pittsburgh, Oct. 5 to 8.

HOSPITALIZATION INSURANCE

An Approved Form of Agreement

Without attempting to discuss the communal need for insured hospital accommodations, the Committee on Medical Economics of The Medical Society of the State of Pennsylvania recently approved the following form of agreement, after correspondence and a conference between representatives of the management and the visiting staff of the hospital and of the county and state medical societies concerned:

RATES PER YEAR	
One person	{ Single payment \$10.00
	{ 2-3-4 payments 10.25
	{ 12 payments 10.50

FORM OF AGREEMENT FOR ASSOCIATION MEMBER
ADRIAN HOSPITAL ASSOCIATION, INC.

I hereby make application to the Adrian Hospital Association, Inc., for associate membership under the following rules and terms:

I agree that such membership does not give me any vote or other authority in the affairs of the corporation except insofar as these apply to associate members, to the dues paid by such members, and to the privileges gained by the payment of such dues.

I agree to pay to the said association the sum of \$..... per year as associate membership dues for myself.

I further agree that this amount shall be paid in installments of \$....., and that my membership shall end automatically, without notice, 48 hours after any payment is due and unpaid.

In return for said payments the Adrian Hospital Association agrees to furnish to me hospitalization in accordance with the terms of this agreement, and when ordered by any physician acceptable to the medical staff of the hospital who has been selected by me as my private physician.

Hospitalization, under the terms of this contract,

The exhibits will stimulate you; you will stimulate the men and women who have spent much time and thought in bringing to you what is new, what is practical, and what is of benefit for the treatment of patients. It is a reciprocal affair.

We are sure that the exhibitors' share of this reciprocal arrangement will be well done. We have had meetings and much conversation and correspondence regarding this exhibit, and we are certain that you, the members of the State Society, will honor this endeavor with your attention and make it a worth-while undertaking.

The Committee on Scientific Exhibit thus respectfully submits its work to the real judges, the members of The Medical Society of the State of Pennsylvania.

LESTER HOLLANDER, M.D., *Chairman,*
Scientific Exhibit Committee.

LIBRARY NEWS

The laity does not stop to consider the amount of preparatory work necessary to ground a physician in the fundamentals of science essential to the development of his art, nor does it realize the constant research work which he must do to keep abreast of new ideas. Some sort of system is imperative in graduate study, for in the words of Sir James Mackenzie, "A lack of guiding principles is responsible for many haphazard methods. The result, too often, is that, though immense energy is expended, achievement is not commensurate with this expense."

The rush of modern life necessitates increased speed in every profession. No longer will people submit to sermons, hours long, droned from the pulpit, nor to sharp raps on knuckles dealt to drowsy members of the congregation. No longer do they have the time nor the inclination to be administered to by doctors who chat in an aimless way about inconsequentials. Diagnoses must be made, not with careless haste but as quickly as possible consistent with the accuracy of modern science, perfected by scholarly study and wise and sympathetic insight into human nature.

The carefully classified collection of reprints, numbering more than 15,000, in our package library is a help to members in the saving of both time and energy. No doubt many physicians have assembled a number of valuable papers for their own personal use, yet few can take time to classify those reprints in an accessible way so that the maximum regarding any particular phase of a subject may be reviewed in the minimum time.

Borrowers from June 18 to August 15 are:

John Francis Blair, Derry—*Coronary Occlusion* (31 articles).

Maurice Seltzer, Philadelphia—*Thrombo-angitis Obliterans* (22 articles).

Mathew H. Sherman, Harrisburg—*Manchester Operation* (2 articles).

Richards H. Hoffman, Bellefonte—*Arsphenamine Eruptions* (12 articles); second package (8 articles).

George R. Barnett, Lewistown—*Barbital and Barbital Derivatives* (24 articles); second package (5 articles).

Sterrett E. Dietrich, Ingram—*Disseminated Sclerosis* (14 articles).

Harry Hayes Lamb, Oil City—*Intestinal Obstruction* (14 articles).

A. Reid Leopold, Lewistown—*Carbon Monoxide Poisoning* (5 articles).

Clarence Homer Lefever, Erie—*Coronary Thrombosis* (18 articles).

Angelo L. Luchi, Wilkes-Barre—*Lead Therapy of Cancer* (3 articles).

Joseph Stewart Brown, Lewistown—*Pneumonia* (27 articles).

Louis W. Schwindt, Philadelphia—*Acetone* (8 articles); second package (1 article).

Harry D. Collett, Altoona—*Subacute Bacterial Endocarditis* (13 articles); second package (3 articles).

Philip S. Stout, Philadelphia—*Ionization* (10 articles).

A. Reid Leopold, Lewistown—*Angioneurotic Edema* (15 articles); second package (3 articles).

Leo C. Mundy, Wilkes-Barre—*Peptic Ulcer* (36 articles).

William H. Guy, Pittsburgh—*Cancer of Oral Cavity and Adjacent Structures* (45 articles).

Hamblen C. Eaton, Polk—*Weil's Disease* (10 articles).

Edmund W. Klinefelter, York—*Sex Hormones* (15 articles).

Virginia South, Harrisburg—*Ovarian Tumors* (15 articles).

R. Manges Smith, Fayetteville, R. D. No. 2—*Röntgen-Ray Therapy of Infections* (20 articles).

Members desiring to borrow reprints from the library should send 25 cents in stamps to cover the postage and part of the expense of collecting the material. Address the Librarian, 230 State Street, Harrisburg, Pa. Only one package may be borrowed at a time and it must be returned within 14 days.

CLARENCE R. PHILLIPS, *Chairman,*

WALTER F. DONALDSON,

FRANK C. HAMMOND,

AUGUSTUS S. KECH,

Library Committee.

PITTSBURGH UROLOGICAL ASSOCIATION BREAKFAST

The Pittsburgh Urological Association will have a breakfast at the Hotel William Penn on Thursday, Oct. 8, 1936, at 10 a. m.

All members of the State Society registering in the Urologic Section are cordially invited to attend.

OBSTETRIC AND PEDIATRIC INSTITUTES

Under the Federal Social Security Act, signed by President Roosevelt on Aug. 14, 1935, the U. S. Congress not only approved the appropriation of funds to be expended in the extension of maternal and child welfare service in the various states of the Union but provided that such service should be administered or supervised by the official health agency of each state "in co-operation with medical, nursing, and welfare groups and organizations."

At the invitation of Pennsylvania's Secretary of Health, Dr. Edith MacBride-Dexter, 10 representatives of our State Medical Society appointed by President Alexander H. Colwell conferred, on Oct. 2, 1935, with the Secretary of Health regarding health and medical service problems likely to develop in connection with the health projects proposed under the Federal Social Security Act.

Since that time, members of the committee have conferred on numerous occasions with Sec-

retary MacBride-Dexter and representatives of the Federal Children's Service Bureau. Progress reports were published from time to time in the PENNSYLVANIA MEDICAL JOURNAL, and in the June number of the JOURNAL the Commission on Maternal Welfare of our State Society tentatively made announcement of the obstetric institutes, regarding which official announcement has recently been sent to the proper committee chairman of each county medical society.

This announcement places upon the chairman of each county medical society's Committee on Maternal Mortality a responsibility which deserves in all its phases the fullest co-operation of the officers and members of each society.

The schedule of subjects, teachers, dates, and places of meeting follow. Only the latter are subject to change.

All physicians are invited; there is no charge to those attending.

List of Subjects for Obstetric and Pediatric Institutes

to be conducted through the

Commission on Maternal Welfare and the Committee on Pediatric Education

of

The Medical Society of the State of Pennsylvania

and the

State Department of Health

FIRST OBSTETRIC INSTITUTE

- Lecture 1. Ante-, Intra-, and Postpartum Care
- Lecture 2. Puerperal Infection
- Lecture 3. The Toxemias of Pregnancy

SECOND OBSTETRIC INSTITUTE

- Lecture 1. Abortion and Ectopic Pregnancy
- Lecture 2. Operative Delivery

{	Forceps
{	Version
{	Cesarean
- Lecture 3. Episiotomy and Repair of Birth Injuries

THIRD OBSTETRIC INSTITUTE

- Lecture 1. Obstetric Hemorrhages

{	Postpartum
{	Placenta praevia
{	Abruptio placentae
- Lecture 2. Anesthesia in Obstetrics
- Lecture 3. Care of Premature Infants

FIRST PEDIATRIC INSTITUTE

Care of Newborn and Premature Infants

SECOND PEDIATRIC INSTITUTE

The Modern Conception of Immunology

THIRD PEDIATRIC INSTITUTE

Gastro-intestinal Disturbances and Infant Feeding

OBSTETRIC AND PEDIATRIC INSTITUTES

<i>*Sept. 15, 22, 29 Oct. 13, 20, 27</i>	<i>Sept. 16, 23, 30 Oct. 14, 21, 28</i>	<i>Sept. 18, 25 Oct. 2, 16, 23, 30</i>	<i>Sept. 22, 29 Oct. 13, 20, 27 Nov. 10</i>	<i>Oct. 15, 22, 29 Nov. 5, 12, 19</i>	<i>Nov. 4, 12, 18, 25 Dec. 2, 9</i>
Susquehanna Bradford Sullivan Tioga †(Sayre)	Schuylkill Berks (Reading)	Clinton Lycoming Cameron (Williamsport)	Indiana Armstrong (Indiana)	Westmoreland Fayette (Greensburg)	Carbon Monroe Lehigh Northampton (Allentown)
‡P-J-T	P2-J	P-J-T	Pgh. 3	Pgh. 3	P-J-T
Clearfield Center Jefferson (Clearfield)	Bucks Montgomery (Norristown)	Erie (Erie)	Venango Forest Elk Clarion (Franklin)	Fulton Franklin Adams York (Chambersburg)	Lancaster (Lancaster)
Pgh. 2-Wom.	J2-P	Pgh. 3	Pgh. 3	P-T-H	P3
Huntingdon Mifflin Juniata Blair Bedford (Altoona)	Lawrence Butler Beaver (New Castle)	Perry Dauphin Lebanon Cumberland (Harrisburg)	Chester Delaware (West Chester)	Lackawanna Wyoming Wayne Pike (Scranton)	McKean Warren Potter (Bradford)
P-T-H	Pgh. 3	P-J-H	P-T-H	P-J-T	Pgh. 3
Montour Columbia Northumberland (Danville)	Allegheny (Pittsburgh)	Greene Washington (Washington)	Luzerne (Wilkes-Barre)	Cambria Somerset (Johnstown)	Crawford Mercer (Sharon)
P-J-T	Pgh. 3	Pgh. 3	P2-Wom.	Pgh. 3	Pgh. 3

* The first, third, and fifth dates are obstetric; the second, fourth, and sixth dates are pediatric.

† The bracketed city is planned for the first meeting; subsequent meetings may be held at the same or other selected points, according to local wishes. A suitable hospital is suggested as the meeting place.

‡ The letters denote the medical school affiliations of the teachers, as follows: H—Hahnemann Medical College, P—University of Pennsylvania, Pgh.—University of Pittsburgh, T—Temple University, Wom.—Woman's Medical College. The figures after letters denote the number of teachers from such school to conduct the institute.

THE ABANDONMENT OF EMERGENCY MEDICAL RELIEF SERVICE IN PENNSYLVANIA*

On Aug. 12, 1936, telegraphic notice of a meeting to be held in Harrisburg, Aug. 14, was jointly issued by Drs. Harold A. Miller and George L. Laverty to the members of the advisory committees representing the healing arts professions participating in emergency medical relief.

In response, the following attended the meeting which convened at 3:30 p.m., at 230 State Street, Harrisburg:

Representing Pennsylvania State Dental Society: C. H. Hollister and Wayde D. Kelly, Harrisburg; R. J. Sample, Erie.

Representing Pennsylvania Pharmaceutical Association: Henry V. DeHaven, West Chester; Frank R. Kelly, Carbondale; J. B. Pilchard, Harrisburg; Harry E. Wertz, Johnstown.

Representing Pennsylvania State Nurses' Association: Esther R. Entriken, Harrisburg; Helen V. Stevens, Pittsburgh.

Representing The Medical Society of the State of Pennsylvania: Alexander H. Colwell, Henry T. Price, and Walter F. Donaldson, Pittsburgh; George L. Laverty, Harrisburg; William Egbert Robertson, Philadelphia; Charles H. Smith, Uniontown.

Representing the State Emergency Relief Board (SERB): Karl de Schweinitz, Executive Director; Harold A. Miller, Medical Director.

Dr. Laverty, serving as chairman, introduced Director de Schweinitz, who briefly elaborated on his announcement for the SERB to the effect that between Aug. 31 and Sept. 15, 1936, emergency medical relief service as it has existed in Pennsylvania since Dec. 1, 1933, would be abandoned.

Director de Schweinitz read a copy of a letter about to be mailed from the SERB to the various County Emergency Relief Boards (CERB) throughout the state. It confirmed the above announcement and praised the past co-operation of the county and state medical advisory committees; also advised that the medical service was being abandoned in the interests of economy because the 1936 Pennsylvania Legislature (special session) had not only appropriated for future emergency relief a sum totaling much less

than the amount requested, but had also fixed inflexibly the proportion of the total which might be spent in the future on administrative overhead expense.

He explained that medical service overhead in the Harrisburg office and the various county relief board offices is proportionately very heavy due to investigative, clerical, and auditing service which is necessary on medical orders because most of them lapse in 2 weeks.

In the free discussion which followed it was established:

1. That in December, 1935, the Pennsylvania and the federal emergency relief authorities had been memorialized as follows:

a. That provision of minimal adequate sickness service to the indigent is the economic liability of society at large (taxpayers) and the professional responsibility of the organized healing arts societies; and

b. That their proper representatives request the federal and state relief authorities to abandon emergency medical relief service in the counties of Pennsylvania only as and when it is justified by stabilized re-employment of all employables and by humane service to the unemployables.

2. That at another conference held in Harrisburg in February, 1936, Director de Schweinitz stated that favorable action on emergency relief estimates by the Pennsylvania Legislature, about to be called in special session, would result in the continuation of emergency medical relief service probably on an extended scale, but that a reduction in the total appropriation asked for would be followed by the abandonment of emergency medical relief service.

3. That the following accomplishments of emergency medical relief service since December, 1933, justified a gradual transfer from state to county responsibility rather than the sudden transformation just announced:

a. Uniting in a common purpose the participants of the dental, medical, nursing, and pharmaceutical professions;

b. Continuing the personal relationship, on a free choice basis, between relief patient and his dentist, physician, nurse, or pharmacist;

c. Maintaining a low morbidity and mortality rate with improved maternal mortality experience and an almost complete freedom from neglect of the sick with its consequent development of epidemics;

d. Combining with a complete absence of political partisanship a proper professional spirit,

* It should be understood that throughout the history of emergency medical relief service in Pennsylvania the words "medical service" stand for professional services rendered by the participating dentist, nurse, pharmacist, or physician.

these healing groups have rendered their service on a reduced fee basis roughly expressed in the following: In the 12 months from July, 1935, to June, 1936, with an average of 288,000 families on relief, the average cost per relief case for all medical care was 97 cents, the total cost for all medical care in July, 1935, having been \$209,000; in June, 1936, \$58,000, averaging considerably less than 2 per cent of the total spent for food, clothing, and shelter for citizens on direct relief.

Prefacing his motion with comments epitomized as follows, Dr. Henry T. Price offered a motion which was unanimously adopted:

WHEREAS, The organized healing arts groups in Pennsylvania have rendered professional service to the families of the unemployed on emergency relief in keeping with responsibilities bestowed by education, experience, and tradition; and

WHEREAS, Continuation of such sickness service by these related professions, composing in each county a strictly nonpolitical agency familiar with community health, sickness, and welfare problems, is advisable; therefore be it

Resolved, That opportunity is requested to have a representative committee appear at a very early date before the members of the State Emergency Relief Board for the purpose of (1) urging the more gradual transfer of emergency medical relief service from state to county or local responsibility, and (2) offering to accept during the period of more gradual transfer a reduction in the cost of the medical service proportionate to the reduction in funds appropriated for emergency relief service in general.*

The chairman announced the following as the committee to represent approximately 40,000 registered practitioners of the healing arts before the SERB: Wayde D. Kelly, R. J. Sample, R. R. Gaw, J. C. Walton, Miss Netta Ford, Miss Ruth Hubbard, Alexander H. Colwell, and Henry T. Price.

Requesting the undersigned to prepare and distribute the narrative of the meeting, Chairman Laverty announced adjournment.

WALTER F. DONALDSON,
8104 Jenkins Arcade,
Pittsburgh, Pa.

Aug. 20, 1936.

* The SERB later designated Sept. 15 as the date for the meeting of the representatives of the healing arts groups with their board.

CHANGES IN MEMBERSHIP OF COUNTY SOCIETIES

The following changes have been reported to August 10:

ALLEGHENY: *New Member*—George Metzger, 1018 Chestnut St., N. S., Pittsburgh. *Reinstated Member*—Everett M. Baker, 121 University Place, Pittsburgh. *Removal*—Oliver M. Warner from Aspinwall to U. S.

V. Administration Facilities, Walla Walla, Wash.; John C. Chornyak from Philadelphia to 38¹/₂ Beacon St., Boston, Mass. *Death*—Robert J. McCready, Pittsburgh (Bellevue Hosp. Med. Coll., '73), July 21, aged 86.

ARMSTRONG: *New Members*—Dorsey R. Hoyt, Rural Valley; Turney L. Kirkwood, Kittanning.

BERKS: *New Members*—John R. Bowers, 350 W. Main St., Kutztown; Carl B. Eshelman, 213 W. Lancaster Ave., Shillington; John M. Wotring, Reading Hospital, Reading.

BRADFORD: *New Member*—William R. Campbell, East Smithfield.

CAMBRIA: *New Members*—George W. Conrad, 516 Vine St., Johnstown; Mary M. Miller, 812 Main St., Portage.

CHESTER: *New Member*—William Parke Kenworthy, Jr., Atglen.

CLEARFIELD: *Death*—James A. Miller, Grampian (Univ. Pgh., '97), July 11, aged 75.

CUMBERLAND: *New Member*—Vance McC. Rothrock, Carlisle.

DAUPHIN: *Transfer*—Paul H. Schraer, 230 N. Fifth St., Reading (formerly of Harrisburg), to Berks County Society.

FAYETTE: *New Member*—Earl W. Hemminger, Uniontown; Coy T. Upchurch, Melcroft. *Transfer*—Alfred G. Neill, Portage (formerly of Melcroft), to Cambria County Society.

LAWRENCE: *Reinstated Member*—Gerald Zieve, 1139 S. Mill St., New Castle.

LEBANON: *New Member*—Alfred D. Strickler, Lebanon.

LEHIGH: *Death*—Palmer J. Kress, Allentown (Jeff. Med. Coll., '95), Aug. 3, aged 64.

MONTGOMERY: *Reinstated Member*—Louis M. Eble, Abington.

NORTHUMBERLAND: *Death*—Percival J. Herman, Selinsgrove (Cinn. Coll. Med. & Surg., '76), July 15, aged 85.

PERRY: *New Member*—Ruth O. Crouse, Duncannon.

PHILADELPHIA: *New Members*—Verner Nisbet, 254 S. 45th St., Sarah I. Morris, 144 W. Washington Lane, Gtn., Arthur H. Thomas, 16 S. Ruby St., Philadelphia. *Reinstated Members*—Samuel Baron, 4800 N. Eleventh St., John L. Laird, 4600 Spruce St., Philadelphia. *Deaths*—J. Leslie Davis, Philadelphia (Jeff. Med. Coll., '01), Aug. 2, aged 64; Charles H. Frazier, Philadelphia (Univ. Pa., '92), July 26, aged 66; Herman B. Slotkin, Philadelphia (Jeff. Med. Coll., '25), Aug. 2, aged 36.

SOMERSET: *Reinstated Members*—George A. Noon, Listie; John F. Maurer, Acostia.

VENANGO: *Reinstated Member*—George B. Jobson, Franklin.

WESTMORELAND: *Reinstated Members*—Thomas Ceraso, 421 Franklin Ave., Vandergrift; George L. Krieger, New Kensington.

YORK: *New Members*—George R. Matthews, Jr., 1414 W. Market St., Hedley E. Rutland, 1705 W. Market St., Lewis C. Pusch, 617 Country Club Road, York. *Death*—Lineus W. Fishel, York (Jeff. Med. Coll., '20), July 20, aged 40.

CONTRIBUTIONS TO MEDICAL BENEVOLENCE FUND

The Committee on Medical Benevolence gratefully acknowledges the following contributions to the Fund:

Woman's Auxiliary to Elk County Medical Society	\$15.00
Woman's Auxiliary to Tioga County Medical Society	14.00
Woman's Auxiliary to Schuylkill County Medical Society	65.00
Woman's Auxiliary to Warren County Medical Society	12.00
Woman's Auxiliary to Clinton County Medical Society	25.00
Woman's Auxiliary to Lchigh County Medical Society	100.00
Woman's Auxiliary to Berks County Medical Society	75.00
Woman's Auxiliary to The Medical Society of the State of Pennsylvania	200.00

Total contributions since 1935 report \$3,216.94

PAYMENT OF PER-CAPITA ASSESSMENT

The following payment of per-capita assessment has been received since July 8. Figures in first column indicate county society numbers; second column, State Society numbers:

July 11 Fayette	107-108	8091-8092	\$15.00
16 Schuylkill	166-168	8093-8095	22.50
Somerset	41	8096	7.50
Venango	49	8097	7.50
22 Cambria	176-177	8098-8099	7.50
Cumberland	40	8100	7.50
Westmoreland	168-169	8101-8102	15.00
23 Armstrong	46	8103	3.75
25 Montgomery	203	8104	7.50
Chester	108	8105	3.75
27 Berks	165-167	8106-8108	22.50
28 Allegheny	1306-1307	8109-8110	11.25
29 Lebanon	35	8111	7.50
30 Philadelphia	2071-2081	8112-8122	82.50
Aug. 1 Venango	50	8123	7.50
3 Somerset	42	8124	7.50
4 York	145-147	8125-8127	11.25
Lawrence	73	8128	7.50
Bradford	40	8129	7.50
7 Armstrong	47	8130	3.75
8 Perry	13	8131	3.75
11 Montgomery	204-205	8132-8133	15.00

County Society Reports

CHESTER

July 21, 1936

A regular meeting was held at the Pennsylvania Epileptic Hospital; President Charles J. Brower presided.

Luncheon was served, following which the committee appointed to meet with the County Commissioners and Directors of the Poor reported that the commissioners felt that these officials were favorably disposed to discuss the broad field of medical care of the indigent, and though nothing definite was decided upon, the committee was impressed with the interest of the county officials in this problem. The commissioners have agreed to recognize any bills contracted at the Rush

Hospital which have been previously approved by the Directors of the Poor for medical care of indigent tuberculous patients.

The Maternal Welfare Committee is active in arranging for the symposium this fall.

The censors reported that the medical society has no jurisdiction over the therapeutic activities of Dr. Mary Kendrick, of West Chester, and Dr. Lloyd Hershey, of Honey Brook.

William Limberger presented charts illustrating the results of several interesting studies in spinal fluid pressure. He demonstrated the fact that reduction in spinal fluid pressure has very little effect in reducing the severity of epilepsy. He also clearly demonstrated that reduction of spinal fluid pressure is a very temporary accomplishment. Nature always tends to return the pressure to its previous level. George Wilson, chief neurologist to the Epileptic Hospital, presented an instructive résumé of several diagnostic and therapeutic phases of epilepsy. Dr. Wilson spoke of various types of epilepsy and the many factors which are supposed to influence its occurrence. He also referred to the severity of epilepsy in various stages of life and particularly stressed the tendency of the disease to go through periods of less severity. As far as treatment is concerned Dr. Wilson has little faith in a specific diet or limitation of fluid intake. The one drug of great value in treatment of this disease is phenobarbital taken in sufficiently large doses to control the attack.

JOSEPH SCATTERGOOD, JR., *Reporter.*

FAYETTE

June 4, 1936

The meeting was held in Medical Hall, Uniontown Hospital, at 8:30 p.m.; Lewis N. Reichard presided.

A symposium was held on "Hyperthyroidism." The speakers were Elliott B. Edie, Clark M. Luman, and Herbert Z. Lund, all of Uniontown, and L. Dale Johnson of Connellsville.

The status of the heart in hyperthyroidism was discussed by Dr. Edie. He said in part: Hyperthyroidism is not a direct cause of heart disease but aggravates a pre-existing lesion. In those cases in which no discoverable lesion exists, the shortening of the rest period and the increased metabolism of the heart muscle itself lead to some disturbance which, however, is not permanent or irreversible. People with normal hearts and hyperthyroidism do not die of cardiac involvement. The effects are slight dilatation with systolic murmur and transient auricular fibrillation. These hearts return to normal after operation without any other treatment. Digitalis preoperatively is given in cases with fibrillation. Quinidine has been given to toxic patients with fibrillation before operation and normal rhythm restored. Postoperatively digitalis had no effect and the patients did badly.

There are many people who have sustained heart damage, either from rheumatic fever in earlier years or from hypertension or arteriosclerosis in later years, which is symptomless. Hyperthyroidism occurring in these patients may bring on failure years earlier than otherwise; fibrillation and flutter are frequent in these cases. Digitalis is indicated but often fails to slow the rate as it does in nonthyroid patients. Rest, iodine, and sedatives will probably do more good. This class of patients may have failure, either congestive or anginal. There is no specific preparation in the anginal type except careful treatment. In cases with congestive

failure, rest, iodine, and digitalis are tried. If there is any vomiting, the iodine and digitalis may be given with glucose intravenously. If these fail, diuretics should be used. Theocin has been most effective, but too much should not be given because of the possibility of alkalosis. Salyrgan should be used in cases in which the previous treatment fails. In some cases auricular fibrillation may persist after operation and the question of the use of quinidine and the time of its use must be considered. Some physicians wait several weeks for the rhythm to change before giving quinidine. Others think that it is more practical to give it about the fourth day after operation because if they wait for 2 weeks the patient may have gone home and it is of course much better to give it in the hospital. The resumption of contraction by the auricle may be accompanied by expulsion of a clot which has formed during the period of fibrillation, but this damage has to be accepted as unavoidable.

We have been talking about patients who present frank evidence of hyperthyroidism, but such evidence is not always present—the condition in such cases is called masked hyperthyroidism, and this subject is one of the most important chapters in the book of heart disease. More time should be spent learning the clinical history of conditions for which there is a possibility of successful treatment. For the patient whose heart involvement has been brought about by masked hyperthyroidism, something can be done. It is the duty of the medical man to keep this possibility in mind every time he sees a patient suffering from heart failure because the masked hyperthyroid heart case can be saved from an otherwise slow but sure death by operation. We predicate that in these cases the evidences of hyperthyroidism are not such as to attract our attention at once. But if we have in mind the possibility of there being a hidden criminal, we may find clues. The usual symptoms should be looked for, such as loss of weight, tremor, and sweating. A history may be obtained that the patient has preferred cold weather. He may have had a transient glycosuria or may remember if questioned that he has had attacks of diarrhea or has had overaction from cathartics. The general appearance of the patient may suggest the condition: He may be more alert and his motions may be quicker than those of the usual decompensated case. The eyes may be stary although not protuberant. He may have prematurely gray hair which is not familial and not have asthma or pernicious anemia.

The heart in some of these masked cases, especially in later years of life, may not be rapid but these particular patients are not so apt to be confused with cardiac cases. One of the most important points in recognizing the underlying thyroid condition in apparent heart cases in which the rate is rapid is the tendency to resist the usual slowing measures, especially rest, digitalis, and sleep. Transient auricular fibrillation should make us think of the thyroid. Some of these cases may be looked upon as mitral stenosis because of the presence of fibrillation, a snappy apex impulse and first sound, and an incorrectly timed murmur. Fluoroscopy will be helpful by ascertaining the heart contour. The blood pressure may be suggestive, if we find a high systolic and a low diastolic rate. These may be looked upon as cases of aortic regurgitation because of the vascular phenomena. Such findings are frequent in thyrotoxicosis and are due to relaxation of the peripheral arteries. When in doubt a basal metabolic rate should be obtained. In the presence of much edema or dyspnea there is not much value in the test.

In other cases it may be helpful. We do not expect to find very high rates because it would seem that these cases are of minor degrees of thyroid toxicity acting on a vulnerable heart. If the basal metabolic rate is more than 30 per cent above normal, it is strong confirmation. From zero to 30 per cent above is in the doubtful zone. If below normal the cases are probably not masked hyperthyroidism. If a decision is still not possible, the patient should be tested by the administration of iodine, a favorable response being strongly confirmatory evidence. If a reasonably certain diagnosis can be made the patient should have the benefit of surgery. The preparation should be made as outlined for the frank cases. The actual surgical measures carried out must depend much on the judgment of the surgeon. A request should be made that, if possible, more of the gland than usual be removed.

In discussing the medical aspects of hyperthyroidism, L. Dale Johnson said that an internist should see all cases of even obvious hyperthyroidism, more from the point of view of the general condition and the cardiovascular system. Hyperthyroidism is a state of hyperpermeability of the body cells, which causes an increase in growth, function, and metabolism and makes them more susceptible to all stimuli. Apparently the thyroid is not originally the offender, but rather has the disease thrust upon it, for in some cases with marked symptoms no pathology can be found in the gland.

In a case of suspected hyperthyroidism, a differential diagnosis must be considered. Muscular weakness, tremor, slightly elevated pulse, some eye signs, and a normal basal rate may mislead us. But hyperthyroidism may exist without a high basal rate, or perhaps the patient has been taking iodine and is being seen during a remission.

The neurosis of the menopause may simulate hyperthyroidism, but actual hyperthyroidism may complicate the picture.

Neurocirculatory asthenia is probably the most difficult condition to differentiate as it presents many of the symptoms of hyperthyroidism and occasionally in people who actually have an enlarged thyroid gland.

The asthenic individual is invariably under age 30, is usually discouraged, and complains of many vague symptoms, while the thyroid patient is optimistic and eager to work but soon becomes exhausted. Lugol's solution gives no benefit in the former and the appetite is poor, while in the latter the desire for food is there, but there is a weight loss. A choking sensation in the throat is complained of more in neurocirculatory asthenia and the hands and feet are cold, clammy, and cyanotic, while in the thyroid patient the hands and feet are warm, pink, and moist.

Syphilis of the central nervous system may resemble hyperthyroidism somewhat but a basal test and serologic examination will give a correct diagnosis.

Encephalitis may cause a high basal metabolic rate, weight loss, and nervousness, but a careful neurologic examination and the nonresponse to iodine will differentiate it.

Multiple sclerosis: Frequent basal metabolic rate tests and careful neurologic examinations will differentiate this disease.

Tuberculosis: Here there is weight loss, fatigue, rapid pulse, and nervousness; a high basal metabolic rate and a goiter may also be present. The temperature will show a slight rise in the evening. No cough or râles may be present, but a roentgen ray may reveal the

true condition. If tuberculosis and hyperthyroidism exist together, thyroidectomy should be done as this will improve the tuberculosis much more rapidly.

Diabetes mellitus often complicates hyperthyroidism. These cases need careful medical supervision pre- and postoperatively, and with the high caloric diet so necessary in the hyperthyroid large doses of insulin are necessary. These patients must be watched closely for hypoglycemia which may occur with the iodine remission.

Clark M. Luman's paper was read by Howard A. Johnson, of Uniontown. He said in part: Surgery is the treatment of choice for hyperthyroidism, but it is actually only one step in the control of this condition. In some cases roentgen ray is useful in reducing the activity of the gland. During operation as much gland as possible is removed. This method is especially valuable in cases of toxic adenoma. Iodine is favorable in hyperthyroid cases, but should be used preoperatively only. In innocent adenomata it is harmful. In children with simple goiter iodine is valuable and may prevent hyperthyroidism later.

Preparation of the patient should be done by the internist which consists essentially of rest, quiet, iodine, and sedation. Repeated basal metabolic rate tests should be done every 5 to 10 days. The operation is kept secret from the patient by substituting for the usual enema one containing the anesthesia. After operation, excitement should be avoided. The complications that may occur are recurrence, injury to the recurrent laryngeal nerve, hypothyroidism, and hypoparathyroidism.

Dr. Lund discussed the clinical pathology of hyperthyroidism. He said in part: The thyroid regulates the amount of oxygen used and consequently the rate. Normals are from -15 to $+15$ and measure the amount of energy for basic functions. Variable factors influencing the basal metabolic rate are muscular activity, mental activity, and fever.

Comparing Gale's formula of pulse rate plus pulse pressure (111 equals basal metabolic rate) with actual rates taken with the basal machine, it is found that for practical office procedure the formula may be used with fairly correct results.

Thirty-four cases were compared to show this. In the blood of the hyperthyroid patient there is a high percentage of lymphocytes. The low tolerance for sugar was not demonstrated in the series of cases discussed above. Low cholesterol (blood) values are usually found in hyperthyroidism.

Domer S. Newell discussed the papers. He believed that the treatment of hyperthyroidism is both surgical and medical and consultation should be used freely. The value of iodine is unquestionably definite and is most valuable preoperatively. Besides injury to the recurrent laryngeal nerve during operation, the formation of scar tissue later may include within it the nerve with the production of hoarseness.

LOUIS F. ROGEL, *Reporter*.

WARREN

June 18, 1936

The meeting was in the nature of a picnic, that is, such was the intention. The Woman's Auxiliary invited the members and their wives to a picnic supper to be held in a grove at Youngsville, but a severe shower

intervened and at the last moment the guests were asked to come to the residence of your reporter in Warren, where the assembled refreshments were arrayed in buffet style; 45 were present including the auxiliary members. It is hoped that next year the event may be repeated. The auxiliary is young and has not succeeded in getting all the wives interested, but it has been successful in bringing about a friendlier relation between those who are members, and it has carried on some work among the inmates of the county home and the children's home, and obtained subscriptions to *Hygeia*. The physicians should give greater encouragement to this organization and urge their wives to apply for membership.

July 20, 1936

A joint meeting was held with the County Dental Society. The speaker was Samuel G. Major, M.D., D.D.S., of Pittsburgh, who presented "Plastic Surgery of the Mouth and Jaws." He described a number of operations for the repair of cleft palate, harelip, nasal deformities, recessive and protruding chins, and facial hemiatrophy. The use of cartilage graft, inserted without large external incisions, was advocated. The tube skin graft for burns was illustrated with lantern slides.

Dr. Major decried the use of plastic surgery for the mere purpose of facial beauty, like "face lifting." He thought this tended to degrade the profession. Some of the methods described are the result of original investigations. The speaker brought out points that, while not applicable to the general practitioner or dental surgeon, were valuable in an informative way.

Dinner followed the meeting and 45 were present. It is hoped that this joint meeting will become an annual affair.

MICHAEL V. BALL, *Reporter*.

FOURTH COUNCILOR DISTRICT

The annual meeting of the Fourth Councilor District was held at Eagles Mere, July 9.

Following a luncheon served at 12:30 p.m., at the Forrest Inn, 95 members of the Fourth District, with the members of their families, held an outdoor meeting.

The meeting was presided over by Trustee and Councilor E. Roger Samuel, of Mt. Carmel.

The district censors, George E. Richardson, Bradford County; Charles B. Yost, Columbia County; John H. Sandel, Montour County; Samuel L. Savidge, Northumberland County; Franklin A. Stiles, Susquehanna County; and William W. Lazarus, Wyoming County, gave brief reports of their counties.

Assisted by Councilor David W. Thomas of the Seventh District, Dr. Samuel presented 50-year testimonials to Charles Reed, of Towanda, who has practiced 56 years, Edward R. Gardner, of Montrose, who practiced 54 years, John H. Sandel, of Danville, who practiced 54 years, and Clarence L. Boston, of Noxen, who practiced 52 years. These gentlemen responded with splendid short addresses.

Testimonials were to have been given to J. Percival Herman, of Selinsgrove, who practiced 60 years, and to Dever J. Peck, of Susquehanna, who practiced 50 years. Both of these members were ill at the time. Dr. Herman has since died.

A report of the appendicitis mortality in the Fourth Councilor District was given by William W. Lazarus, of Tunkhannock, member of the State Society Commission on Appendicitis Mortality.

Walter F. Donaldson, of Pittsburgh, secretary of the State Society, spoke on the "Constancy and Change in Medical Service."

In the absence of J. Elmer Shuman, of Bloomsburg, Dr. Yost, secretary of the Columbia County Medical Society, read a history of that society.

Alexander H. Colwell, of Pittsburgh, president of the State Society, gave a talk on "Cardiovascular Emergencies in General Practice."

Laurie D. Sargent, of Washington, spoke on "Hypotension."

The annual meeting of the Woman's Auxiliaries of the Fourth Councilor District of The Medical Society of the State of Pennsylvania was held on July 9, 1936, at Forrest Inn, Eagles Mere, at 12:30 p.m. The wives, daughters, and sisters of physicians attended the luncheon and meeting. Mrs. Henry F. Hunt, district councilor, presided.

Reports of officers of county auxiliaries were given, followed by greetings from Alexander H. Colwell, Pittsburgh, president of The Medical Society of the State of Pennsylvania, and Mrs. W. Burrill Odenatt, Philadelphia, president of the Woman's Auxiliary to The Medical Society of the State of Pennsylvania.

Short addresses were given by Mrs. David W. Thomas, Lock Haven, president-elect of the Woman's Auxiliary of The Medical Society of the State of Pennsylvania; Mrs. Laurie D. Sargent, Washington; and Mrs. George O. O. Santee, Cressona.

FIFTH COUNCILOR DISTRICT (WEST BRANCH)

The thirtieth annual meeting of the West Branch of the Fifth Councilor District of Pennsylvania was held July 16 at the York Country Club, York. President W. Frank Gemmill presided.

A résumé of the history of the councilor district as an organization was given by Dr. Gemmill.

Clarence R. Phillips, of Harrisburg, trustee and councilor of the district, made a brief address of greeting to the members and outlined the legislative aspects of the organization.

Two-minute reports were made by the following district censors: John H. Bennett, York County; David S. Funk, Dauphin County; Henry B. Davis, Lancaster County; Henry Stewart, Adams County; and Edward R. Plank, Cumberland County.

Theodore B. Appel, of Lancaster, read a paper on "Maternal Mortality in the Fifth Councilor District."

Mr. Roy Jansen, of Pittsburgh, publicity director of the State Society, read a paper entitled "The Medical Society and the Press."

The speaker of the day, Francis C. Grant, assistant professor of neurosurgery of the University of Pennsylvania Medical School, gave an address on "Head Injuries and Spinal Cord Tumors." Dr. Grant enumerated in great detail the symptoms, diagnosis, and treatment of all head injuries and explained many new methods of diagnosis, localization, and treatment of spinal cord tumors.

The following officers were elected: President, William B. Stewart, Carlisle; first vice-president, Samuel D. Sutliff, Shippensburg; second vice-president, Theodore Peters, Chambersburg; third vice-president, Chester G. Crist, Gettysburg; fourth vice-president, Her-

man A. Gailey, York; secretary, W. Newton Long, York; treasurer, John F. Bacon, York.

Dinner was served to 50 doctors and members of their families, and musical entertainment was furnished.

The next meeting will be held in Carlisle, Sept. 16, 1937.

ELEVENTH COUNCILOR DISTRICT

A most successful annual meeting of the Eleventh Councilor District was held at Bedford Springs on July 16. The attendance was far beyond expectation, as there were approximately 240 for luncheon.

The meeting was under way at 10:30 a.m., all papers being finished exactly on time, and luncheon was served at 12:30 while the hotel orchestra furnished music.

The meeting program consisted of an address by the district councilor, Laurie D. Sargent, of Washington, who presided. There were 2-minute reports by each of the district censors. "Social Security and Pennsylvania Legislation" was discussed by Chauncey L. Palmer, of Pittsburgh, chairman of the State Society Committee on Public Health Legislation. Joseph P. Replogle, of Johnstown, gave a talk on "Prophylactic Surgery in Connection with Appendicitis Mortality in the District," and John O. Bower, of Philadelphia, chairman of the State Society Commission on Appendicitis Mortality, continued the discussion. Walter F. Donaldson, Pittsburgh, secretary of the State Society, gave one of his pointed talks referring to facts concerning the State Medical Society. Alexander H. Colwell, of Pittsburgh, president of the State Society, spoke upon "The True Spirit of Our Profession." Randle C. Rosenberger, of Philadelphia, professor of preventive medicine and bacteriology, Jefferson Medical College, discussed "Foods, Their Preservation, and Food Poisoning." After luncheon Roy W. Scott, professor of clinical medicine at Western Reserve University, gave an hour and a half discourse on "Management of Coronary Artery Disease." The meeting was adjourned at 3:30 p.m.

Among the guests were John B. Lowman, of Johnstown, State Society treasurer, and Trustees and Councilors George C. Yeager, of Philadelphia, and A. Hamilton Stewart, of Indiana. There were also in attendance 11 physicians from Cumberland, Md.

The Woman's Auxiliary, under the leadership of Mrs. S. A. E. Brallier, conducted a separate program. The meeting was honored by having the following auxiliary officers in attendance: Mrs. W. Burrill Odenatt, Philadelphia, State Auxiliary president; Mrs. David W. Thomas, Lock Haven, State Auxiliary president-elect; Mrs. Walter F. Donaldson, Pittsburgh, second vice-president, State Auxiliary; Mrs. Laurie D. Sargent, Washington, past state president; Mrs. John F. McCullough, Pittsburgh, past state president; Mrs. Augustus S. Kech, Altoona, past state president and president-elect of the National Auxiliary to the American Medical Association; Mrs. Daniel N. Bulford, Pittsburgh, chairman, Public Relations Committee; Mrs. George C. Yeager, Philadelphia, state publicity chairman; Mrs. Herbert E. Woelfel, Pittsburgh, chairman of the Pittsburgh Convention; Mrs. Howard A. Power, Pittsburgh, councilor of the Tenth District; Mrs. William A. Prideaux, president, Cambria County auxiliary; Mrs. James H. Corwin, president, Washington County auxiliary.

The Woman's Auxiliary to The Medical Society of the State of Pennsylvania

MRS. GEORGE C. YEAGER, *Editor*, 1419 E. Susquehanna Ave., Philadelphia, Pa.

THE PRESIDENT'S MESSAGE

This word must be in a sense a very reluctant valedictory. The past year has been much of an education in many things. Each trip among friends and coworkers seemed to round out a semester, each hour of which was filled with enlightenment. One goes out, not to teach, but to be taught. Unless this theme follows through the year of a president, she will have missed the best things that life has to give. Whether she comes from a metropolitan area or from the less crowded centers, she will profit in any case from the interchange of ideas and the impetus received from those who labor in a different field from her own. At best then she can only carry from one group to another the splendid inspirational urge that she has received. This she has tried her best to do. Feeble though her efforts may have been and whatever the results accomplished, she has achieved a pardonable pride in accumulating many new friends and perpetuating old friendships.

It has been the joy of the president to see in each community unabating zeal in organized and individual effort. It has been shown that women can still work faithfully and harmoniously for a common cause, sinking their separate identities beneath a desire to achieve a common end. It has revealed a new type of woman who, when she fills an office, assumes that it is a trust, and others who make up the rank and file sense their lot is not a subordinate one, but glorify each humble task assigned to them.

Beginning timidly but with abiding faith in those who have honored her, she approaches the end of this year with profound assurance that this confidence in your loyalty has not been misplaced. May you continue, as you surely will, to give to the incoming president that same measure of devotion that it has been the writer's privilege to receive and cherish.

Two visits were made during July, one to Bedford Springs, where was held the Eleventh Councilor District meeting—here a large group of auxiliary members proved their interest by their attendance: another, a Program Conference at West Chester, when these forward-looking women planned for the year to come.

In prospect for September—the western part of the state.

The program for the convention in Pittsburgh is in your hands; will you not plan to make this coming event, "which casts its shadow before," a convention worthy of past records?

To this last message, it is our pleasure to add a word of gratitude and tribute to the editor of the JOURNAL. His indulgence, his patience, and his sustained interest have helped us over the rough places many times. His clippings from nation-wide medical journals have been a source of needed information. Will he please accept this as a public acknowledgment of thanks for these many acts of kindness?

MRS. W. BURRILL ODENATT, *President*.

EDITOR'S NOTE

We wish to thank each auxiliary that responded to our plea for news. Some few have not sent any reports, but we are hoping for better results next year. Will each auxiliary please send to me the name of the publicity chairman or whoever is responsible for the publicity?

I wish to thank each auxiliary for the co-operation I have had this year. The enthusiasm displayed impresses me with the belief that next year will prove a banner one for our pages in the PENNSYLVANIA MEDICAL JOURNAL.

I also wish to thank Dr. Frank C. Hammond, editor of the State JOURNAL, who has been so patient and kind to us, and Mrs. W. Burrill Odenatt, our president, who has contributed an article to these columns each month. These 2 friends have helped me over many rough spots and made my path as publicity chairman a very easy one to travel. Many thanks again to them and to each auxiliary.

(MRS. GEORGE C.) JESSIE W. YEAGER,
Publicity Chairman.

COUNTY AUXILIARY REPORTS

Bucks.—The regular meeting of the auxiliary was held at the Fountain House, Doylestown, April 8, with the president, Mrs. Clairmont A. Kressley, presiding. Mrs. W. Burrill Odenatt, State Auxiliary president, spoke on the work of the auxiliary and also gave an eye-witness description of the flooded sections

of Pennsylvania. The yearly contribution to the Medical Benevolence Fund was authorized to be made.

At the regular meeting of the Bucks County Medical Society held in Bristol during May, the auxiliary members were invited as guests of the doctors at dinner, which was served in the Presbyterian Church, after which the ladies were entertained at the home of Dr. Mary E. Lehman.

The regular meeting of the auxiliary was held at Grand View Hospital, Sellersville, June 10, Mrs. Clairmont A. Kressley presiding. A play, "Why Doctors' Wives Get Gray," was presented by the pupil nurses, under the supervision of Miss Fenstermacher, instructor of nurses. This was followed by a musical number. A bouquet of American Beauty roses was presented to Miss Nellie Hoffecker, superintendent of the hospital, in appreciation of the many favors rendered to the auxiliary.

Chester.—"Norwyden," the home of Dr. and Mrs. Howard Mellor, at Scennelltown, was the scene of the meeting of the auxiliary on July 21, and Mrs. Howard B. Davis, of Downingtown, president of the auxiliary, presided for the first time. Mrs. W. Burrill Odenatt, president of the State Society auxiliary, was the guest speaker. Mrs. R. Powers Wilkinson, of Philadelphia, corresponding secretary of the State Auxiliary, was also a guest.

Committee conferences were held.

Mrs. Mellor, immediate past president of the auxiliary, presented the auxiliary with a gavel that will be used at the meetings in the future. The gavel is made from the wood of a cherry tree that was cut down at Valley Forge to make room for one of the memorial buildings. This was done during the time that Dr. Herbert Burk was rector of the chapel. The gift of the gavel is greatly appreciated by the auxiliary.

Sixteen members of the Chester County Auxiliary were present at the meeting. Refreshments were served.

Chairmen of committees appointed to serve during the year are: Hospitality, Mrs. Henry Pleasants, Jr.; *Hygeia*, Mrs. Clarence S. Kurtz; membership, Mrs. U. Grant Gifford; ways and means, Mrs. Michael Margolies; archives, Mrs. John A. Farrell; legislation, Mrs. Robert T. Devereux; parliamentarian, Mrs. Joseph Scattergood, Sr.; publicity, Mrs. J. Oscar Dicks; public relations and public health education, Mrs. Howard Mellor.

Clinton.—Mrs. W. Burrill Odenatt, president of the State Auxiliary, was the guest of honor at a meeting of the auxiliary held at the home of the president, Mrs. Edwin C. Blackburn. Mrs. Odenatt spoke on "The Auxiliary and Its Purpose." There was an election of officers. Mrs. Edwin L. Royer is the newly elected president.

A substantial sum was realized for the Medical Benevolence Fund at a card party held at the home of Mrs. Royer, July 1.

Fayette.—The meeting of the auxiliary was held in the White Swan Hotel, Uniontown, May 15, at 8:30 p. m.; the president, Mrs. Ralph L. Cox, presided. Dr. John B. Hibbs, a member of the Fayette County Medical Society, gave an address on "Psychiatry."

Reports were given on the Annual Health Institute held at the White Swan Hotel on May 5. Dr. George W. Wright, professor of neurology in the University of Pittsburgh, delivered the address of the evening on "Mental Health." The institute was well attended, the

ballroom of the hotel being filled to capacity. Preceding the lecture, a banquet was served to the members of the medical society and the auxiliary.

Standing committees of the auxiliary made annual reports on their activities during the year which included a successful card party held at the White Swan Hotel on the afternoon and evening of Feb. 24. A luncheon in honor of Mrs. W. Burrill Odenatt, president of the State Auxiliary, was held at the White Swan Hotel, Mar. 16, at 1 p. m. Satisfactory progress was reported in the compiling of a scrapbook of the auxiliary, including clippings of activities since its organization in 1925, snapshots of officers, and other mementos of past accomplishments.

The treasurer reported the following disbursements: Three subscriptions to *Hygeia* for public libraries in the county, namely, Brownsville, Connelville, and Uniontown, and one subscription to the Children's Home in Uniontown; a contribution to the Fayette County Tuberculosis Society of \$10; a contribution to the American Red Cross for flood relief of \$25; a contribution to the Medical Benevolence Fund of \$25; and the purchase of eyeglasses for needy school children, \$76.35.

The project of the auxiliary is that of supplying eyeglasses to children of school age whose studies are retarded because of defective eyesight. These children come from homes unable to defray the expenses incident to examination and securing glasses. The ophthalmologists to whom these children are sent are members of the county medical society and render services free of charge, supplying the eyeglasses to the auxiliary at actual cost. The auxiliary is very grateful for the co-operation of these benevolent physicians who give so generously of their time and labor to this very worthy cause.

The nominating committee presented the following nominees, who were elected to the various offices. They will assume office at the October meeting of the auxiliary: President, Mrs. Ralph C. Hough; president-elect, Mrs. Arthur D. Hunger; vice-president, Mrs. D. Hibbs Sangston; recording secretary, Mrs. John D. Sturgeon, Jr.; corresponding secretary, Mrs. John B. Hibbs; and treasurer, Mrs. Ralph P. Beatty.

Montgomery.—The auxiliary held a basket lunch at the home of Mrs. Edgar S. Buyers on May 22; about 40 members were present. On June 23 the doctors and their families joined the auxiliary at a picnic held at Fisher's Pool. Games were played.

Philadelphia.—The auxiliary has completed its eleventh year. The chairmen and members have shown great loyalty, support, and co-operation. There were 34 new members this year, making a total of 432.

Through the efforts of the Committee on Ways and Means, \$1090 was raised for benevolences; of this amount \$600 was contributed to the Aid Association of the Philadelphia County Medical Society, the American Red Cross, the United Campaign, the Salvation Army, the Blind Fund, and flood relief. The Corinne Freeman Student Loan Fund helped 2 senior women medical students.

The Sixth Annual Health Institute gave evidence that this is a very worth-while part of the yearly program. The "Formula" has kept the members interested in the social and scientific activities. There were 3 outings, and a very substantial sum was turned over to the treasurer by this committee. The courtesy of the meetings was extended to the wives of physicians attending the Graduate School of Medicine of the Uni-

versity of Pennsylvania. We have tried to co-operate with our county society in every way, and they in turn have been most loyal and kind to the auxiliary.

York.—The meeting of the auxiliary was held in the Professional Building, York, June 4. The president, Mrs. Pius A. Noll, presided.

The traveling basket was started on its rounds and will be passed on to each member as soon as possible.

Mrs. William H. Treible reported on the Health Institute held Apr. 28 in the building of the Y. W. C. A., which was attended by representatives from York County, York, and other cities. The guest of honor and one of the speakers was Mrs. W. Burrill Odenatt, of Philadelphia, president of the State Auxiliary. Dr. J. Moore Campbell, of Harrisburg, director of the Bureau of Health Conservation, also gave an address.

Greetings were extended to the guests by Dr. Clyde L. Seitz, president of the York County Medical Society, and Mrs. William H. Treible, first vice-president of the York auxiliary. Two educational films on tuberculosis were shown and explained by Miss Charlotte M. Hitchcock, secretary of the York County Tuberculosis Society. The invocation was offered by Mrs. Robert Thena, and there was a musical program. Mrs. Odenatt and Mrs. Treible were presented with shoulder bouquets of gardenias.

Money was donated for the Welfare Committee, and refreshments were served.

Medical News

Births

TO DR. AND MRS. LOUIS B. LAPLACE, of Philadelphia, a daughter, Aug. 20.

TO DR. AND MRS. WILLIAM D. STROUD, of Villanova, twin daughters, Aug. 12.

TO DR. AND MRS. JAMES T. GILLESPIE, of Erie, a daughter, Shirley Marian, July 16.

TO DR. AND MRS. DONALD D. WILLIAMS, of Erie, a son, Donald Dunmore, Jr., July 23.

Marriages

MISS DOLORES TELLERS to Dr. B. Lechner, of Erie, July 22, at Emlenton, Pa.

MISS JEAN RICHARDSON FAGANS to Dr. E. Raymond Ambler, Jr., of Abington, June 13.

MISS MABEL HALSEY WOODROW to Dr. Arthur Bruce Gill, both of Philadelphia, Aug. 3.

MISS RUTH H. PAYNE, of Montrose, to Dr. Harvey M. Fry, Rush, Susquehanna County, July 24.

MISS EVA MAE RIEHL, of Washington, D. C., to Dr. Phillip Augustus Degnan, of Waynesboro, May 11.

DR. LUCILLE ELISE TUCKER, of Reading, to Mr. Richard B. Greene, Philadelphia, June 24, in New York.

Deaths

LEONARD C. BALDAUF, Erie; Jefferson Medical College, 1926; aged 35; died July 6. Dr. Baldauf was born at Reynoldsville, where his surviving parents now reside. He is also survived by his widow, 3 children, 3 sisters, and 3 brothers. He was a member of his county and State medical societies and the A. M. A.

J. LESLIE DAVIS, Philadelphia; Jefferson Medical College, 1901; aged 63; died at the Jefferson Hospital, Aug. 1, following an operation for intestinal obstruc-

tion. Dr. Davis was born in Lexington, Ky., and was graduated from the Commercial College of Kentucky University. In 1904 he became a member of the Jefferson Hospital laryngological staff, but resigned a few years ago; was chief of clinic of the otolaryngological department of the Mary J. Drexel Home, otolaryngologist to St. Mary's and St. Agnes Hospitals, and consulting otolaryngologist at the Philadelphia Lying-In Charity Hospital. He was a member of his county and State medical societies; a Fellow of the A. M. A.; a member of the American Academy of Ophthalmology and Otolaryngology; and a Fellow of the American College of Surgeons. He was also a member of the board of trustees of the Philadelphia College of Pharmacy and Science. He is survived by 2 sisters and a brother, Dr. Warren B. Davis, of Philadelphia.

JOHN SCHOFIELD EYNON, Chester; University of Pennsylvania School of Medicine, 1911; aged 48; was instantly killed, Aug. 15, when his plane crashed near Beach Haven, N. J. A friend who had accompanied him on the flight was also killed. Dr. Eynon was attempting to drop a note of greeting to a young son who was camping at Brant Beach when the accident occurred. He was on the surgical staffs of the Chester Hospital and the Taylor Memorial Hospital at Ridley Park. Dr. Eynon was long active in American Legion affairs, at the time of his death being commander of Chester City Post 390. He was a member of his county and State medical societies and a Fellow of the A. M. A.

LINEUS W. FISHEL, York; Jefferson Medical College, 1920; aged 40; died July 20. Dr. Fishel was a member of his county and State medical societies and the A. M. A.

MR. WILFRED W. FRY, president of Jefferson Medical College, Philadelphia, died in the Jefferson Hospital, July 27, aged 61.

WILLIAM J. HUMPHREY, Union City; University of Buffalo School of Medicine, 1890; aged 75; died July 28. Dr. Humphrey was a pharmacist before he began the study of medicine. He was a member of his county and State medical societies and a Fellow of the A. M. A. He was the son of a physician, Dr. Jonas A. Humphrey, and is survived by a brother, also a physician, Dr. G. E. Humphrey, of Cambridge Springs.

GEORGE WALTER LEWIS, Belle Vernon; Jefferson Medical College, 1917; aged 42; died April 2, in the McKeesport Hospital, of sinus infection, otitis media, and rheumatic fever. He served during the World War.

GEORGE "DOC" MACKENZIE, noted auto racer, of Edgington, Pa., son of Dr. and Mrs. George W. Mackenzie, of Philadelphia, died Aug. 23, in Milwaukee, Wis., following a race track crash at State Fair Park. In addition to his parents, his wife survives.

ROBERT J. MCCREADY, Pittsburgh; Bellevue Hospital Medical College, New York, 1873; aged 86; died July 21. He was a member of his county and State medical societies and a Fellow of the A. M. A.

HORACE PHILLIPS, Atlantic City, N. J.; University of Pennsylvania School of Medicine, 1889; aged 69; died July 23. Dr. Phillips was formerly of Philadelphia, but he made his home for the past year in Atlantic City. For 17 years prior to 1913 he was associated with the Pennsylvania Hospital for Mental Diseases, Philadelphia. He was special psychiatrist for the district attorney's office in Philadelphia, visiting physician at the Eastern Penitentiary, and associated with the Federal Bureau of Health and Immigration. During the World War he was a major in the Medical Corps of the United States Army, having served overseas with the 134th Division. He is survived by 2 sisters and a brother.

HERMAN B. SLOTKIN, Philadelphia; Jefferson Medical College, 1925; aged 36; died Aug. 1, of complications following an operation at the Manhattan General

Hospital, New York. Dr. Slotkin was an instructor in neuro-otology at the University of Pennsylvania Graduate School of Medicine; assistant neuro-otologist at the Graduate Hospital of the University of Pennsylvania; assistant otolaryngologist to the Jewish Hospital of Philadelphia; and assistant aural surgeon on the otorhinologic service of Dr. George M. Coates at the Graduate Hospital of the University of Pennsylvania. He was a member of his county and State medical societies; Fellow of the American Medical Association and the American Academy of Ophthalmology and Otolaryngology; and member of the Philadelphia Laryngological Society. He was certified by the American Board of Otolaryngology in 1932. During the World War he served in the Medical Corps, chemical warfare division.

Miscellaneous

THE ANNUAL OUTING of the Lehigh County Medical Society was held Aug. 11, at the Lehigh Country Club.

SIR DAVID WILKIE, professor of surgery, Faculty of Medicine, University of Edinburgh, will give a series of 25 lectures at the Jefferson Medical College of Philadelphia during next November and December.

DR. ARCHIBALD LAIRD, of Wellsboro, returned recently from Scotland, where he took a graduate course at the Glasgow Eye Infirmary given by the Postgraduate Medical Association of the University of Glasgow.

GOVERNOR EARLE APPROVED, July 27, the appointment of Dr. Robert Y. Grone as superintendent and chief surgeon of the Shamokin State Hospital, effective Aug. 1. Dr. Grone was formerly assistant superintendent of the Geisinger Memorial Hospital at Danville. He succeeds Dr. George W. Reese.

HONORING PAST PRESIDENTS.—The Medical Society of New Jersey has established an honor to the past presidents in the presentation of a golden key as a recognition for services rendered. At the recent meeting of the society a key was awarded to all of the living past presidents. This custom will continue as an annual event for the retiring president.

STAFF MEMBERS AWARDED GOLD MEDALS.—The Houston (Texas) Memorial Hospital presents a gold medal to the members of its staff who reach the age of 65, and active staff members reaching this age are appointed to the consulting staff. On one side of the medal is the name of the hospital and the name of the physician to whom the award is made, and the date. On the reverse side is "As a Token of Appreciation for Your Years of Faithful Service on the Active Staff the Board of Directors Honors You with Appointment to the Consulting Staff."

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY.—The next written examination and review of case histories of Group B applicants by the American Board of Obstetrics and Gynecology will be held in various cities in the United States and Canada on Nov. 7. Application blanks and booklets of information may be obtained from Dr. Paul Titus, secretary, 1015 Highland Bldg., Pittsburgh (6), Pa. Applications for this examination must be filed in the secretary's office 60 days prior to the scheduled date of examination.

THE ACADEMY OF MEDICINE of Toledo and Lucas County, Toledo, Ohio, has sent a letter to all secretaries of county and state medical societies containing a newspaper clipping regarding one Michael Erim Brooks, age 48, teacher and lecturer, who pleaded guilty, Aug. 5, on 2 counts of an indictment charging him with unlawfully practicing medicine. The attention of the medical profession of the United States is called to the nefarious practices of this individual, as he may possibly begin the same thing in some other section of the country.

THE INTERNATIONAL ASSEMBLY of the Inter-State Postgraduate Medical Association of North America

will be held in St. Paul, Minn., Oct. 12 to 16, with preassembly clinics on Oct. 10 and postassembly clinics, Oct. 17, in the Detroit hospitals.

The association through its officers and members of the program committee extends a cordial invitation to all physicians in good standing in their state and provincial medical societies to attend the assembly. An unusual clinical and didactic program including all branches of medicine and surgery and the specialties has been arranged by the program committee, affording an excellent opportunity for an intensive week of graduate medical instruction. A list of distinguished teachers and clinicians who will take part on the program appears on page viii of the advertising section of this JOURNAL.

The registration fee of \$5 admits all members of the profession in good standing.

DR. KOLMER HALTS USE OF HIS VACCINE.—According to the Philadelphia *Evening Bulletin*, Aug. 21, 1936, Dr. John A. Kolmer, in an address at the convention for the National Medical Association, held in Philadelphia, announced that the distribution of the infantile paralysis vaccine developed by him has been discontinued indefinitely. Dr. Kolmer said this action was due to critics who maintained development of the disease in 9 out of 10,725 vaccinated patients had been due to the vaccine.

Despite the fact that the remaining 10,716 developed immunity to the disease, his critics condemned the application of his vaccine. He preferred to take their view. Pending the completion of extensive experiments with monkeys and their reaction to injections, he will not permit further release of the vaccine for human uses.

It is Dr. Kolmer's opinion that 5 out of the 9 who contracted the disease after vaccination did so because the vaccine was injected during the incubation period. In this stage the disease has progressed too far to be checked. When and if ever he releases the vaccine again, he will insist that practicing physicians be more alert to detect the disease in its earliest stages. He will also insist that injection be made during winter months when there is a minimum of possibility that the disease will have reached the incubation period.

THE NEW YORK PHYSICIANS' HOME.—The Physicians' Home, which was originally incorporated on June 4, 1919, was reorganized on Apr. 15, 1936, with a new constitution and by-laws and a more effective organization.

It is planned by the new officers, trustees, and directors to make a vigorous effort to finance this worthy project so as to build a permanent home for aged and infirm physicians of the State of New York.

Ever since this home was founded there has always been a long waiting list, but inadequacy of income has rendered it impossible to accept as guests all the elderly physicians who have applied. It soon became apparent to the new officers and trustees that the existing policy must be abandoned in favor of a permanent home with adequate endowment. The present endowment is approximately \$130,000.

Five types of membership in the organization have been created and are now open for application and registration.

Annual member	\$10 or more
Sustaining member	100 to \$1000
Life member	1000 to 5000
Patron	5000 to 10,000
Benefactor	10,000 or more

The Physicians' Home is a worthy medical public service and should enlist the sympathetic co-operation of all members of the medical profession as well as the profession's nonmedical friends.

Dr. Chas. Gordon Heyd, president of the Physicians' Home, makes an appeal to further the object of this organization in order to create and maintain a home for

aged and infirm physicians, their wives or widows, or to assist in any other way found feasible.—*N. Y. State Journal of Medicine*, Aug. 19, 1936.

Book Reviews

From a reviewer we expect information and advice which will guide us safely and to our profit, warning us of the poor, the mediocre, the commonplace, and inviting our attention to merit.

A TEXTBOOK OF SURGERY. For Students and Physicians. By W. Wayne Babcock, A.M., M.D., LL.D., F.A.C.S., professor of surgery and of clinical surgery in the Temple University Medical School; surgeon to the Temple University Hospital and to the Philadelphia General Hospital; chief of the Surgical Service, U. S. General Hospital No. 6, 1917-1919. Second edition, rewritten. Philadelphia and London: W. B. Saunders Company, 1935. Cloth, \$10 net.

During the latter part of 1927, announcements were circulated that W. Wayne Babcock was writing a textbook of surgery for students and physicians. This fact created quite a furor, for Wayne Babcock was known to everyone either by personal contact or by reputation as being a clear thinker, an accurate analyst, and a painstaking and remarkably efficient technician. Many hundreds of copies of this textbook were sold long before the edition came off the press. The volume itself surpassed even the greatest anticipation of those who purchased it before its publication. It has continually enjoyed a place among the leaders in textbooks of surgery.

In the preface to the first edition the author says, in part: "For the student particularly, surgery should be presented as a precise, an exact science; but surgery, as with all science, is constantly changing, constantly progressing. How in the face of such evolution can we make it exact and enjoy today's heritage? Only by infinite faith in that heritage. The student or physician who reasons 'why learn today what tomorrow may prove wrong? Why strive for exactness when the most learned are often in error?' not only loses his usefulness in a progressive profession, but lays down the torch of progress bequeathed to him. I have, therefore, written in a dogmatic vein what practice and study have made me believe is true today. If tomorrow I progress to an opposing point of view I shall not lose faith. . . ."

Evidently the author has found enough change in the science of surgery to necessitate a complete rewriting and revision of his textbook. This second edition contains 1312 pages with 1032 illustrations, 150 of which are new. It still retains that same clearness and conciseness seen in the first edition. In addition it incorporates new sections, embracing the newer developments in surgical diagnosis and technic. The section on the newer anesthetics is particularly timely and most interesting. It might well be remembered that Wayne Babcock was one of the pioneers in the development of spinal anesthesia. The chapter on fractures has been enlarged to embrace the use of infiltration anesthesia for reduction, with a Boehler application of plaster casts without padding, and the various types of internal fixation skeletal tractions. Keeping pace with the rapid change in surgery of the ductless glands, this section has been almost entirely rewritten, bringing it practically up-to-date.

To the practicing surgeon the volume is a refreshing review of fundamentals. The practicing surgeon would particularly welcome a more detailed discussion of surgical technic; but he must put his personal wishes and desires in the background when he realizes that the volume is primarily intended for the medical student and for the general practitioner. For them it is a priceless library addition. Not only is it absorbing when casually perused, but it is a reference work to which

the general practitioner can turn without feeling that he might be disappointed.

It is this reviewer's feeling that the second edition of Wayne Babcock's *Textbook of Surgery* will enjoy even greater popularity than the edition which preceded it.

HANDBOOK OF SURGERY. By Eric C. Mekie, M.B., Ch.B., F.R.C.S. (Edin.). With a foreword by John Fraser, M.C., M.D., Ch.M., F.R.C.S.E. Baltimore: William Wood & Co., 1936. Net price, \$4.50.

This handbook contains "only what are the salient features of the subject." Not only will it serve well to prepare a medical student for the final examination in surgery, but it will be found helpful as a quick reference book to the graduate as well as the undergraduate in medicine.

THE SPLEEN AND RESISTANCE. By David Perla, M.D., associate pathologist and bacteriologist, Montefiore Hospital, and Jessie Marmorston, M.D., associate in pathology, Cornell University Medical College. With a foreword by David Marine, M.D. The Williams & Wilkins Co., Baltimore, 1935. Net price, \$2.

This timely monograph is a distinct contribution to our knowledge of the part played by the spleen in natural and acquired resistance. The book begins with a review of the comparative anatomy of the spleens of various species and a discussion of the spleen's function as a source of phagocytes, important to exudates and inflammatory reactions generally. It takes up the pathologic changes in the organ itself as they are found in association with various infections. A large portion of the text is concerned with a critical review of the knowledge of antibody formation in normal animals under various stimuli and contrasts them with the reactions in splenectomized animals. The authors conclude with an impartial résumé in which all of the established facts are summarized. They explain away the contradictions and controversies on the basis of the use of different animal species and the fact that almost all laboratory animals are carriers of latent infections, and assert finally that the importance of the spleen in natural resistance and in certain instances of aquired resistance is well established.

TEXTBOOK OF PATHOLOGY. Revised by Francis Carter Wood, M.D., director of pathological department, St. Luke's Hospital, New York, and director of the Institute of Cancer Research, Columbia University, New York. Sixteenth edition with 22 full-page plates and 839 illustrations in the text in black and colors. William Wood & Co., Baltimore. Net price, \$10.

This text combining, as it does, 3 large parts dealing with general pathology, special pathology, and post-mortem technic, probably contains more information and a wider range of subjects than any other single volume on the subject. The chapter on the nervous system has been entirely rewritten and is handled in a most creditable manner. It should be useful as a source of ready reference for students and general pathologists who have not specialized in neuropathology.

It is to be regretted that the subject matter on glandular disturbances has not been treated in a similar manner. The whole discussion of the newer knowledge of the endocrines is practically ignored. For example, there is no attempt to correlate the secretions of the pituitary and ovaries with the endometrial cycles; the influence of the parathyroids on bone disturbances is dismissed with a word, and the detailed knowledge of the Aschheim-Zondek test, now a regular laboratory procedure, is entirely lacking. In spite of omissions of this type the work as a whole has much to recommend it.

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